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APPROVAL

This Project titled **"LearnBD"**, Submitted by **AL KAWSAR MAUJMDER**, ID No: **182-16-327**to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systemsand approved as to its style and contents. The presentation has been held on **29-12-2019**.

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DECLARATION

I hereby declare that, this project has been done by me under the supervisor of **Sarwar Hossain Mollah,** Assistant Professor & Head of the department of CIS of Daffodil International University. It is also declared that neither this project nor any part of there has been submitted anywhere else for the award of any degree, diploma or other qualifications.

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At first I want to give thanks my almighty Allah. Allah gives ability to make this project properly. Then I want to give thanks my all university teacher who are train me well for development the project. Without them I never learn all of these things. Then I want to give thanks my course supervisor **Sarwar Hossain Mollah**. Then I want to give thanks my family they always support me mentally and economically. Then I want to give thanks my friends who always give support and they help me always for my study and they also give support mentally which is very needed for everyone I'm very lucky because I got everything.

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Dedication:

This project is my first final project of academic purpose, that's why I would like dedicate this final project to my father and my mother. In my whole life they are big inspiration and support for me without them my life is nothing. They give lots of effort for me and they also sacrifice lots of things .That's why I think they deserve this respect.

Executive Summary:

This proposed system is my academic project. This application is web based system. It is education support system. In this system students get service their ICT academic problem with others subjects. They don't need to go coaching center and they can get all of academic support in this system. Here teachers are given their lecture, files and videos. Students can ask question about each lecture. They will get answer weekly.

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Chapter – 1 - Introduction

- **Initial Description of the total project**
- **Document context**

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1.1 – Initial concept of this project:

Day by day everything is updating and depends on technology whole of the world use internet and latest technology. But our country has one big problem which is education system. Our country student does not get proper schooling that's why they go coaching center for learn properly. Every student is not able to give extra money for it. Another thing is waste of time many student spend more time for this reason. I research this area many days I got a solution for it. If student use this system they do not need to go any coaching center. They can get every academic resource in here. Teacher gives their lecture, files notes. Students can give exam here. If they use this system they can save their time and money which is very important. Here I will manage quality teacher. Every student can use it in anywhere in our country. Now internet connectivity is available in everywhere in our country that's why I think this is best idea for our country student. I think it will very helpful for our education system.

1.2 – Document Context:

- ✓ **Chapter 1: Introduction**

  Here I given short description about my project

- ✓ **Chapter 2: Initial study**

  Here I will describe the main theme about my propose system. Here mainly focus on prospective area of my project.

- ✓ **Chapter 3: Literature review**

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Here I gave system solution of the problem, about system domain discussion, analysis about existing system and comparison with those system and recommended approach.

- ✓ **Chapter 4: Methodology**

  Here I discuss about chosen methodology which is I use and why methodology is use, methodology implement section and sections of methodology.

- ✓ **Chapter 5: Planning**

  Here I discuss about project planning phase, project management, security, risk, and quality management.

- ✓ **Chapter 6: Feasibility study**

  Here I discuss about all the economical, operational, technical, cost benefit analysis and social feasibility.

- ✓ **Chapter 7: Foundation**

  Here discuss about existing system process and problem area of my system, system requirements, rich Picture and problem solution of this system.

- ✓ **Chapter 8: Exploration**

  Here discuss about the system boundaries, system requirements, system prototype and some system diagram.

- ✓ **Chapter 9: Engineering**

  Here given some system diagram of this system like class diagram, use case, sequence diagram and engineering describe the new system.

- ✓ **Chapter 10: Deployment**

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Here describe about the system development with necessary system development steps, core cording of this system and prioritization.

- ✓ **Chapter 11: Testing**

  Here describe about system testing all the system testing is include this chapter such as black box testing, white box testing, integration testing , unit testing etc.

- ✓ **Chapter 12: Implementation**

  Here I describe about my new system implementation, load balancing and big bang theory.

- ✓ **Chapter 13: Evaluation**

  Here I describe about evaluation of this project.

- ✓ **Chapter 14: Critical appraisal**

  Here describe about this system requirement and objective which are meet with the system or not

- ✓ **Chapter 15: Lessons Learned**

  Here describe about which I learned from this project

- ✓ **Chapter 16: Conclusion**

  Here I gave this project summary, project goal and main focus point.

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Chapter – 2 – Initial Study

- **Project Proposal**
- **Goal of the project**
- **Research about project**
- **Problem area**
- **Possible solution**

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2.1 – Project Proposal:

Discussion about the project: In this project my concern is Bangladesh education system. Most of our student does not get proper resource. Some of technical subject but there is no sufficient equipment they have and also they have no good teacher that's why they suffer from many. In our country SSC and HSC level students are depends on coaching center. Lots of coaching center in our country almost all students go coaching places for solve their educational problem. That's why they pay 1000-1500tk for each subject in every month. Every family is not capable to pay this tuition fess many family face many problem for this problem. 10-20% people can able to pay. 10-20% people who are unable to pay this tuition fees that's why they can't continue their education life mid- level peoples are face lots of problem they can't stop their study and they can't continue study. Don't get proper support in their education institution. Those institutions have no government permission also.

My project goal is there is no need any coaching support every class and subject contain lecture and they can give exam use this software then they can get answer and they also can ask question in every lecture. Every student can use this software and they can solve their problem without give lots of money. In this education support system I will manage quality teacher lecture, evaluation, and exam. Every students can learn properly with good example. Our education ministry can monitor this system. My main focus is every people can learn without face any financial problem. Every student will learn good thing which is needed in our country students.

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2.1.2 Goals of this project:

- User friendly: system need to user friendly for access and use properly.
- Easy to Access: this system is developing for the students need to access properly.
- secure all resource: need to secure all resource because all resources for students and if lost resource it is very difficult to manage again
- Provide lecture, videos, and files.
- Student involvement in the web application

Objectives of the project:

- The objective of the project is to make an application so that student can access from anywhere and then can pay form anywhere in anytime.
- Easy to get any lectures videos, files, notes, exam, result, search option.
- Easily get any academic things their own location.
- There is no need to more experience for use this web application.

2.2 Research about the project:

In this country almost all student want to go school and collage all guardian also want this but problem is they are depends on coaching center. Sometimes teacher do not interest to give good lecture in a class and they also force student for coaching center. In our country every district is not developing some area is very rural where students are not get proper education resource and support or quality teacher. I already involve six years in coaching center I am a teacher. I already research about long time. So I know what is problem in our academic education sector and what is need them. In my point of view in service is badly needed in our country for develop our education sector.

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In our country about 30% people only get proper education support and 70% people are not get proper support. ICT is new subject include in Bangladesh education system but here is not enough teacher support and students do not get proper contain from them, now a days in our country almost 90% people use smart phone or computer and they also can use internet that's why I think about this system and I hope this system will very helpful for our country students.

2.3 Problem area:

This project is web- based and need to internet for access in our country every student have not laptop or computer and some are not able to buy internet they will face this problem. But it can removable problem our government arrange lots of computers for rural area almost school or college get computer now need to internet connectivity for access and their teacher need to help them for use computer and learn

Another problem is some student do not know how to operate the computer and how they can search about topic but here is also solution for them every school and college have some technical teacher they can train them for how to use the computer and internet. Then this problem also can remove.

2.4 Possible Solution:

I always know every problem has solution. Every system face some problem my system have also some problem like web- based system which is need to covet in mobile app for use all of student, and I will develop this system in mobile application. I will give guide line about system for all students then they can use it easily and there is no need to extra trainer.

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Chapter – 3 – Literature Review

- Discussion on problem domain
- Discussion about problem solution
- Comparison among three online education management system
- Recommendation approach

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Chapter - 3: Literature review:

This system I very help full in our country. In our country some of learn system already but they do not maintain proper academic syllabus system and they develop system with many subjects that's why students can face many problem in this system. That's I think about this problem and I develop this system for ICT subject. I already research about this subject in long time many of student in our country face lots of problem in this subject, they need proper support for this subject in last HSC exam 2019 almost 37% student fail in ICT in eight board in our country. Those student badly need to support in ICT subject.

3.1 – Discussion on problem domain:

Bangladesh has already some online education based website like ten minutes school they start their wok in April 2015 which is sponsored by Robi Telephone Company and government also approve it. But there is some limitation also they give service such as video contains and quiz system student cannot ask question because they do not implement this feature which is big issue for online education because this platform is also include school and college level student who do not understand everything easily that's why they have must some question in each topic. Bangladesh government 2013 officially include ICT is mind subject for HSC and SSC students but there is some problem arise this is newly start that's why teachers is not sufficient and some of student do not get proper support in ICT. 30% people get well support and 40% people get support but it is not good enough for them. Last year HSC exam ICT fail rate is 37% which is very bad for our country, that's why I develop this system for student only about ICT. In this system they will get proper support. But there is some problem like:

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- Proper data support
- Understandable user interface
- Internet connection all over the country
- Website need to efficient and first web site needed
- Technical Issue
- Computer Literacy.

Proper data support:

This project is web- based e-learn system. Here lots of student comes for learn. Data is needed for them, this is academic system student always wants to know everything about the topic, that's why need to store all related data support for them. If they do not get their question answer they do not come again here for learn. Data is most important thing for online based website.

Understandable user interface:

This system is for academic student, they are not good at using internet and computer. That's why needed to develop friendly user interface which can help them for easily access in system and they can easily find their topic and they can use this system without any training. That's why need to develop understandable user interface.

Internet connection all over the country:

Internet connectivity is more important thing for web based application. This system is web- based application for all of Bangladesh country student. ICT is technical subject which is needing to internet connectivity for learn many thing. I will provide all videos,

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contains and files in this system, if student want to access here they need to internet connection. Out government already works for it.

Website need to efficient and first web site needed:

This is web- based online education site it is always need to access for all student, here access lots of student that's why need to this web site efficient and faster for use. Every propel wants faster and efficient web site.

Technical Issue:

This application online based. Here lots of student will come for learn, but there is a problem will arise many of student have not high bandwidth or internet connection which is very important for this system, they also need to computer or laptop or mobile phone for access in this system many of student in our country live in rural area they have no technology.

Computer Literacy:

Many of students know how to operate computer but they do not know how to operate basic application like Microsoft word, Microsoft access and Microsoft PowerPoint and they also don't know how to organize their files. Basic knowledge will help student for participate on online class.

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3.2 – Discussion about problem solution:

This system is E-learn based system which is e-learn domain. In this time online education is very common for whole of the world most of the people learn from online site (Project Solution, 2019). Education business is one of the profitable place in every country. But every place has some problems those are given below:

Quality lecture:

Quality lecture is most important for this system. this site not only for one area but also whole of the country every student can access in this system they will come here for learn quality lecture which is need to clear voice, meaningful and maintain student syllabus.

Unable to pay internet connectivity:

Most of the student not able to pay internet bill because in our country internet connectivity is very high and everywhere is not available internet connection. That's why many of the students will not interest to come here to learn. That's why our government need to manage affordable internet price in everywhere in our country.

Feedback:

Sometimes it will be difficult for give feedback every student every day that's why I will give feedback in every week. In this reason some of student maybe feels bad for this. But I will try to my best for give feedback in everyday.

Unable to buy Device:

This system is online based that's why student need to device like computer, laptop, phone etc. which is costly many of student is not able to buy those devices. Our

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government already manages most of computer for many of school and college some so student does not get is support but I hope as soon as possible they will get this support.

3.3 – Comparison among online education management systems:

My project will be implemented based on this new idea. My project aimed is providing good quality education service in our country. My project wills beneficial for every SSC and HSC students in our country which is we needed and our government want. In this project I will give two type services one is free and one is paid. Everyone can take free lecture but anyone wants to give exam in a system and want solve paper and results then they have to pay for it then they also can ask question and I will give answer in every week in this system every student get all academic support then they do not need to go outside for learn anything. Here I will give everything.

Comparative Analysis:

- Steam: https://steamedu.com/about-us/students/

  Steam gives educational service. They also give education service, business, community etc.

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Best Features of this site given below:

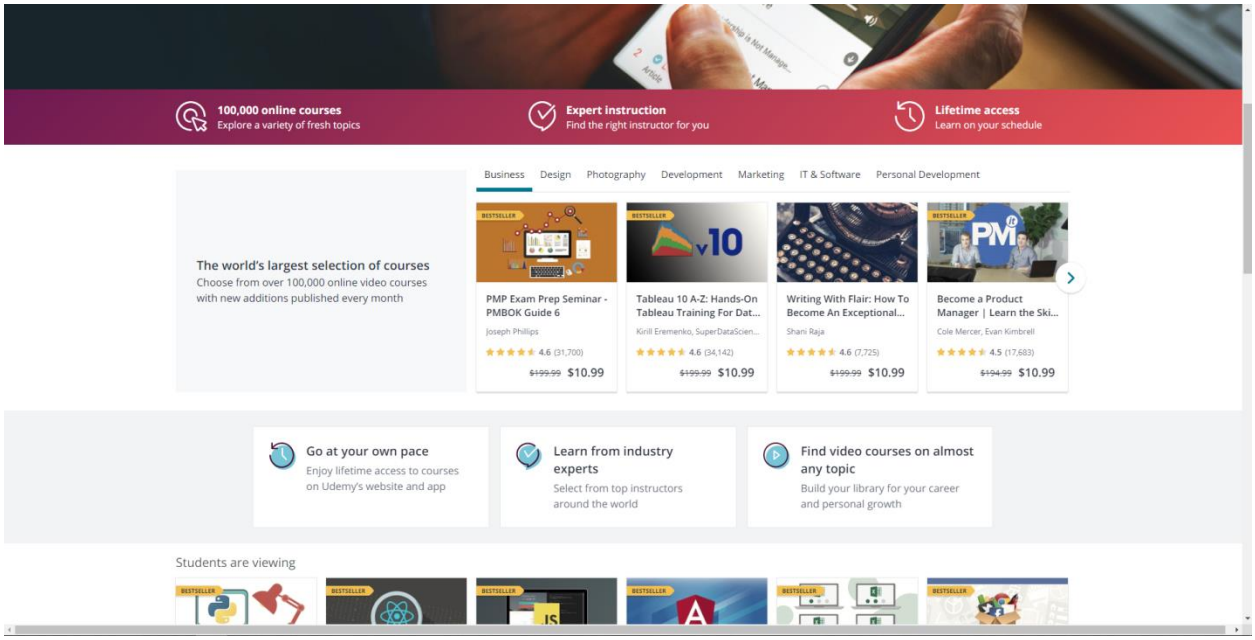
- News and blog
- Store
- Sign up
- Services

There is some limitation like:

- Different types of user and services that's why they can confuse
- There is not given actually any academic full course system
    - This site mixed in business, professional course and kid's course that's why it is not user friendly it's difficult to understand.

2. Udemy - https://www.udemy.com/

Udemy is online course system site they give different types of courses service.



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They have some good features like:

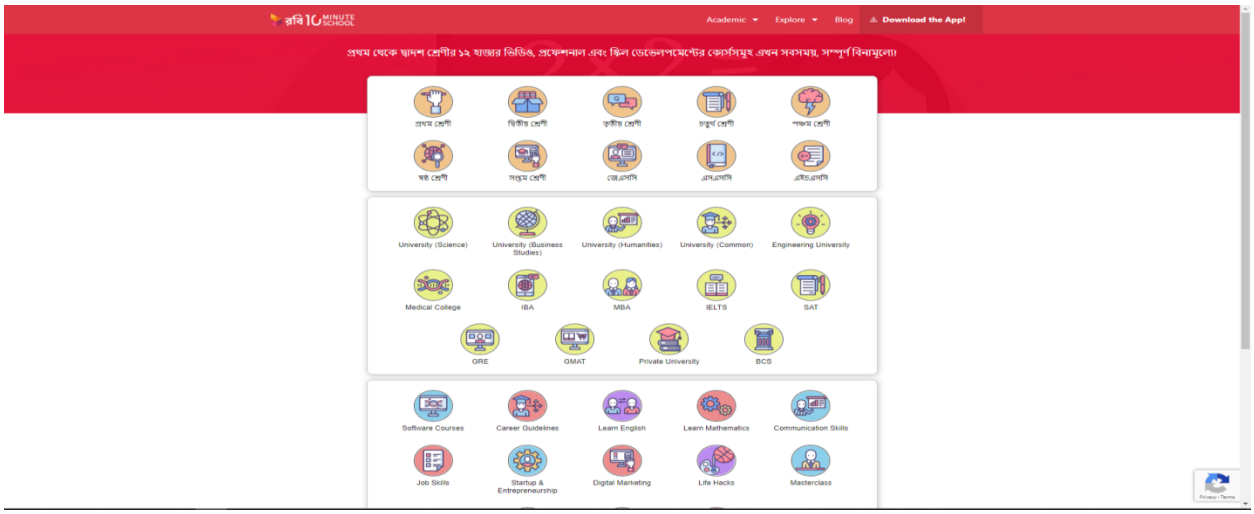
- Login system for all student
- They give two types service free and paid
- They give service for professional
- Every course is for limited time
- Payment system.

There have some limitation also like:

- Most of the course is paid and costly that's why many of people not able to buy courses.
- Every course has some duration time but there is not any warring system.
- This site is not for any academic courses.

3. 10 Minutes School. http://10minuteschool.com/

10 minutes is online education system in our country.



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They have some good features like:

- They organize all academic courses with video
- They also give quiz system with time limitation
- Downloaded app system connected with system.

There have some limitation like:

- There is no login system.
- There is no solving class system or no option for question asking.

3.4 – Recommended approach:

Discussing those system I analysis their features and functionality and their system but in this system I add some new functionality and feather and how those function and features will interact with user given below:

- User friendly
- Easy to access
- Efficient
- Online chat
- Understandable user interface

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Chapter- 4 (Methodology)

- User DSDM atern
- Why use DSDM
- Sections of Methodology

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Methodology is a process for software development use for system structure, design, and development phase. It is framework for software development. For development my I chose DSDM (Dynamic system management method) for my propose system which is part of agile framework. (Verma, 2019)

4.1- What to use Of DSDM atern:

DSDM (dynamic system management method) atern framework has some work in my system those are given below:

- DSDM helps to defined strategic goals of the project.
- DSDM always focus on time management and it helps to deliver system in actual time using time box and it helps to develop system in iterative way.
- In this methodology helps to customers business objectives.

Suitability of DSDM atern for the proposed system:

- Every project have some strategy for development time, time is very important for project every customers want to get their system in proper time. DSDM helps to solve this problem and it also allow to communicate with end user continuously for make sure to meet user requirements meets.
- In this project have lots of requirements that's why need to prioritize it properly for development in proper time. For manage prioritize user requirements need to use DSDM MoSCoW prioritization technique.
- DSDM helps to clear about system requirements and system objectives which is end user want to clear. It also helps to clear proposed system. DSDM is suitable for this system

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- DSDM very helpful for large project development because it works iteratively and it use time box. Large project manage very difficult because there is lots of requirements and features and limited budget and time in this problem DSDM help to develop and reduce problem if developer makes mistake in previous stage then can go back and solve the problem or user requirements change they can change it easily. It helps to reduce risk and uncertainty when they wants to change anything. (Agile Maturity, 2019)

Used techniques by DSDM:

MoSCoW prioritization:

MoSCoW prioritization helps to develop system requirements to prioritize. It has some part given below:

Must have:

In this part it helps to define the major function requirements without this system is not useful for customers.

Should Have:

In this part it helps to define most essential requirements band make the solution for benefited at all.

Could Have:

In this part it helps to define some important requirement which is not must needed if those requirements left there will not effect in system.

Won't have:

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In this part it helps to define which requirements is not needed in this system it helps to find out.

Facilitated workshop:

Facilitated workshop means arrange a session with end user and developer to discuss about the system problems.

Iterative development:

In this project I choose DSDM it helps to develop system use iterative in this frameworks give opportunity to development system if they want to change anything in previous stage there is no problem for that it follow cycle which is given below:

- It helps to identify the system task.
- It helps to complete the task which is planned.
- Measure the system work on solution.
- It helps to check system function and objection is meeting or not.

Time boxing:

Time box is help to finish system in actual time and meets user's requirements. There are different types of box those are given below:

- Start to end of the project which is help project time box.
- Delivery increment is use for increment time box.
- Engineering and exploration during the project is help to development time box.
- Time box in includes review and workshop

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4.2. Section of Methodology:

DSDM atern methodology has seven phases those are given below:

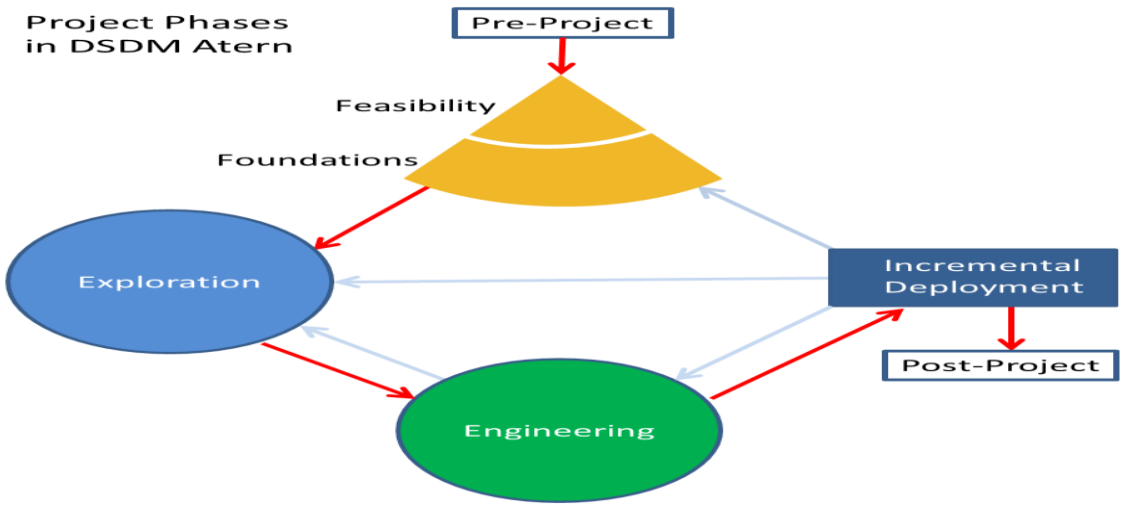

Figure 1: DSDM atern (https://en.wikipedia.org/)

- **Pro- project:**

In this stage includes system proposal, feasibility study and project budget given and project resource availability. In this stage there is some problem like sponsor and visionary is identified.

- **Feasibility:**

  In this phase helps to system budget solution, technique solution, business case and business plan. This phase also helps to identify the business project benefit.

- **Exploration:**

  Exploration phase helps to defining the system functional and non- functional requirements using Moscow prioritization.

- **Engineering:**

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In this phase help to discuss about system architecture such as system iterative, testing, system increment, and user requirements meet with system criteria those works help to develop in this phase.

- **Development:**

  In this phase help to system development site like develop system documentation, system architecture, system solution and release all in include development phase.

- **Post project:**

  This phase is use for development last planned system solution. Post project also help to find expected benefit.

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Chapter 5- Planning:

- Plan for project
- Plan for test
- Plan Risk Management
- Plan Quality management

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5.1 – project plan:

Project planning means about the project how it will work, start time, end time of the project, system requirements, functionalities, features development plan, system risk and system quality management and system proposed system planning details discuss.

5.1.1 Work breakdown structure:

Work breakdown structure means system architecture of the project bark intro small parts. This process helps to develop easier and efficient and every part have fixed time for develop that's why it help to save time and also help to develop whole project in actual time. This process helps to do complex work in project easily. Using breakdown process help to develop proposed system category and sub- category. This system Breakdown chart is given below:

Task Name	Duration	Start Time	Finish Time
Starting the Project • Looking for teacher • Research same type idea • Research and identify positive and negative site of my system	7 days	Saturday 10/05/19	Monday 10/14/19
Making the project Proposal • Before submit the project proposal and get feedback |	5 days	10/14/19	10/18/19
Analysis	5 days	10/19/19	10/24/19
Design • UI Design • Diagrams • Database Design	10 days	10/25/19	11/07/19
Development • Testing	10 days	11/08/19	11/21/19
Documentation	7 days	11/22/19	11/30/19
Final Project Summation	6 days	12/02/19	12/09/19

Figure 2: Breakdown Structure

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5.1.2 –Resource allocation:

Resource allocation means whole system resource divided in different part like system introduction, initial study, literature review, methodology, planning, feasibility, foundation, exploration, engineering and implementation. Critical appraisal evolution and lessons learned, conclusion part allocate for system analyst then user allocate for planning, testing, implementation then developer allocate for feasibility, lessons learned foundation, exploration, engineering and implementation and tester allocate for deployment and testing, lessons learned part. Here is given all allocate people and time duration for resource development:

No.	Tasks	Duration	Resource Name
01	Introductions	2 Days	Analyst
02	Initial Study	6 Days	Analyst
03	Literature Review	1 Days	Analyst
04	Methodology	1 Days	Analyst
05	Planning	6 Days	Analyst, User
06	Feasibility	5 Days	Analyst, Developer
07	Foundation	4 Days	Analyst, Developer
08	Exploration	2 Days	Analyst, Developer
09	Engineering	5 Days	Analyst, Developer
10	Deployment	10 Days	Developer Team, Tester Team
11	Testing	5 Days	Tester
12	Implementation	6 Days	Analyst, Developer
13	Evaluation	2 Days	Analyst, Developer
14	Critical Appraisal and Lesson Learned	3 Days	Analyst, Developer
16	Conclusion	1 Days	Analyst, Developer, Tester
	Total	59 Days	

Figure 3: Resource Allocation Table

5.1.3 – Time Box:

Time box is a methodology of DSDM freamwok. Most of system part is dobe by DSDM time box methodology. In this projkect in breakdown in 4 ways for reasource allaction and tast. Time box- 01 is for introduction, initial study, Literature review, methodology

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which is allocate for system anayst, time box- 02 is for planning, feasibilty, fundation, Exploration here is allocate analyst and developer. Time box- 03 is for Engineering, deployment, testing, Implemention is allocate for anayste, devloper, tester and user. Time box- 04 is for critical appraisal and evaluation, lessons learned and conclusion here is allocate analyst, developer, tester. Time box table given below:

Time Boxes	Tasks Name	Resource Name
Time box - 01	Introductions	Analyst
	Initial Study	Analyst
	Literature Review	Analyst
	Methodology	Analyst
Time box- 02	Planning	Analyst, User
	Feasibility	Analyst, Developer
	Foundation	Analyst, Developer
	Exploration	Analyst, Developer
Time box - 03	Engineering	Analyst, Developer
	Deployment	Developer Team, Tester Team
	Testing	Tester
	Implementation	Analyst, Developer
Time Box - 04	Critical Appraisal and Evaluation	Analyst, Developer
	Lesson Learned	Analyst
	Conclusion	Analyst, Developer, Tester

Figure 4: Time Box Table.

5.1.4 – Activity Network:

Activity diagram graph helps to show every part of system start and end time of every part and relationship with every part. This graph is draw left side to right side for sequential representation.

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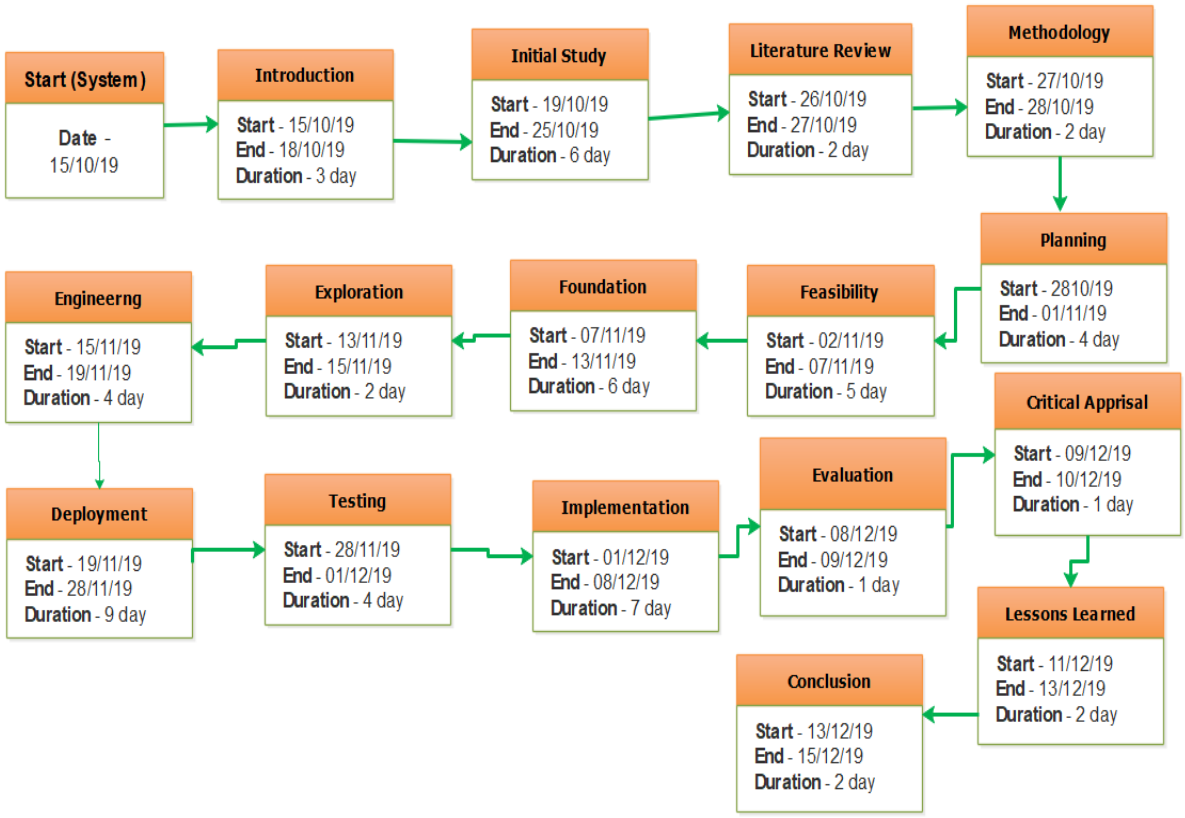

Figure 5: Activity Network.

5.1.6 – Gantt chart:

Gantt chart helps to development project and show every part of project time representation and start time and end time of every part. Gantt chart is very effective tools for visual representation for show time duration. Here is given Gantt chart for this system:

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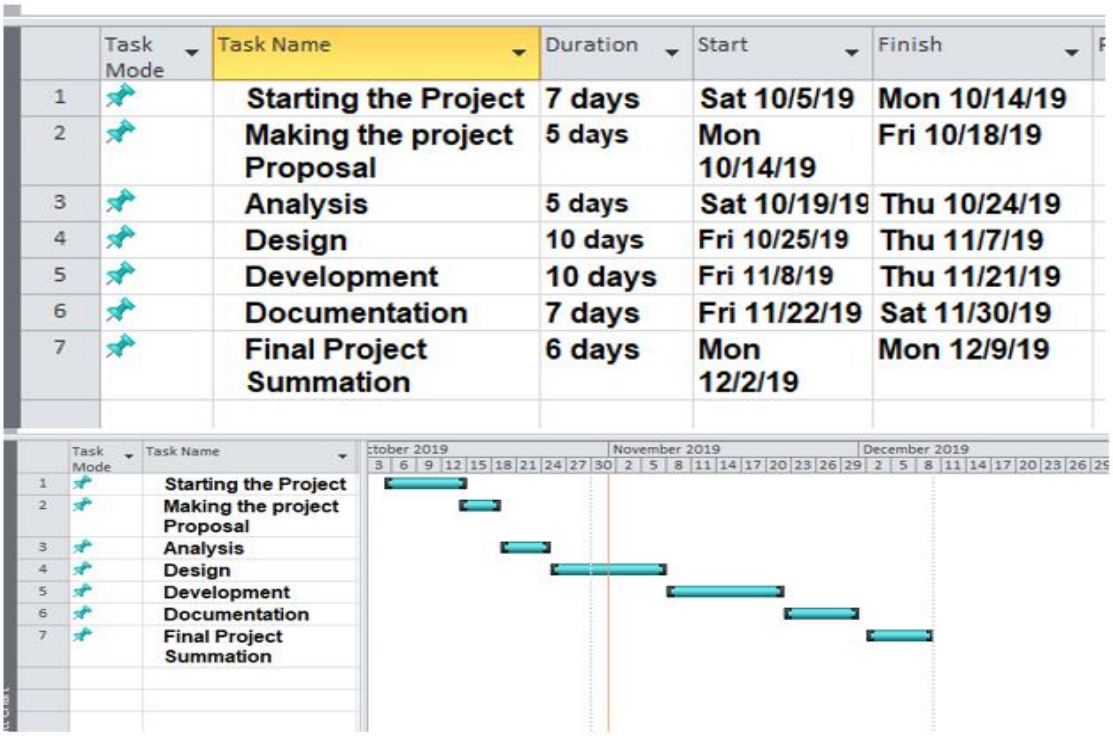

	Task Mode	Task Name	Duration	Start	Finish
1		Starting the Project	7 days	Sat 10/5/19	Mon 10/14/19
2		Making the project Proposal	5 days	Mon 10/14/19	Fri 10/18/19
3		Analysis	5 days	Sat 10/19/19	Thu 10/24/19
4		Design	10 days	Fri 10/25/19	Thu 11/7/19
5		Development	10 days	Fri 11/8/19	Thu 11/21/19
6		Documentation	7 days	Fri 11/22/19	Sat 11/30/19
7		Final Project Summation	6 days	Mon 12/2/19	Mon 12/9/19

Figure 6: Gantt chart.

5.2 – Test Plan:

Test plan helps to development system properly. It help to check system requirements, functions, features step by step and give output actual system requirements if anything fault in a system then it helps to find easily find out. It also helps to developed system is working properly or not and also help make sure system reliability and system risk.

5.2.1. Testing against time box:

Time box helps to develop project in proper time it helps to check every step of project after complete the step time box helps to clear about that time testing against time boxes given below:

Name	Example	S. no	Example
Time box			

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Time box resource	

Testing types	Steps of type	Actual Result	Expected Result	Comment
System testing				
Security testing				
Acceptance testing				
Unit testing				
Integration testing				
System testing				
Reliability testing				
Performance testing				
Module testing				

5.2.2 – Required Testing:

Every system has two requirements testing needed which are functional requirements and non – functional requirements. Those testing are given below:

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Functional testing:

- **System testing:**

  System testing means how system works, how the system running check system requirements and functions and check system output.

- **Unit testing:**

  Unit testing works in indusial part of the project. It helps to check every part of project when it check every part of project that time only check that part and that time it do not check another part.

- **Integration testing:**

  Integration testing helps to test the project. It's mainly work combination of unit testing. It helps to system testing groups of unit testing. When the entire project unit is works accurately then it will consider successful test.

- **Acceptance testing:**

  Acceptance test is the mainly use for check user acceptance in this test user directly involved for system testing. This testing mainly use for user satisfaction.

Non- Functional Testing:

- **Security testing:**

  Security is most important part of the system. This testing helps to check internal and external security of the system. Internet world is very risky thing is security, without secure system can attack by them. Like malware attack.

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- **Reliability testing:**

Reliability testing is mainly important for check system operation condition like system speed , system failures when operation is running, in this testing user and developer are involve for testing.

- **Usability testing:**

Usability testing is very important for system, every user want usable system, where user can use the system easily, that's why need to system friendly, it helps to check user satisfaction, user attraction.

5.2.3 – Test Case:

For develop the system there is need different kinds of software test case for testing, here is given every test, name of test and what types of consider all of the system given below:

Test Case No			
Test Type			
Test Description			
Test Steps	Expected Result	Acual Result	Comment

5.2.4 – User Acceptance Test Plan:

User acceptance plan test mainly user for system step by step how system perform and it helps to check system requirements, user acceptance is one of the most important part of the system. That's why need to test plan for user acceptance.

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Test Case No			
Test type			
Test Title			
Pre- Condition of Testing			
User Name			
Act as			
Test Steps	**Expected Result**	**Actual Result**	**Comment**

5.3 – Risk Management:

For development the system risk management is most sensitive matter. Every system need ensure the risk management. Many of risk m In IT related project some are given below:

- Lack of IT Knowledge
- Not fire wall system
- Poor level developer use
- Not proper maintain system management
- No use specialists for system development.

Risk management helps to manage system security properly form external and internal attract. There many kind of risk management process some are given below:

- Risk Identification

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- Perform Quantitative Risk Analysis.
- Perform Qualitative Risk Analysis.
- Plan Risk Response
- Monitor & Control risk

Figure 7: Risk Management (https://www.kovair.com/)

5. 3. 1. – Risk Identification:

Risk identification is very helpful for the project , it helps to identify the project risk which part of the project is affected and which objectives are affected, it helps to improve system performance, quality and it also helps to reduce time and cost. After develop the system it help to manage business risk like which business aims and objectives are affected, market shares and business reputation etc., it also help system safety risk identification and reduce the rate of accident and minimal loss of days.t technical risk also help to identify and help to improve system technical objectives, performance and system functionality then it help to manage security risk identification. Some risk identification explanation with impact given below:

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Types of Risk	Description	Objectives
Project Risk	It help to identify the project objectives.	Time, cost, performance and quality.
Business Risk	It helps to identify the business objectives	Reputation, profitability, market share
Safety Risk	It helps to identify safety objectives	Minimal lost days and accident rate low
Technical Risk	It helps to identify technical objectives	Functionality, performance
Security Risk	It helps to identify security objectives	Security of information, personnel

There many types of technique for risk identification here is given a sample template of risk identificatio0n for my proposed system.

Risk Identification					Qualitative Analysis			Risk Owner	Risk-Response Strategy		Monitoring and Control	
	SMART Column	Risk Trigger	Impact Area	Affected MDL/WBS Level 2 process	Probability	Impact	Risk Matrix		Strategy	ACTION TO BE TAKEN (Include advantages and disadvantages)	Status Interval or Milestone Check	Date, Status and Review Com
	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
t or s, ty) or	Detailed description of the risk. Includes information on the risk that is Specific, Measureable, Attributable, Relevant and Timebound. Describe the consequences of the risk to scope, schedule, budget or quality.	Triggers are indications that a risk has occurred or is about to occur. Used to determine when to implement the Risk Response Strategy. For example: Wetland impact is greater than 1/2 acre.	Is the primary impact to the scope, schedule, or budget?	Which WBS element will be modified as part of the response strategy? For example: PC-19 Environmental Permits	Assessment of the likelihood of occurrence. Valid entries are Low or High.	The severity of the risk's effect on the projects objectives. Valid entries are Low or	High: Substantial impact on cost, schedule, or technical. Substantial action required to alleviate issue. Low: Minimal impact on cost, schedule, or technical. Normal management	Name of the person or office responsible for managing the risk event.	Avoid, Transfer, Mitigate, Acceptance, Exploit, Share, Enhance (See the Risk Management Guide for strategy definitions.)	Develop options and determine actions to be taken in response to the risk event. Immediate action may be required at the time of identification. Estimate value of risk and estimate cost to respond.	For example: Completion of wetland delineation expected: 2/28/00	For example: Last status up 4/30/00. Wetland delineati completed 3/15/00. Over 1 of wetland was delineate action is being taken to expe meetings with regulatory agencies & expedite the effo provide appropriate wetla mitigation & attain proje permits
				WBS 165 Perform Environmental Studies and Prepare Draft Environmental Document (DED)			Probability H L L H Impact					
							Probability H L L H Impact					
							Probability H L L H Impact					

Figure 8: Risk Identification Sample (*https://www.engineeringmanagement*, *2018*)

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5.3.2 Risk Assessment:

Risk assessment is mainly use for risk determine which kinds of risk will occurs in a system. There are some kind of risk assessment is given below:

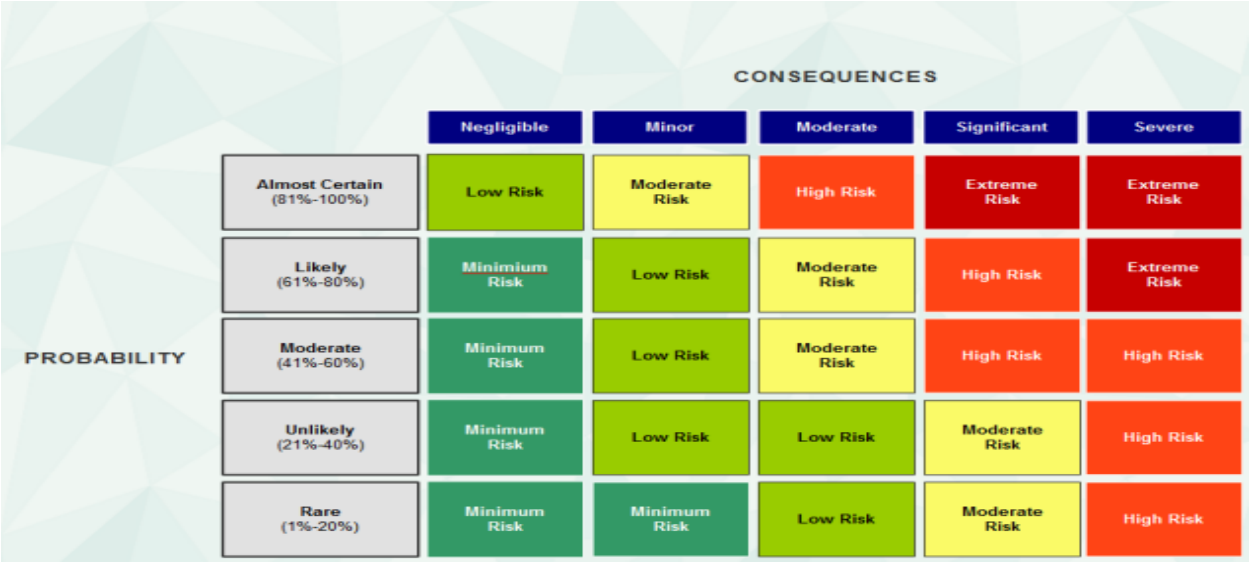

Figure 9: Risk Assessment Matrix (https://www.biggerplate.com/, 2014)

5.3.3. –Risk Precaution:

It helps to reduce the risk every system has many of reason for development like business perception, education perception here is include different types of risk those are given below:

Risk Name	Description	Precaution	Impact
Business risk	There is no need to any other software	This can be help risk problem solve using market research and help to take user review	High
Technical risk	When developer change the user requirements frequently	It helps to understand user's requirements properly.	Medium

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	its can be face in technical risk		
Internal risk	It helps t change of loss data from system.	Data backup and ensure the security of database system management.	High

5.3.4 – Steps taken for possible risk:

Some to risk can be arise in future, there is some of step of possible system is given below:

Risk Name	Description	Taken step	Impact
Business risk	No need other software or existing system.	Analysis related system and checking out the existing system process.	Medium
Technical risk	Frequently change requirements during developing	Being an academic project, there is no outside client	High
Internal risk	Chance of losses data from system	Set daily backup system in the cloud.	Medium
External risk	Government policy change	Government rules regulation checks timely to keep up to date.	High

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5.4 – Change Management

5.4.1 - factors that might cause change:

In my system there is some change is needed. This is my final project in my education there only one person can act for different role in individual time. Some of changes of my system is given below:

- User interface
- Change time box
- Some technological changes
- Change Some of functional and features

5.4.2 – DSDM atern change:

DSDM atern framework always support for change system iteratively. Developer can change function or features easily and they also can change user requirements. Sometimes need to go previous stage to change something DSDM atern also support this problem. That also support time box.

5.4.4 – Change Workshop:

Every project has goals. Everyone wants to achieve their goals. Project is not for only use personally. It is for get customers customer requirements, that's why need to workshop with customer and developer for meet business requirements and achieve business goals. It help to get solution of the whole system development and needed user requirements.

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5.4.5 – system requirements changes allow:

Every system when developer start to develop they face this problem because requirements always changeable but some requirements is very important for the system that time they need to change those requirements. User requirements is not finish able it is always changeable but some o common this which are need to change. System change is not good for system because here is include time box, resource, cost, risk, quality etc.

5.4.6 – Key Decision taker for change:

When development a system there is arise many of problem and they also need to change some of functions those problem do not solve one person here is include analyst, developer, and tester. This people are take decision for change some requirements for development.

5.5 – Quality Management:

Quality management helps to ensure the project quality and its output. For ensure the quality here is some objective those are given below:

- Identify the system acceptance.
- Identify the system bugs and solve this.
- Maintain system quality
- Identify the control quality

5.5. 1- Rules applied to maintain quality:

- **Quality control:** For maintain system quality there is maintain some rules to make standers proposed system.

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S. N.	Functions Name	Physical Standards	Activities Quality Assessment	Intervals Assessment
01				
02				
03				
04				

Figure 10: Quality Control Sample

- **Quality Assurance:**

Quality assurance use for identify the system design of the product. Development time developer change iteratively system features or functionalities that's why most provably system quality can be damage. For development system life cycle quality assurance is used for this proposed system.

S. N.	Process of Action	Process of Standards Acceptable	Process Phase Information	Intervals Assessment
01				
02				
03				
04				

Figure 11: Quality Assurance sample

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Chapter 6 – Feasibility study

- Economic Feasibility
- Operational Feasibility
- Technical feasibility
- Cost Benefit analysis

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6.1 – Economic Feasibility:

This project is online educational based application system. Every project have some budget for development, before development the system there is need to analysis about the economic feasibility. For development this project here is also need economic feasibility because this system need domain name, hosting cost, internet cost, pc, and printer and need a server for maintain all system and user related data, all of cost analysis in include economic feasibility. After development the system here is also include additional cost for system publication.

Component Name	Component cost
software	25,000
Hardware	1,56,000
Web hosting	4,000
Others	30,000
Total cost	2,15,000

6.1.1- Software price:

This project development technology is raw PHP that's why needing XAMPP and MySQL for development this project both software price given below:

Software	cost
XAMPP	15,000
MySQL	10,000
Total cost	25,000

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6. 1. 2 – Hardware price:

For development this system here is need some hardware cost those are given below:

Name of Hardware	cost
Personal Computer	80,000
Printer	4,000
Server	50,000
Router	2,000
Network component	10,000
Others	10,000
Total cost	1,56,000

6.1.3 – Hosting Cost:

Every system when need to publish they need web hosting for unique name for system, for this system hosting cost given is 4,000.

6.1.4 – Others Cost:

For development this system here is also need other cost those are given below:

Name of other Cost	Cost
Employee training	15,000
Management cost	7,000
Cloud cost	2,000
Security cost	6,000
Total cost	30,000

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6.2 – Operational Feasibility:

This proposed system will be beneficial for every student not only specific people but every students will get benefit in two ways one is free one is paid. But fees will very chip which is affordable. Who will register in a system their data will save in a server. Data like student information, teacher information, student report, student attendance system, payment system, weekly report, monthly report, yearly report, add /update,/read/delete item and sub item monthly cost , video, files, update notification, notice, search file ,videos , edit student profile , database backup, monitor lecture , file videos and history daily, weekly and yearly report.

6.3 – Technical Feasibility:

This proposed system is online education web-based application in this system teacher can use this system easily they can upload their recourse for student students, students can access the system after they register the system, admin can monitor all of things. For using the system is needed one computer for admin , one server for save data which is teacher upload for the student and need MySQL database and need some print that's why need one printer. For all the process need internet connection for connectivity and upload and download videos, files, resource, content etc. in this part helps to solve technical problem. This probed system here I use PHP, database, javaScript, jQuery etc. here also use some additional hardware and software for development the system.

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6. 4 – Cost Benefit Analysis:

Cost benefit analysis means how much money need to invest in a project and how much profit will come from the project that is cost benefit analysis my system cost benefit list given below:

Quantitative analysis	One year	Two year	Total cost
Hardware	1,56,000	20,000	1,76,000
Server	4,000	3,000	7,000
Software	25,000	5000	30,000
Development	1,00000	10000	1,10,000
Management	50,000	6000	56000
Others	20,000	1000	21,000

Figure 12: Cost analysis for this project

Quantitative analysis	One year	Two year	Total benefit
Benefit Productivity	130000	2,00,000	3,30,000
Saving structural changes	50000	80,000	1,30,000
Improve business process	80000	1,20,000	2,00,000
Total benefit	2,60,000	4,00,000	6,60,000

Figure 13: benefit for this project

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Chapter – 7: Foundation

- Problem Area Identification
- Rich Picture
- Specification Area Identification and Description
- Possible Solution
- Over all requirement list
- What Technologies to Implemented
- Recommendation And Justification

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7.1 – Problem Area Identification:

Every system have many of problem will arise when system developer start to develop the system. Those problem need to identify for solve system problem area; there are techniques for identification like interview, questionnaires and observation. Those techniques can help to identify the problem area of my system.

7.1.1- Interview:

Interview technique can help identify the system problem area. In this technique end user directly involve in system. Before development the system need to interview from the users requirements meet system and there are some ways to take interview from end user like face to face interview, over the phone call, user interest and user requirements based system etc. those interview gives more data for development the system and it helps to solve problem area and also help to get project goals.

7.1. 2 - Observation:

Observation is a technique for collect actual data from user. When take interview from user that time they gives different types of information and data, all are appropriate for the system. Observation technique helps to identify which are good data and bad data for system. There are some actual reasons for observation is given below:

- Help find out analytical problem
- Helps to find out system business requirements
- Helps to find out system lack of functionalities

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7. 1.3 – Questionnaires

Questionnaires is good technique for achieve business goals. It is mainly use for users. User when give information that time they give some question answer which are analyst or system related people ask. They set sort question or MCQ types question because user have no lots of time for give answer that's why need small types questions, it help to get very important data from user. Here is given a sample for questionnaires:

	strongly agree	agree	uncertain/ not applicable	disagree	strongly disagree
1. Initially I was able to contact the service easily	☐	☐	☐	☐	☐
2. I was informed when I could expect an answer	☐	☐	☐	☐	☐
3. The answer provided was sufficiently detailed for my needs	☐	☐	☐	☐	☐
4. In general I found the service to be helpful	☐	☐	☐	☐	☐
5. I had to contact the MI centre more than once before I received a response	☐	☐	☐	☐	☐
6. I received the answer to my enquiry too late for it to be useful	☐	☐	☐	☐	☐
7. The information was received when requested	☐	☐	☐	☐	☐
8. I did not receive the information that I required	☐	☐	☐	☐	☐
9. I received the answer to my enquiry within the time requested	☐	☐	☐	☐	☐
10. I was happy with the answer to my question	☐	☐	☐	☐	☐
11. My question was answered in full	☐	☐	☐	☐	☐

Figure 14: Questionnaires sample (http://templatelab.com/ 2019)

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7.2 – Rich Picture:

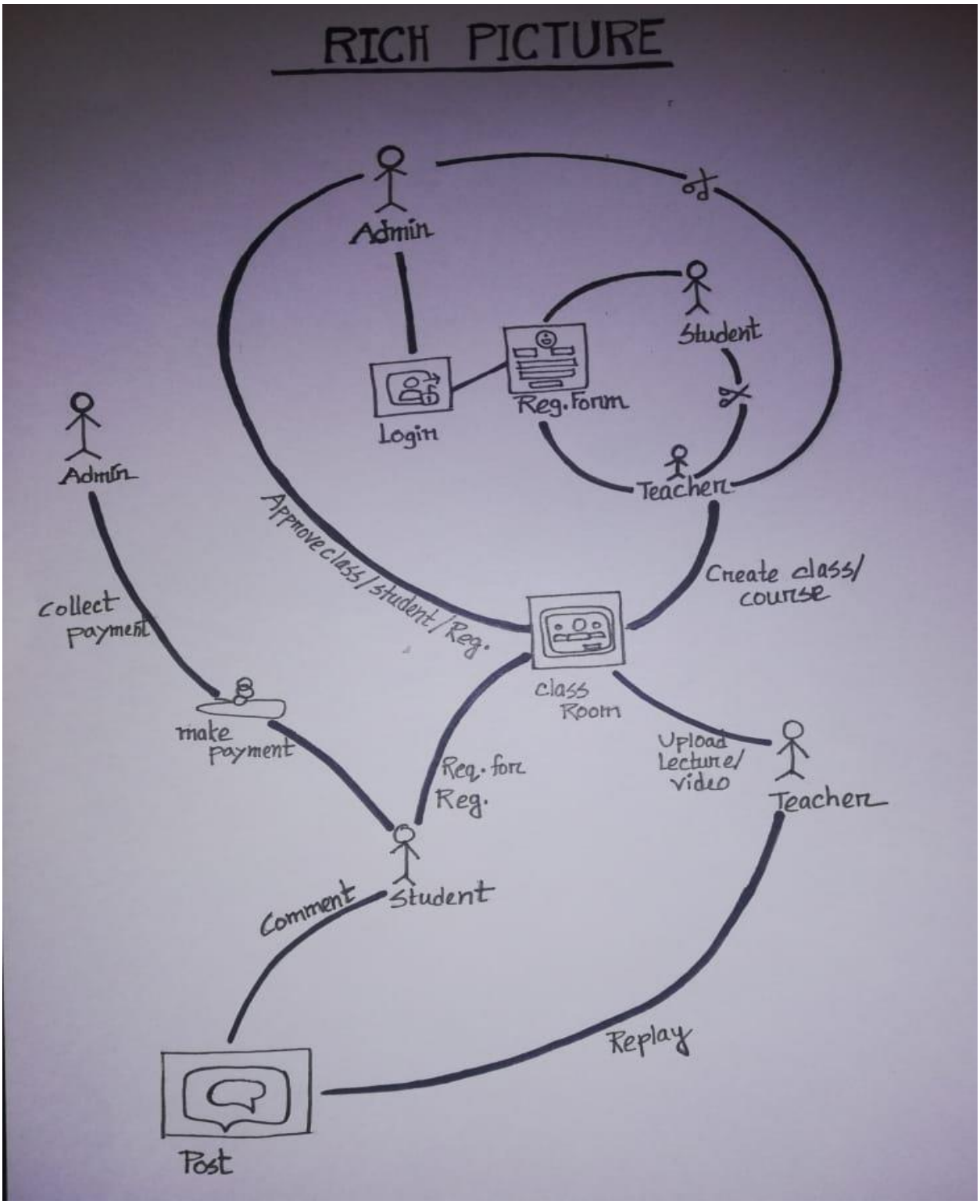

Figure 15: Rich Picture

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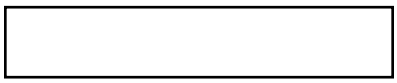
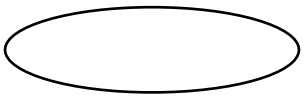
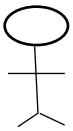
In this system rich picture helps to me for development this system process properly which process is connection with another process. It also helps to represent the system how works user with admin.

It is for process 

Issues for 

Conflict for

Actor for 

Connection for

7.3 – Specific Problem area identification

In every project developer and system analyst face some of problem because user requirements is changeable, it is very common issue in in field. In my system there is also some problem also those are identified by user's interviews, questionnaires, observation and rich picture. Some of my system problems are given below:

- Maintain lots of data
- System security issue
- Data backup system

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- Regular feedback and live chat
- File management.

7.4 - Possible solution:

Every problem has some solution, every system also face some problem like user requirement because user requirement always changeable it is never finish. Another problem is time management when developer develop the system that they are change some user requirements that's why it is very difficult to develop the system proper time. Every project has a limited budget for development but when they change user requirement and they add extra features that time project budget some time will increase it is another problem that they need to analysis fist before development the system. this is educational system that's why here is lots of data need to manage that's why need to buy server or rent cloud service it helps to data backup, security and file management. This is startup system that's why cloud is the best solution for that problem.

7.5 – Overall requirements list

In this project there are two types of system requirements those are given below:

7. 5. 1 – Functional requirements:

- Teacher/admin/ students login facilities
- Teacher/admin/ students update their profile
- Admin can create/ update/ delete student and teacher profile
- Admin owner can create database backup file and restore database backup file.

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- Admin owner can create/ update/ delete / search student and teacher information.
- Admin owner can see all content
- Admin handle daily, weekly , monthly and yearly report
- Admin maintain student demand, wants.
- Admin can create course and appoint teacher.
- Teacher can see his lecture comments and notification and he/she can give answer
- Admin can see all information students and teachers
- student can see their notification
- student can give exam
- student can see result and solution
- Teacher can see only assign this course contain and exam paper and check the copy and give solution.
- Student can ask any question about the lecture
- Admin assign course teacher
- Admin can post notification
- Admin can see the history of every students and teachers
- Admin can add file, videos
- Admin can change the UI background color/change theme/close all the window one click.
- Student can see all the courses

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- Every topic must need to complete after he /she complete the topic the he/she get access to see another topic.
- Admin, teacher and student logout facility.

7.5.2 – Non – Functional requirements:

- Validation and verification
- Security
- Friendly
- Reliability
- Efficiency
- Testability
- Response time

7.6 – what Technology to be implemented:

For development this system here is used different types of technologies for 21st centuries to access the in this system. This system is web – based application system that's why technologies also include server for web – based application.

7.6. 1 - server application

In this system here is server application is needed because it is online based education system here lots of student will access for collect data for learn that's why need to store lots of data for them, it also helps run on the student machines and it also help configure for carry on the task. It helps to run more machines in same time, it helps to faster application and give some security risk.it is highly costly for buy, it helps to system robust and faster, it need to install on every users machine.

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7. 6. 2 – Web application:

This project is online based educational system. For use this system there is need web browsers for access because it is computerized program. In this application use HTTP protocol for files transfer data. It helps to run more than one computer in same time. There is no need to install anything and it also help easy to access in a system, uniform resource locator driven application properly, there is need internet connection for access in this system, it helps to system faster and it will support all kind of browser.

7.7 – Recommendation and Justification:

In this system I think server application is best. It helps store data. In this system here needs store lots of data for student. This system will use whole of the country student and those student will access this system from difference types of place. Many of student will access in this system in same time and they also try to access in same topic. Server application helps to access in same time in more than one machine in same time. It help to manage lots of user at a time. That's why my recommendation is server application a best for this system.

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Chapter – 8 – Exploration

- Business Process modeling and notation
- Requirement specification for problem domain
- Prioritized requirement list
- Requirements catalogue
- Prototype of new system
- Initial Class Diagram

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8.1 – Business process modeling and notation

Business process modeling and notation is mainly used in a system for clear concept for initial business process of the system.

Here is given business process modeling and notation use for this following system.

BPMN

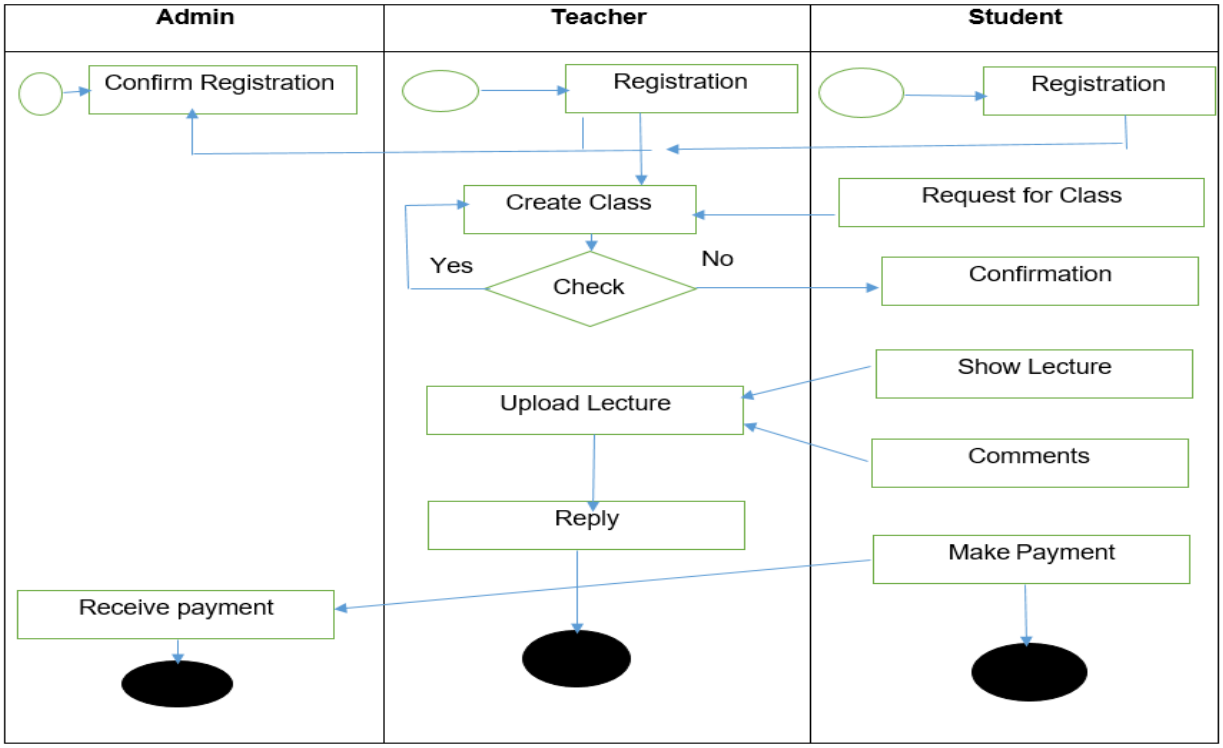

Figure 16: BPMN System Diagram

This diagram show the all the process of this system, how teacher and student do registration and then how admin confirm their request. If students face and kind of problem in lecture then they can comment, they also see their lectures and there is a payment system for the student they can easily send their money and admin will give confirmation. All of process is given in this diagram.

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8.2 – Requirement specification for problem domain

In this project here is lots of requirements for user. Some specific requirements problem for specific domain those are given below:

- In this project there is no easy to track all videos, files etc. this system is for academic student in our country. There is some kind of online education system already but those are not organized for academic syllabus. But in our country most of the student do not get proper education support from their school or college that's why need to some academic subject based online system in our country for those students. Then they will get proper support and they do not need to go coaching center for learn.
- In our country every school or college more than 70 student attend in every class. This number is huge that's why sometime teacher unable to give his/ her lecture properly. Online based education system can solve this problem properly and it will best support for all student. This is 21st century running, now everything is technology based.
- Now a day's ICT subject is very challenging subject for lots of student. Many of student go not get proper teacher for learn, some college has no actual ICT teacher and some teacher are force their student for come their coaching center. Many of student have no enough money for pay. But in this time most of the family has smart phone or computer and internet is also get low price. This is the time to develop our country. In this system will provide all ICT based videos lecture, files, and student requirements. (Software Testing, 2019)

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8.3 – Prioritized Requirements list

In this project there are many kind of techniques to prioritize the requirements.it will help to find out which system requirements is most important and which are not for this system. In this proposed system all system requirements are prioritizes using MoSCoW. Here is given MoSCoW Prioritize:

Must have:

Must have section is most important requirements of this system which is needed for this system development. Without those requirements this system will useless.

- Admin, student, teacher login facilities
- Manage student
- Manage teacher
- Manage courses
- Manage academic content, lecture, videos, files
- Manage profile
- Manage exam
- Manage result
- Student registration
- Manage data
- See daily questions
- Monitor all the courses
- Payment system
- Parches course

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Should Have:

Should have section is define which requirements is important but not essential for this system. For include those requirements system will benefited.

- Search Course, file , videos
- Backup database
- Recover password
- Teacher can see student copy

Could Have:

Cloud have section is define which requirement is not needed but those requirement is help to give information and those requirements can left.

- Update theme
- Teacher can chat with admin
- Student can update their information
- Student can buy many courses

Won't Have:

Won't have section which is valuable for the system but this is not necessary to implement in long time.

- Student teacher can update their profile
- Student can compare course content
- Student can save some files

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8.4 – Requirement list

In this system there is some requirements list those are given below:

Functional Requirement for registration:

Name of Requirements	Registration		
Source	Sign off	Priority	Requirement ID
Teacher and students	Student and teacher	Must have	112
Functional requirements for student and teacher registration : **Students and teacher need to register in this system for access. Without registration they cannot access this system.**			
Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Registration for login	1000 every day	2000 every day	

Requirement list for add student and teacher:

Name of Requirements	Add student and teacher		
Source	Sign off	Priority	Requirement ID
admin	admin	Must have	116
Functional requirements for add student and teacher: **Admin can add student and teacher if they give valid data.**			
Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Registration for login	1100 every day	21000 every day	

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Requirement list for login:

Name of Requirements		Login	
Source	Sign off	Priority	Requirement ID
Admin, Teacher and Student	Admin, Teacher and student	Must have	111
Functional requirements for admin, student and teacher: **Students, teacher and admin need to login this system for user. Without login they cannot add student and teacher, student do not access for take course this system.**			
Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Registration for login	1500 every day	2300 every day	

Requirements list for lecture upload:

Name of Requirements		Upload video, files	
Source	Sign off	Priority	Requirement ID
admin	Teacher and admin	Must have	123
Functional requirements for upload lecture : **After complete registration teacher can upload course related data like lecture videos, file etc. Admin also can do this.**			

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Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Lecture upload	10 every day	20every day	Students can see lectures

Requirements list of comments/ ask question:

Name of Requirements		Question	
Source	**Sign off**	**Priority**	**Requirement ID**
admin	student	Must have	222
Functional requirements for student questions/comments : **After complete registration in this system. Then they can take course and watch lecture. If they do not understand any topic or they have any question about topic they can give comments.**			
Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Student question/ comments about topic	1500 every day	3000 every day	Every student can ask question related topic

Requirement list of feedback:

Name of Requirements		User add	
Source	Sign off	Priority	Requirement ID
admin	Teacher	Must have	333
Functional requirements for feedback each topic:			

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Some student does not understand all of topic. They have option for ask question and there option to give answer. Teacher will solve those question answer which is feedback system			
Non – functional Requirements:			
Description	Value of target	Acceptance value	Comments
Feedback	1000 every week		Every student will get answer

8.5 – Prototype of this system:

Prototype of the system means initial step to interface design. Here is given some prototype of this project those are given below:

Here Is given LearnBD index page.

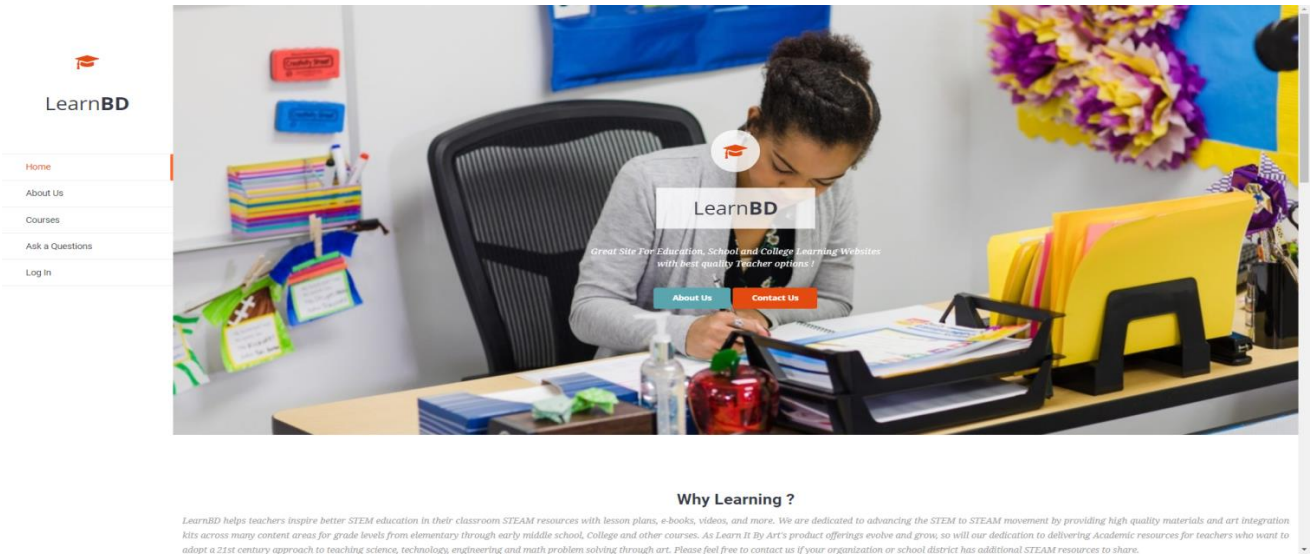

Figure 17: Index page of this system

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Here Is given LearnBD Login page

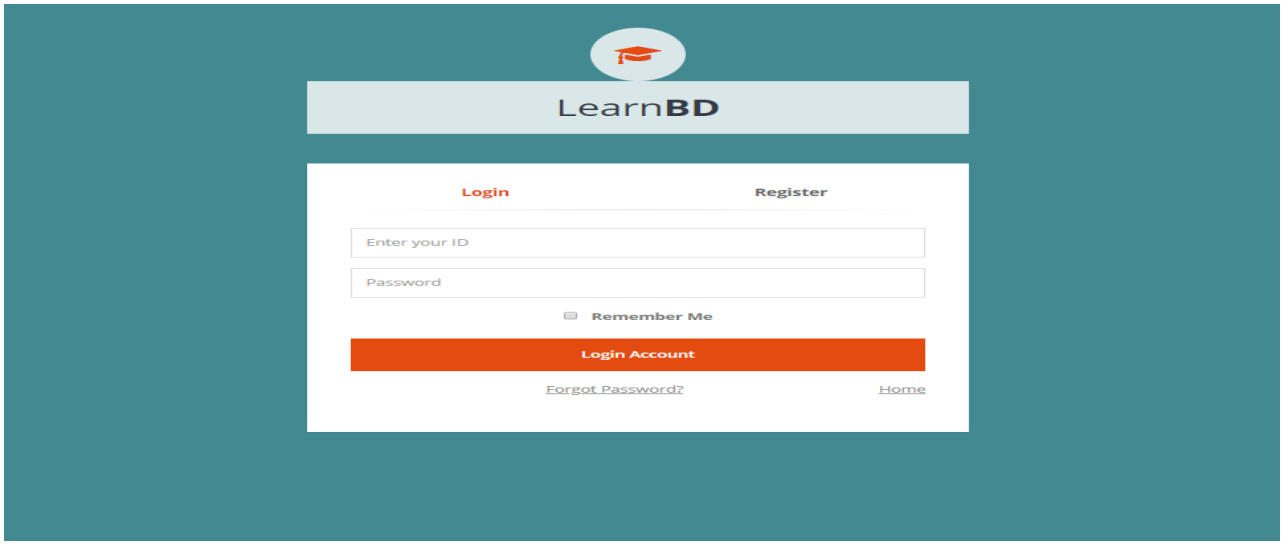

Figure 18: Login page of this system

Here Is given LearnBD Registration page

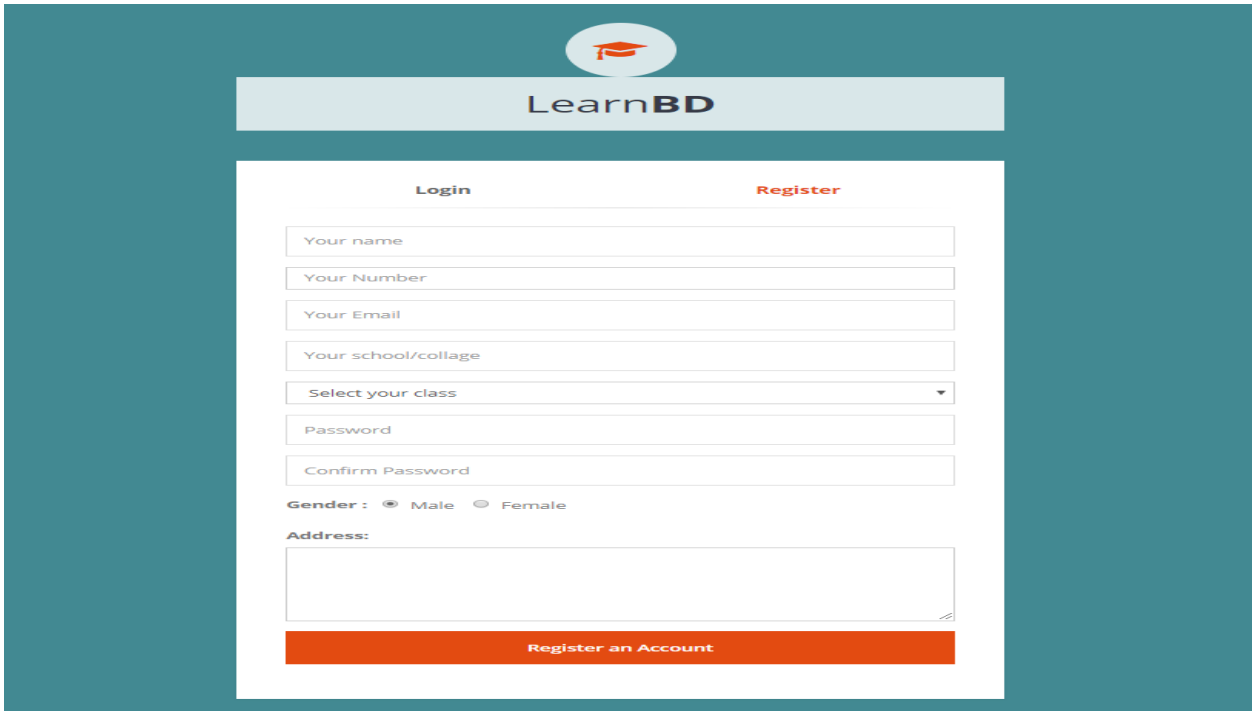

Figure 19: Registration page of the system

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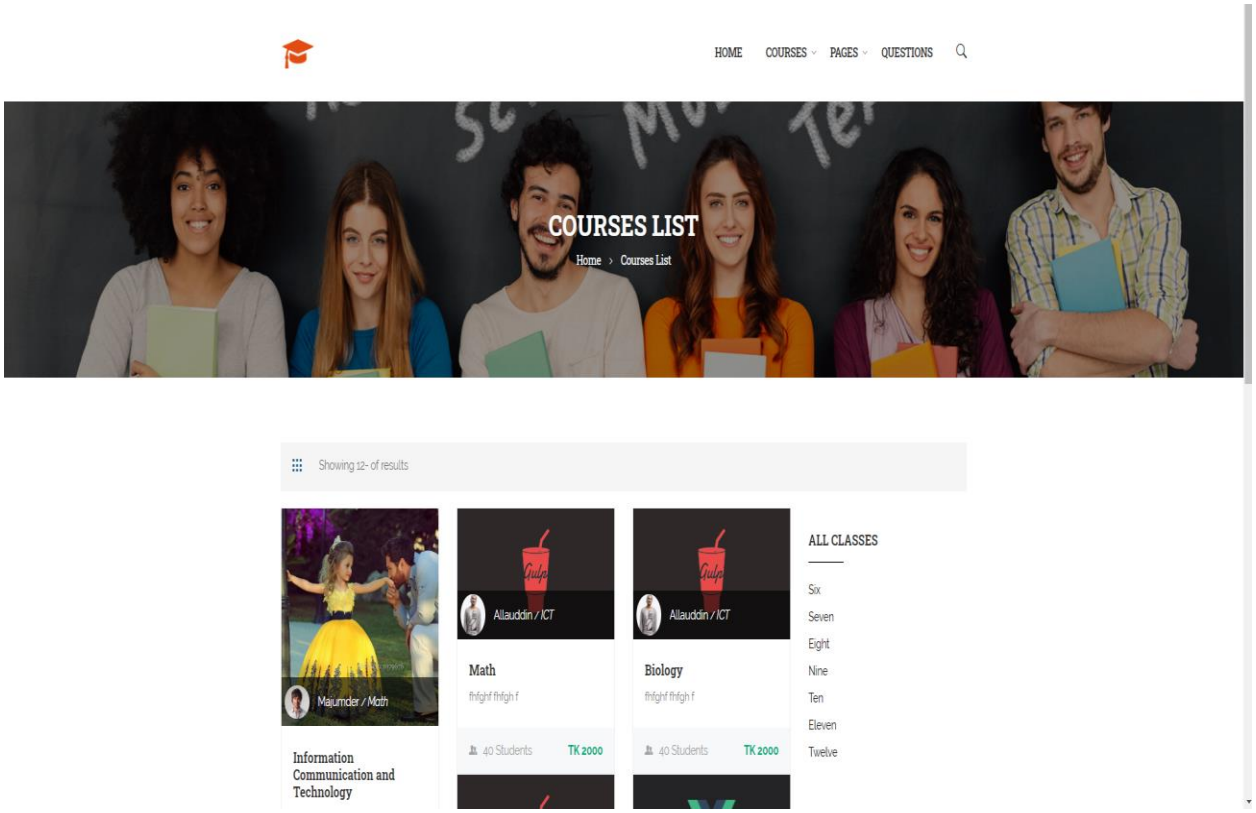

Figure 20: student page of this system

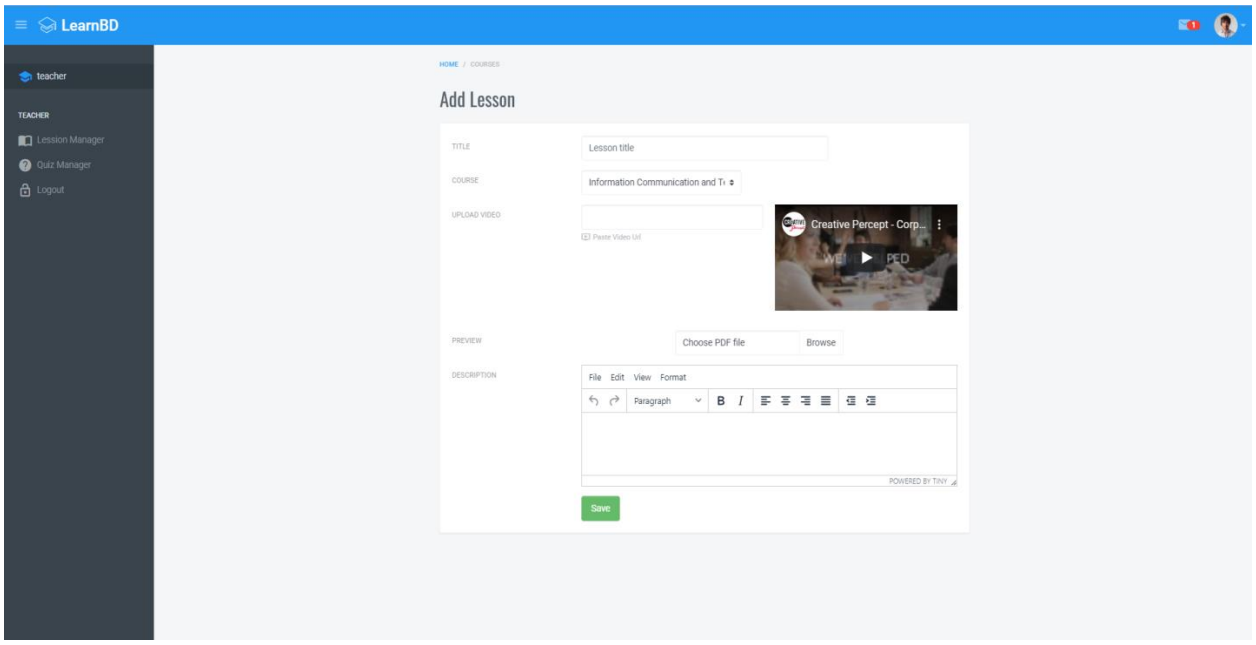

Figure 21: Lecture add prototype

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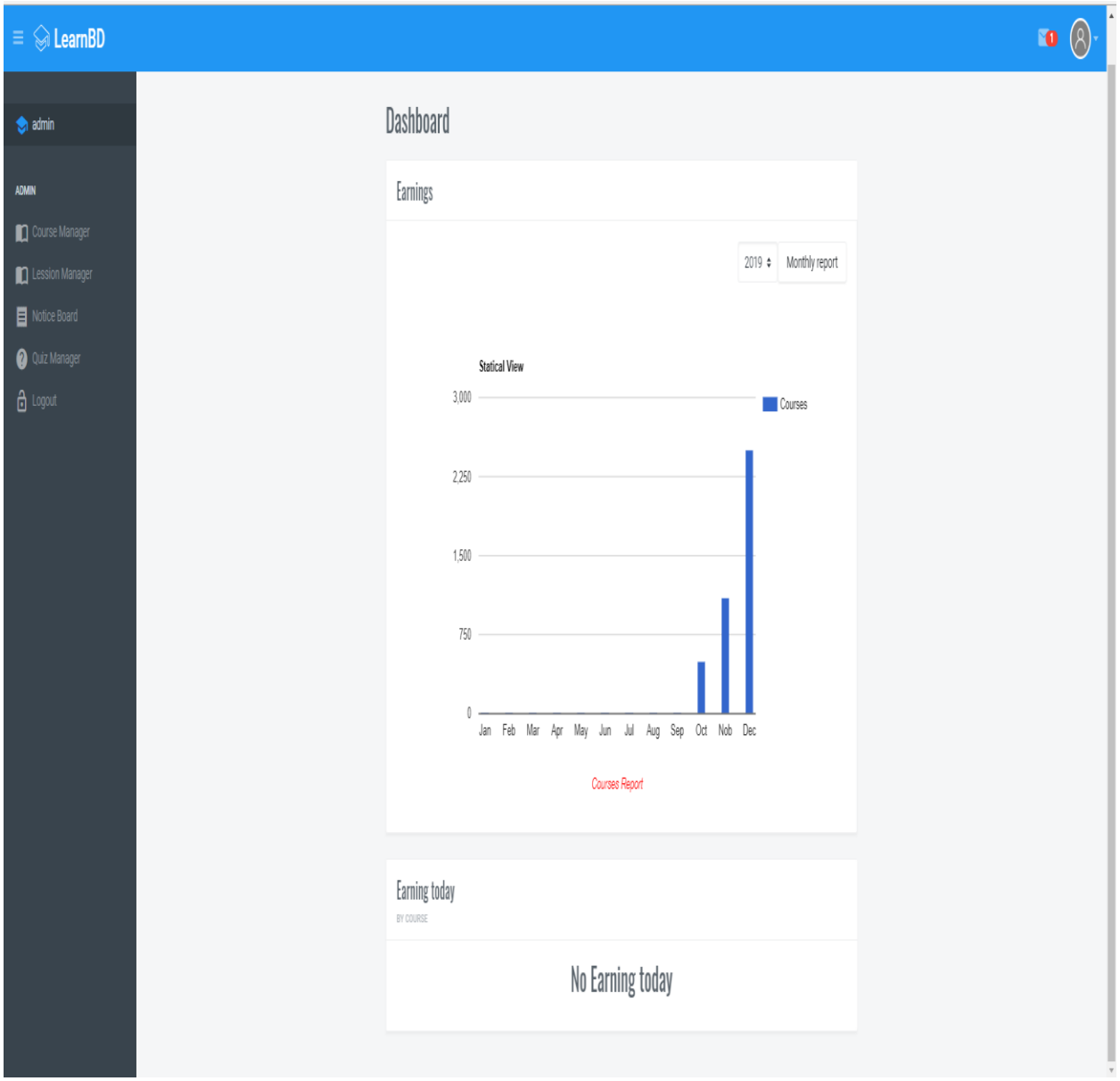

Figure 22: Dashboard prototype

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8.6 - Initial class diagram:

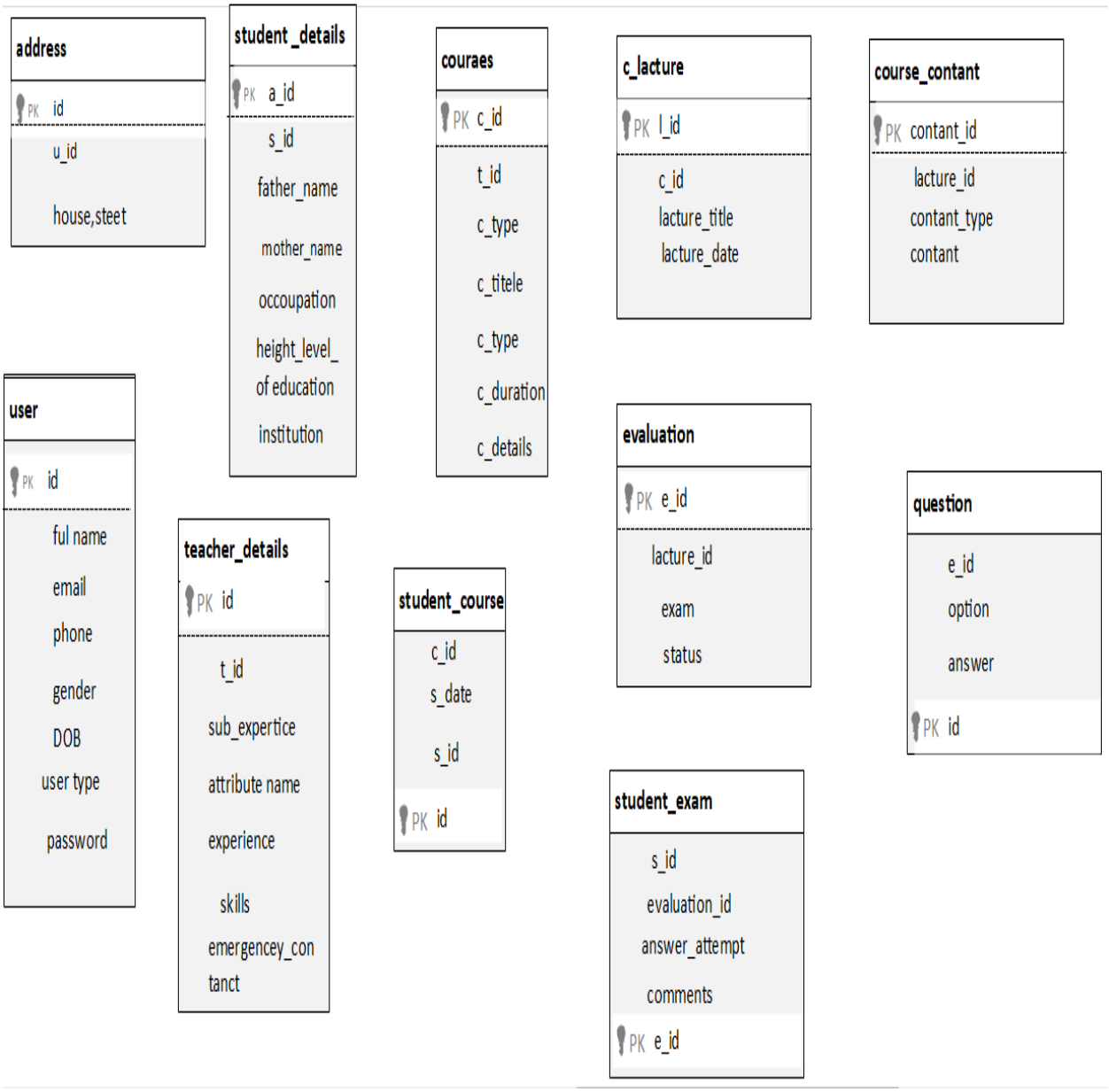

Figure 23: Initial Class Diagram for this system

Initial class diagram represent the system architrave how they system will work between system and user.

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Chapter – 9 – Engineering

- Use Case Diagram
- Description of the use case
- Activity Diagram
- Entity Relationship Diagram
- Sequence Diagram
- Component Diagram
- Deployment Diagram
- System interface design

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9.1 – User case for this system:

Every system has different types of user available. Use case is a process for represent the system and different types of user interaction with the system. Here is give different types of user case of this system.

Use case for Student:

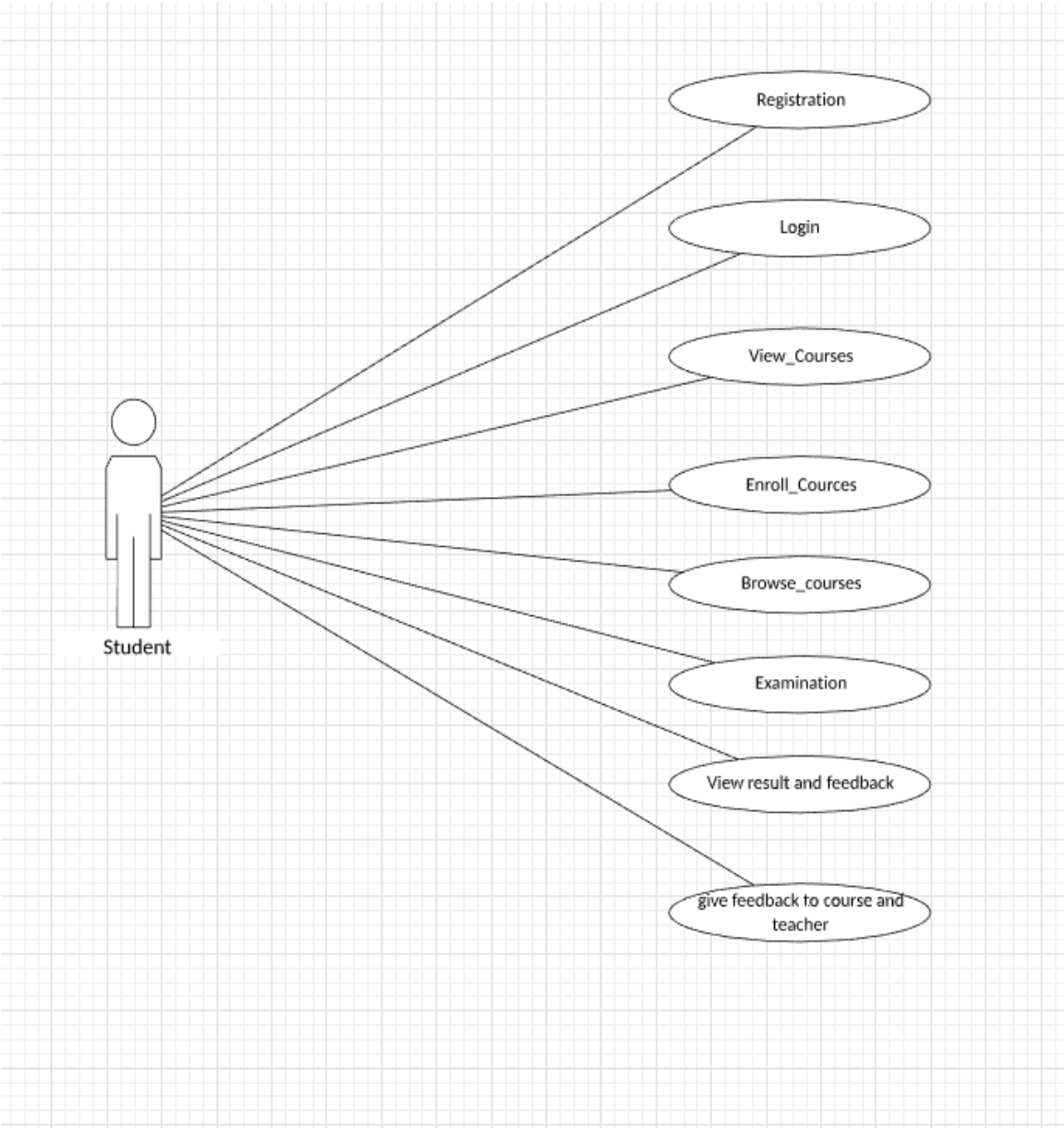

Figure 24: student use case diagram

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This use case show how student can interact with this system. Here is show student can registration for login this system after registration they will get user name and password for access/ login in this system. Then they can enroll course and give examination make payment, and they also ask question for each lecture. In this use case diagram is shows all of student interaction with the system.

Use case for teacher:

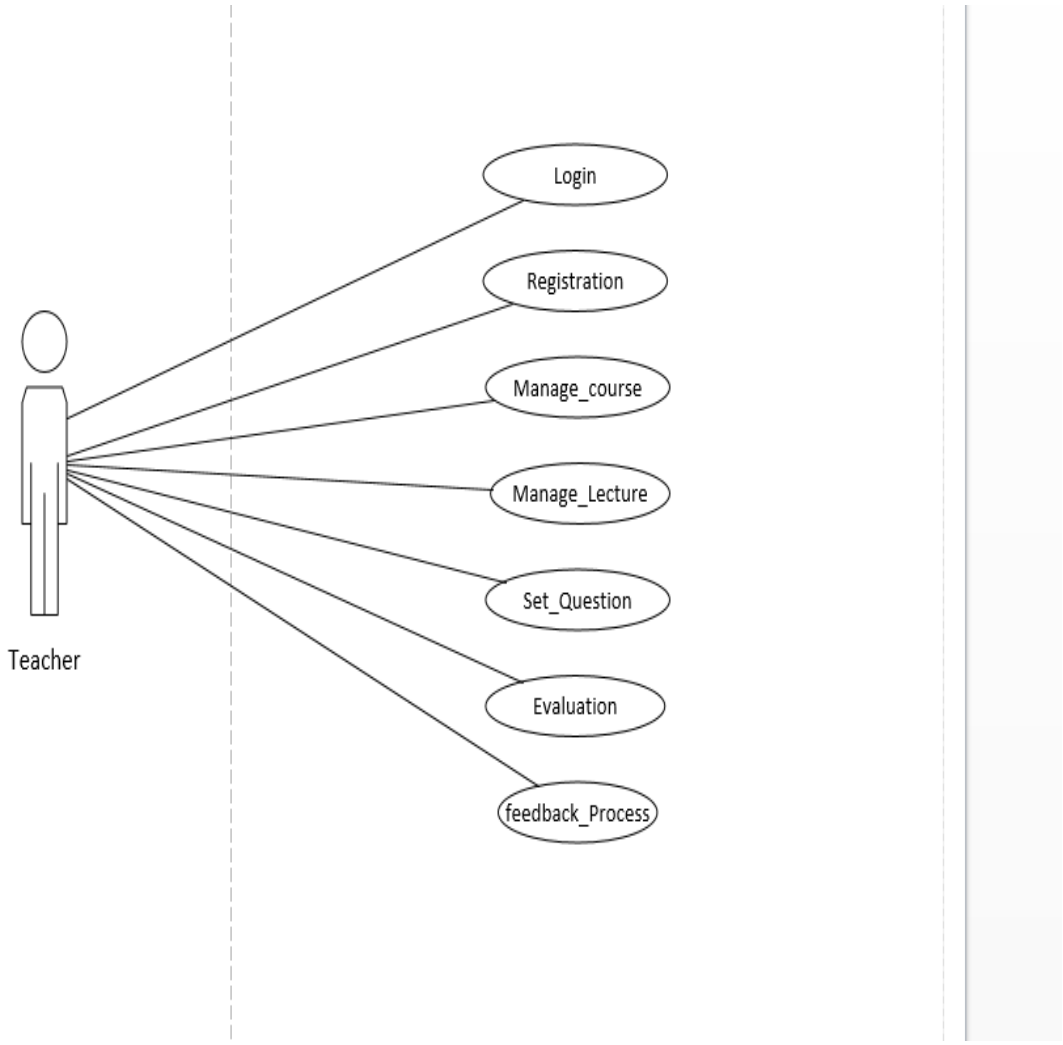

Figure 25: use case diagram for teacher

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Another use case is for teacher in this system. in this system teacher interaction with this system are teacher need to register for access this system then need to login then teacher can upload videos, files and course related data, teacher can manage the course, teacher can set question and also can evaluate then teacher can give feedback.

Use case for admin:

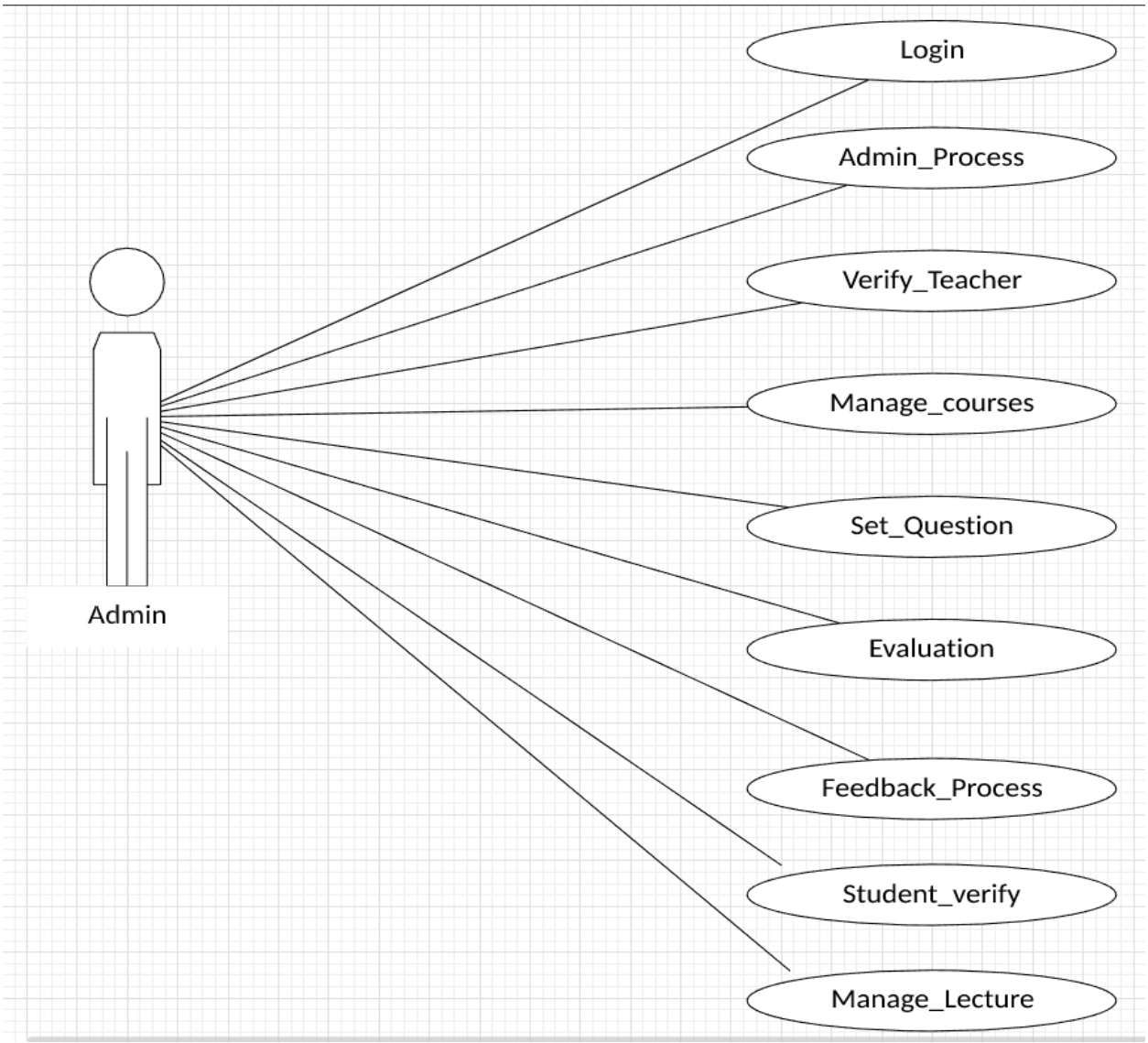

Figure 26: use case diagram for admin

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In this system here is admin work main role for add teacher, student, admin can modify the question and lecture. Admin manage all of core work of this system.

9.3 – Activity Diagram

Registration Activity Diagram:

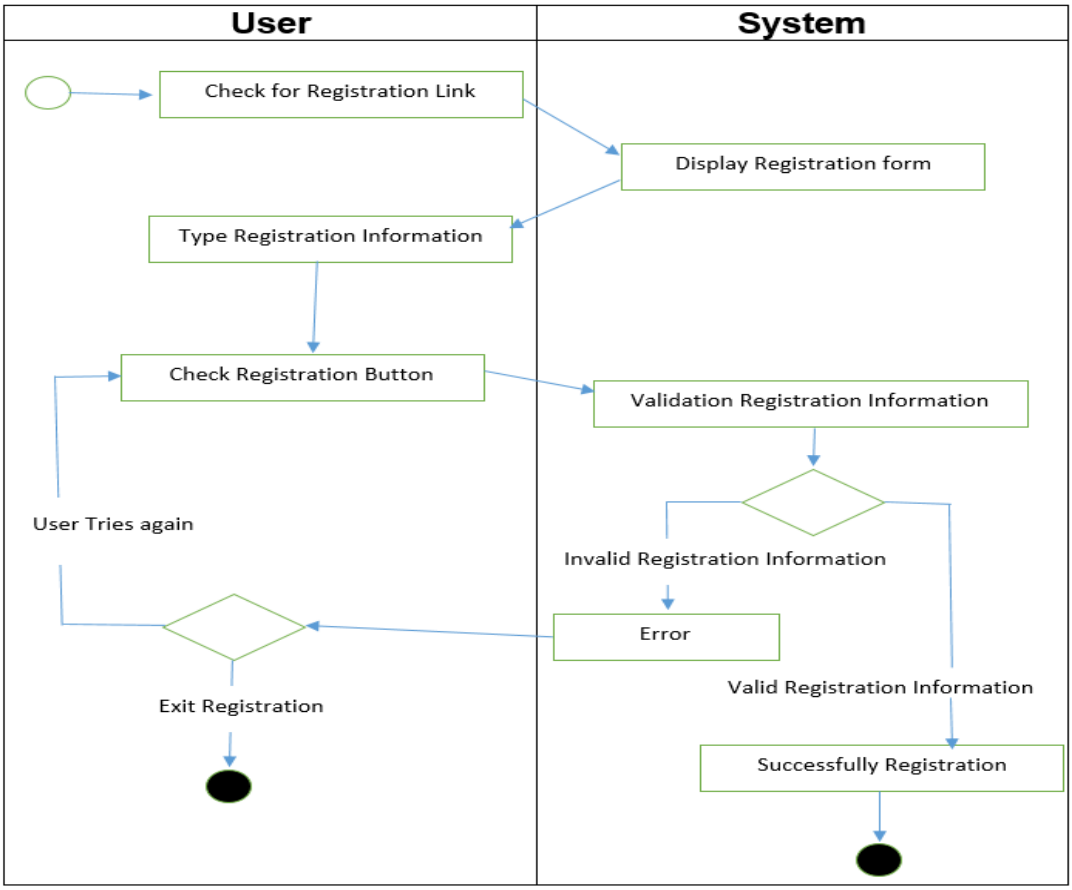

Figure 27: Registration activity diagram

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Login Activity Diagram:

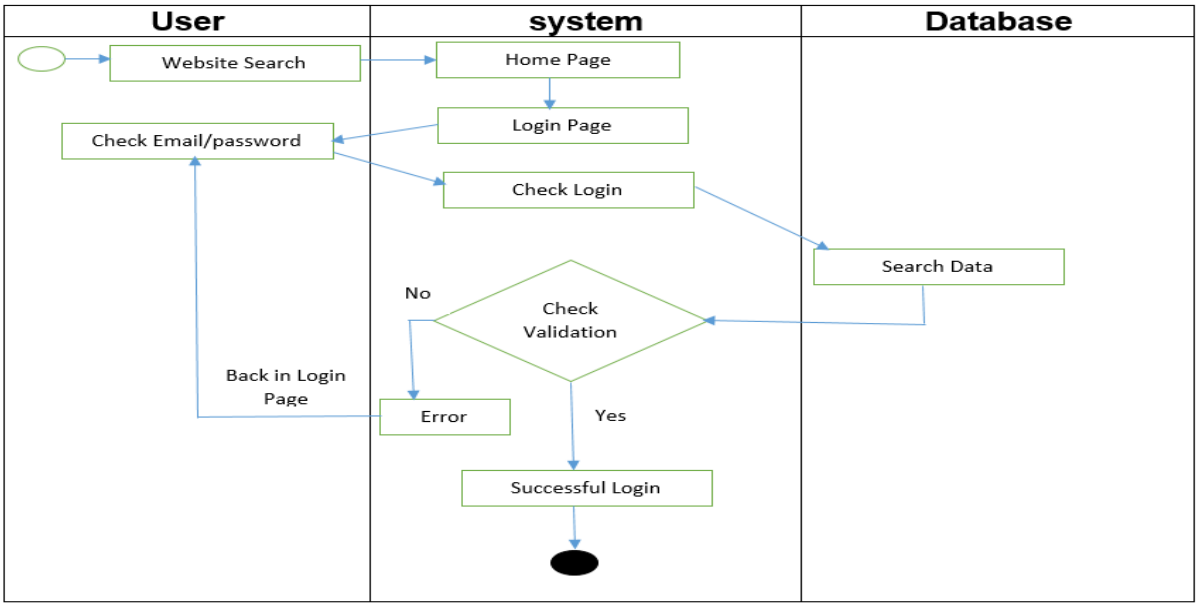

Figure 28: Login activity diagram

Request for add user activity diagram:

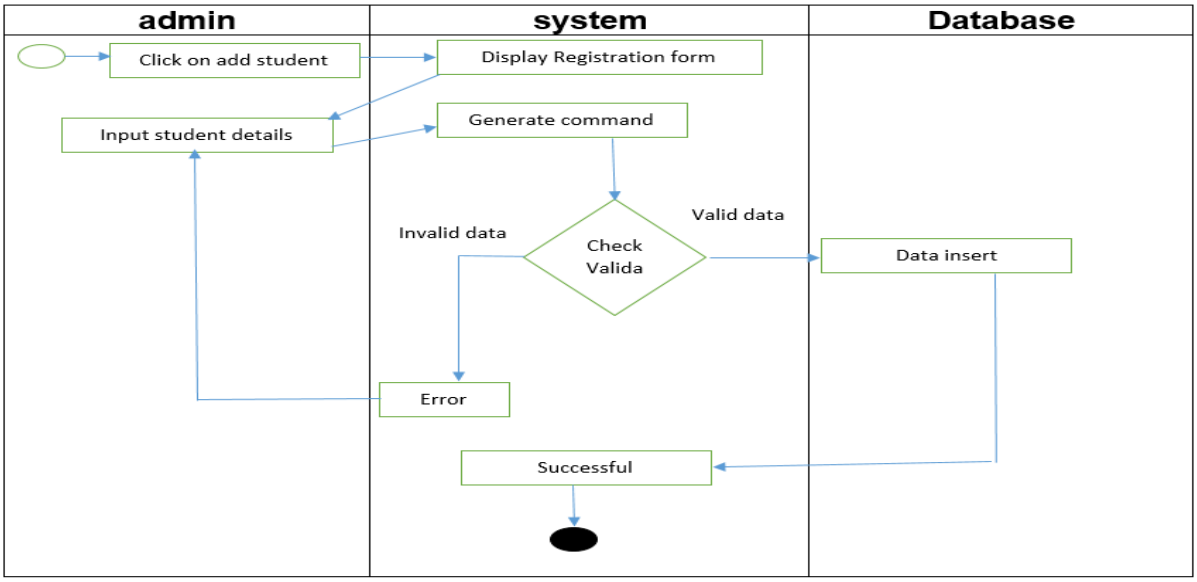

Figure 29: User add activity diagram

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Request for join class activity diagram:

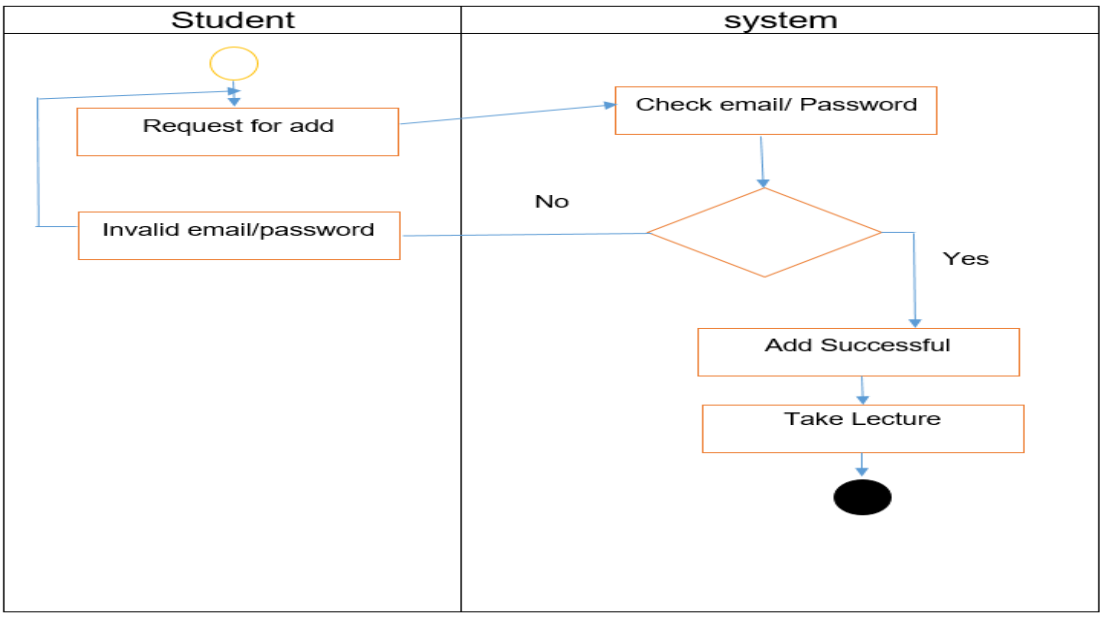

Figure 30: Join class activity diagram

Upload Data activity diagram:

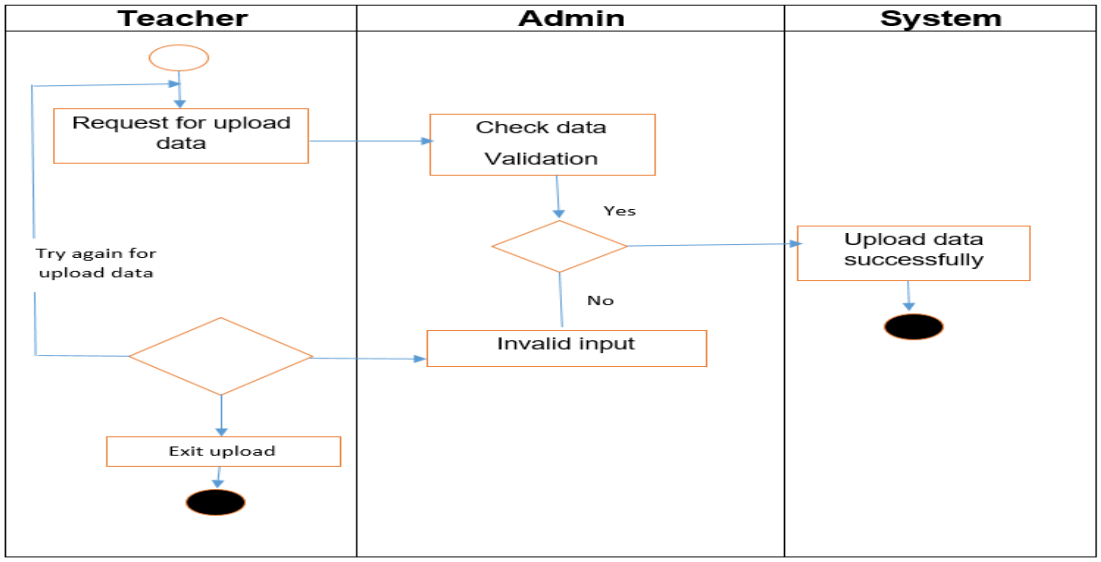

Figure 31: Upload file activity diagram

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Make payment Activity diagram:

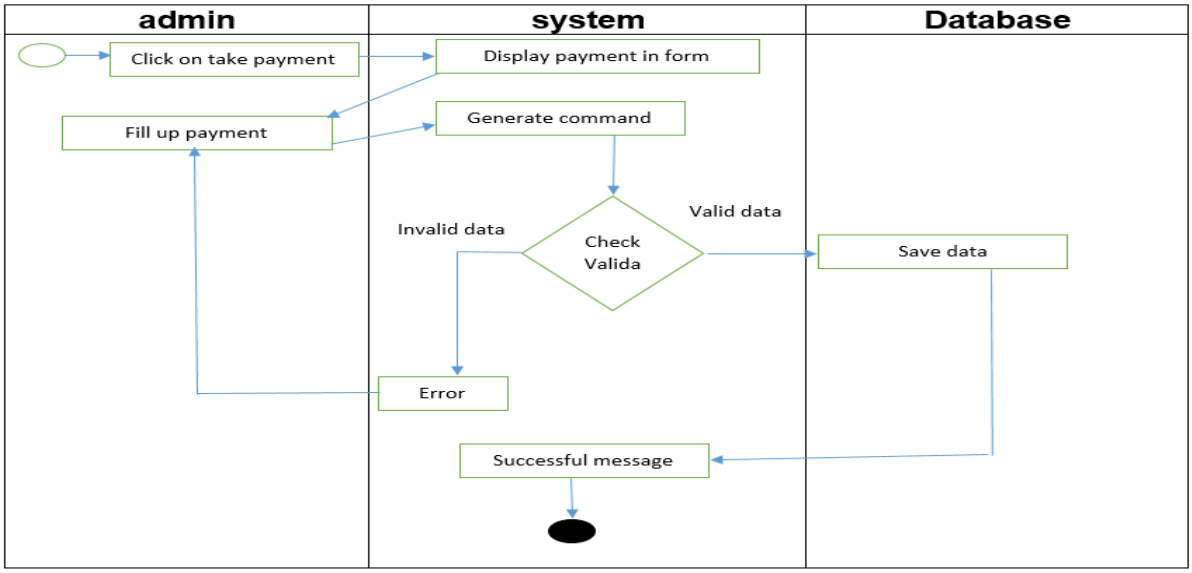

Figure 32: Make Payment activity diagram

Logout activity Diagram:

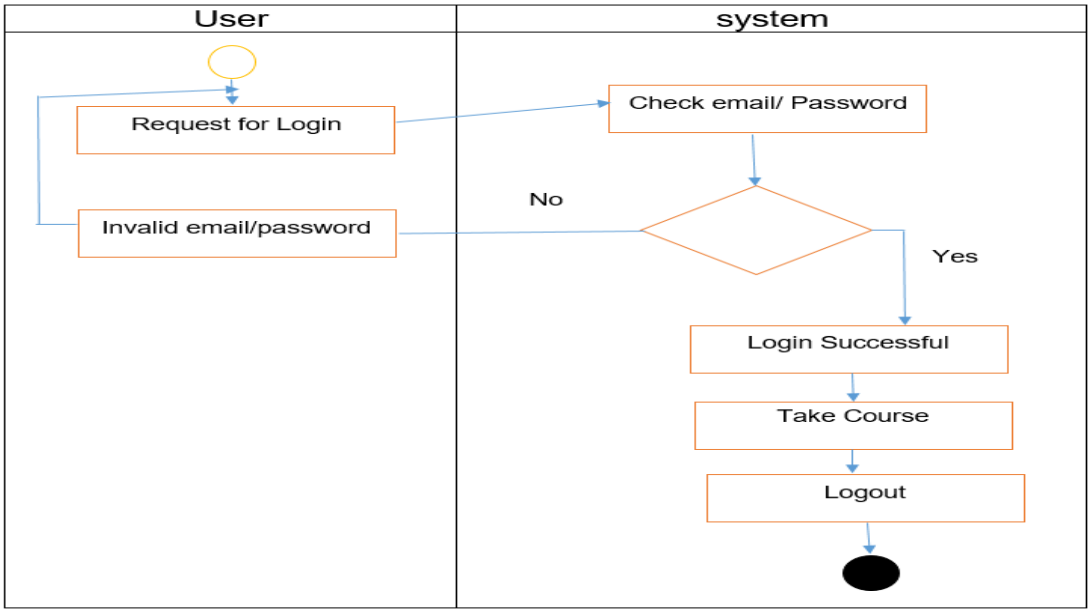

Figure 33: Logout activity diagram

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9.4 – Entity Relationship Diagram

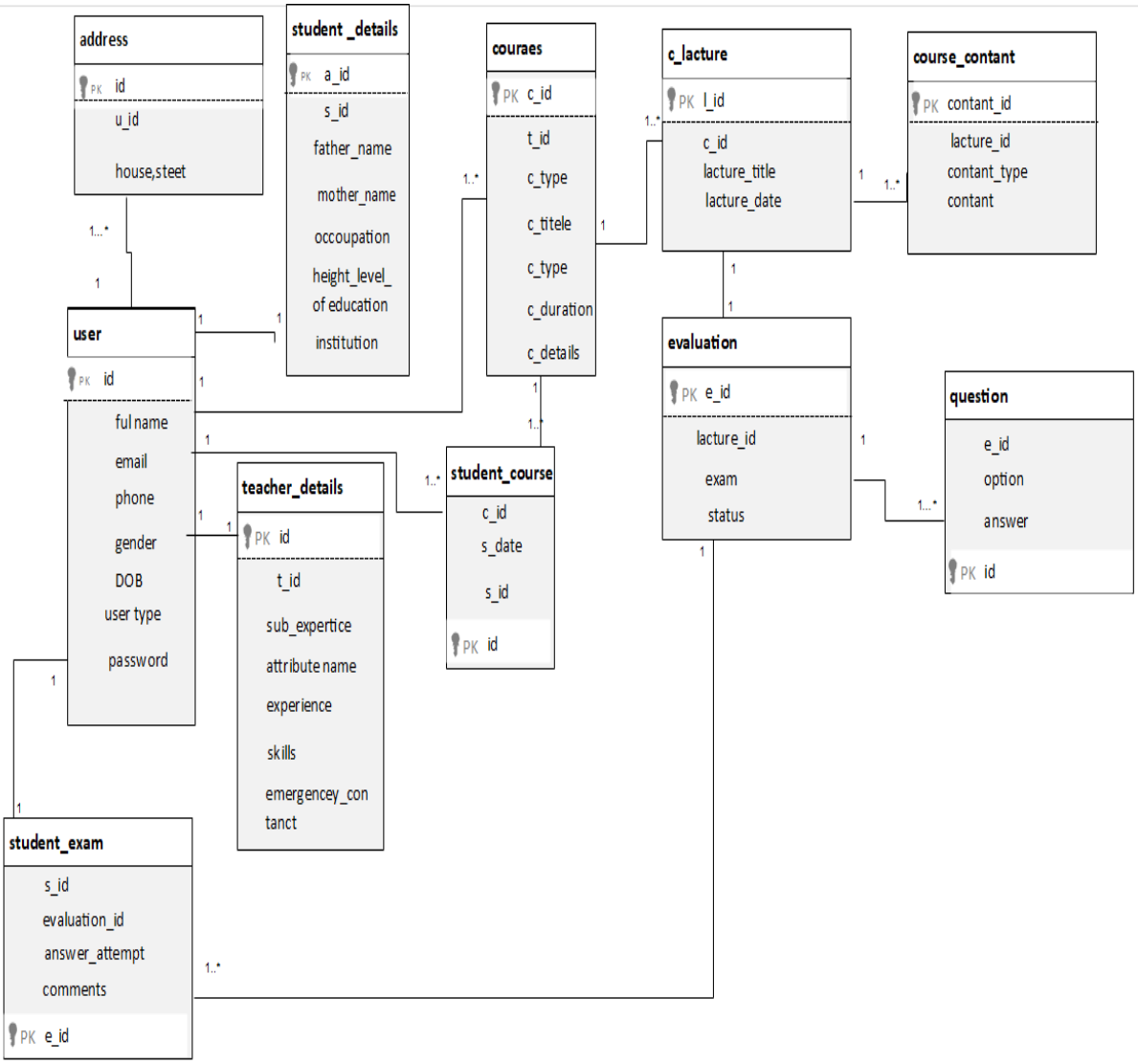

Figure 34: ERD for this system

Entity relationship diagram show system architecture. It show relation between all class and sub class which is depend. This architecture helps to develop proper database design and connection and relation between entities.

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9.5 - Sequence Diagram

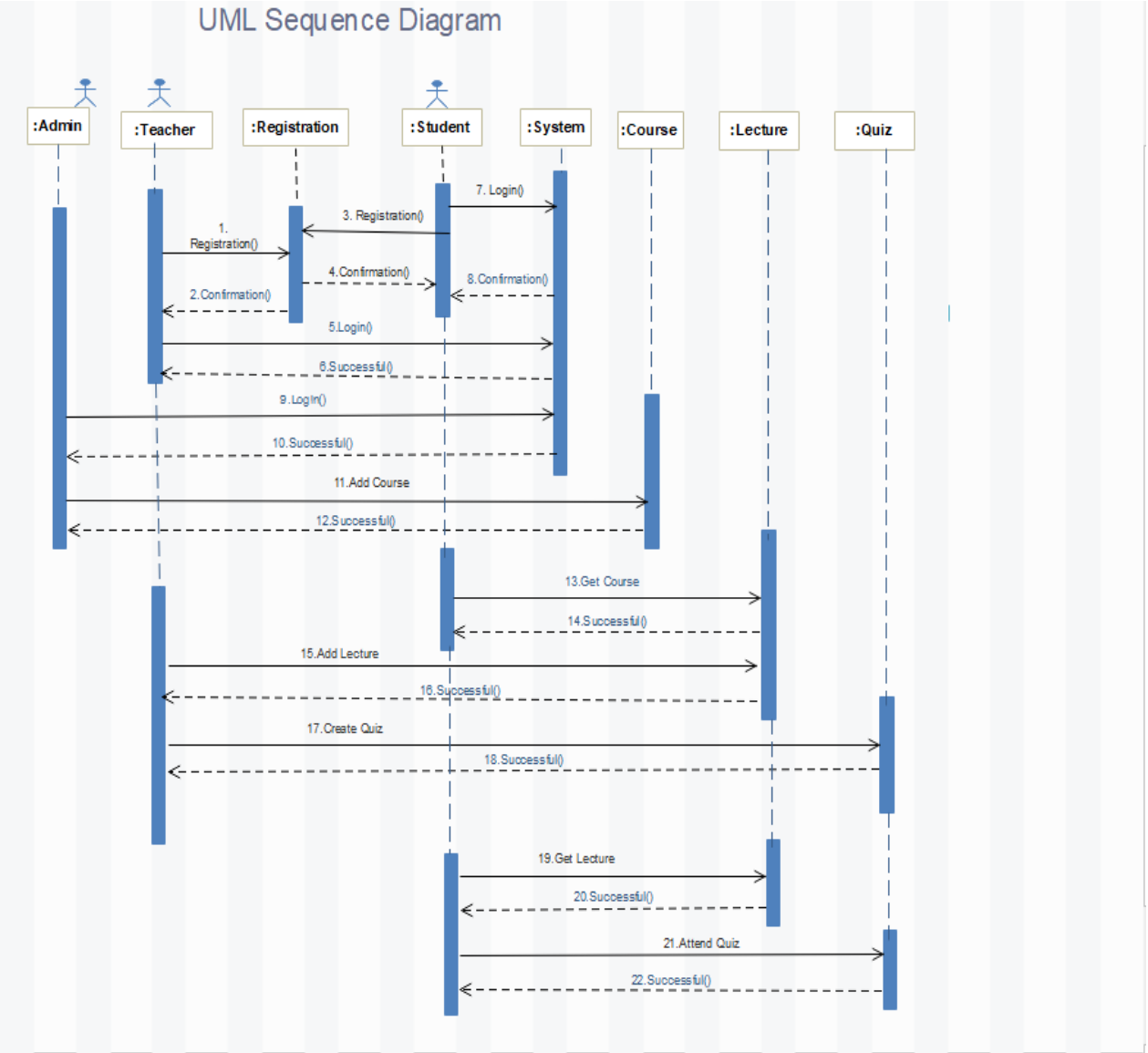

Figure 35: Sequence Diagram

This system has many object and functions and there is connection between all object and function. Every step is depend on other steps those connections are given in this diagram.

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9.6 - Component Diagram

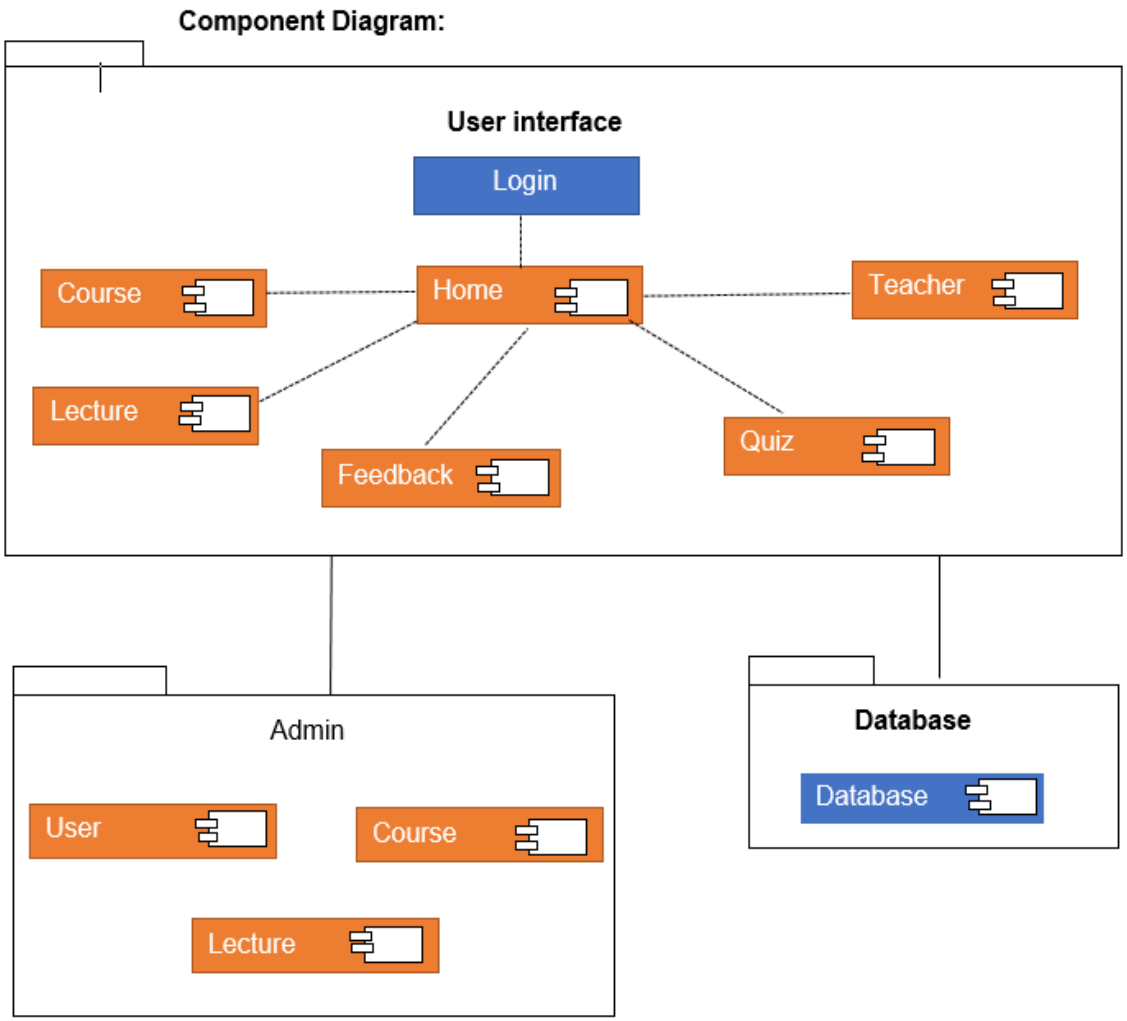

Figure 36: Component Diagram

In this system has many of steps for different types of works for user and admin component diagram helps to show all the physical system component and it helps to check system validation. All component is given in this diagram.

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9.7 – Deployment Diagram

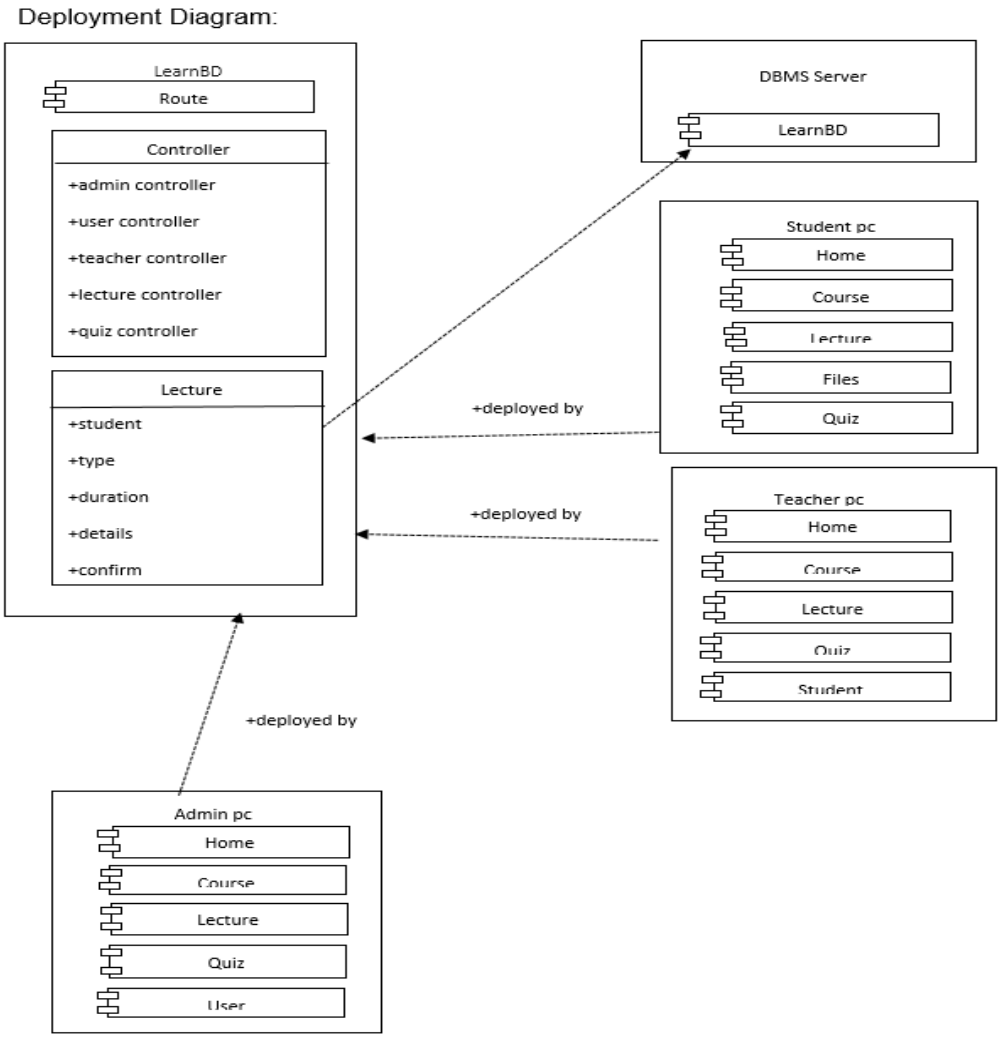

Figure 37: Deployment Diagram

In this diagram shows the system architecture which part deploy for work and which part connect with another part all are given in this diagram. For development this part use PHP technology.

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9.8 – System Interface design

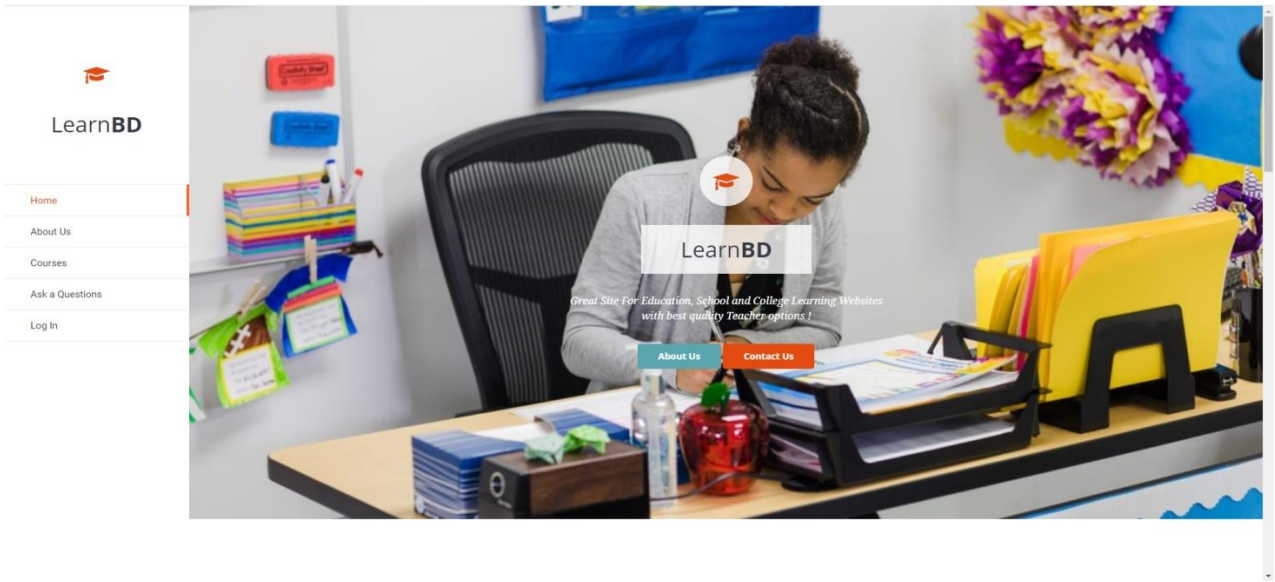

Figure 38: System index interface

About us system interface

Figure 39: About interface

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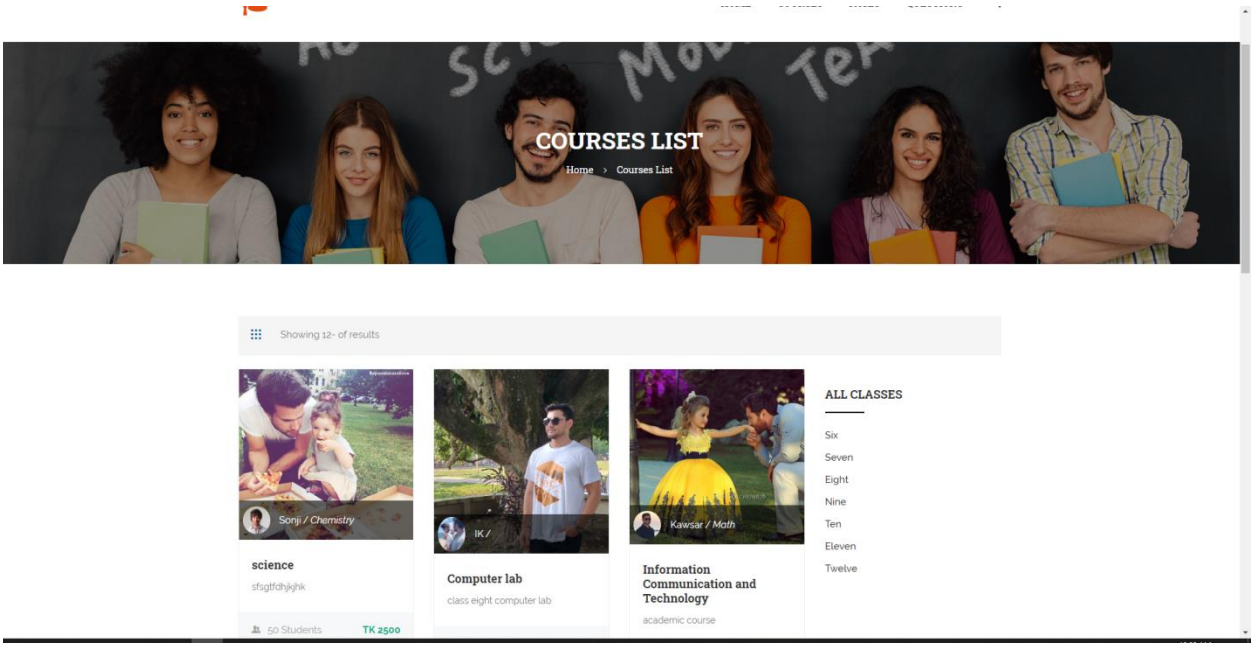

Figure 40: Course list interface

Contact system interface

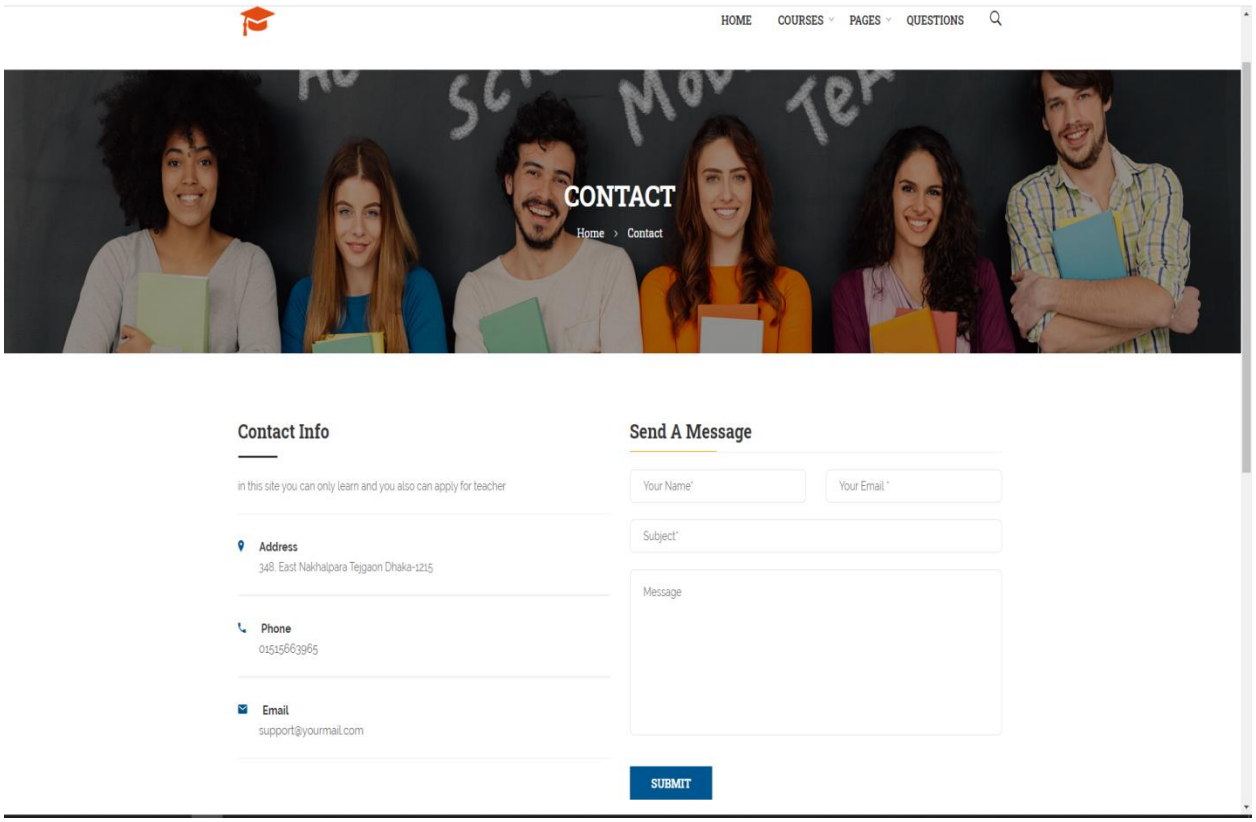

Figure 41: Contact interface

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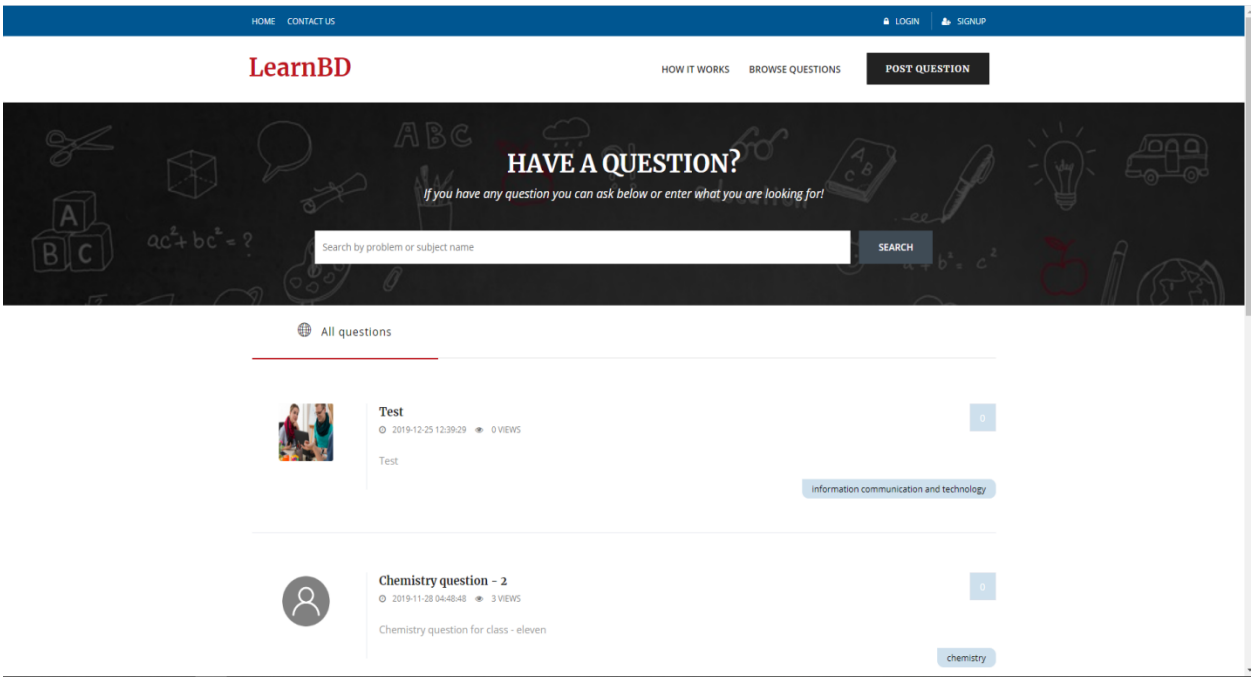

Figure 42: Question interface

Login interface for student

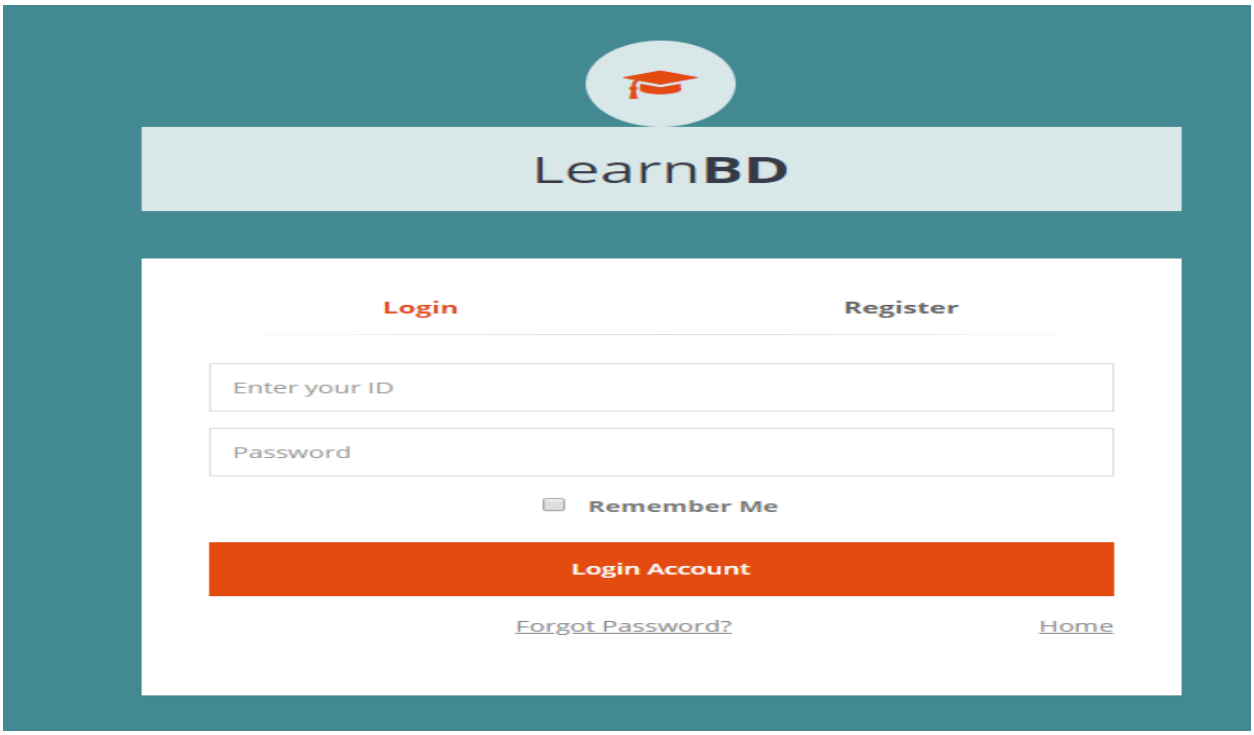

Figure 43: student login interface

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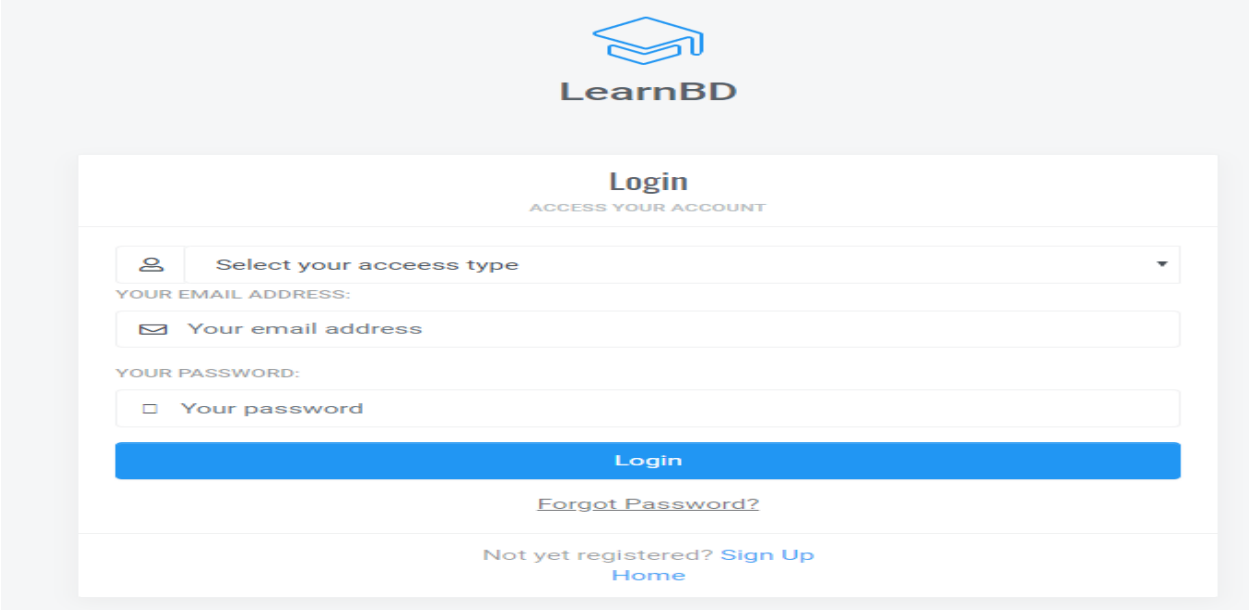

Figure 44: Admin login interface

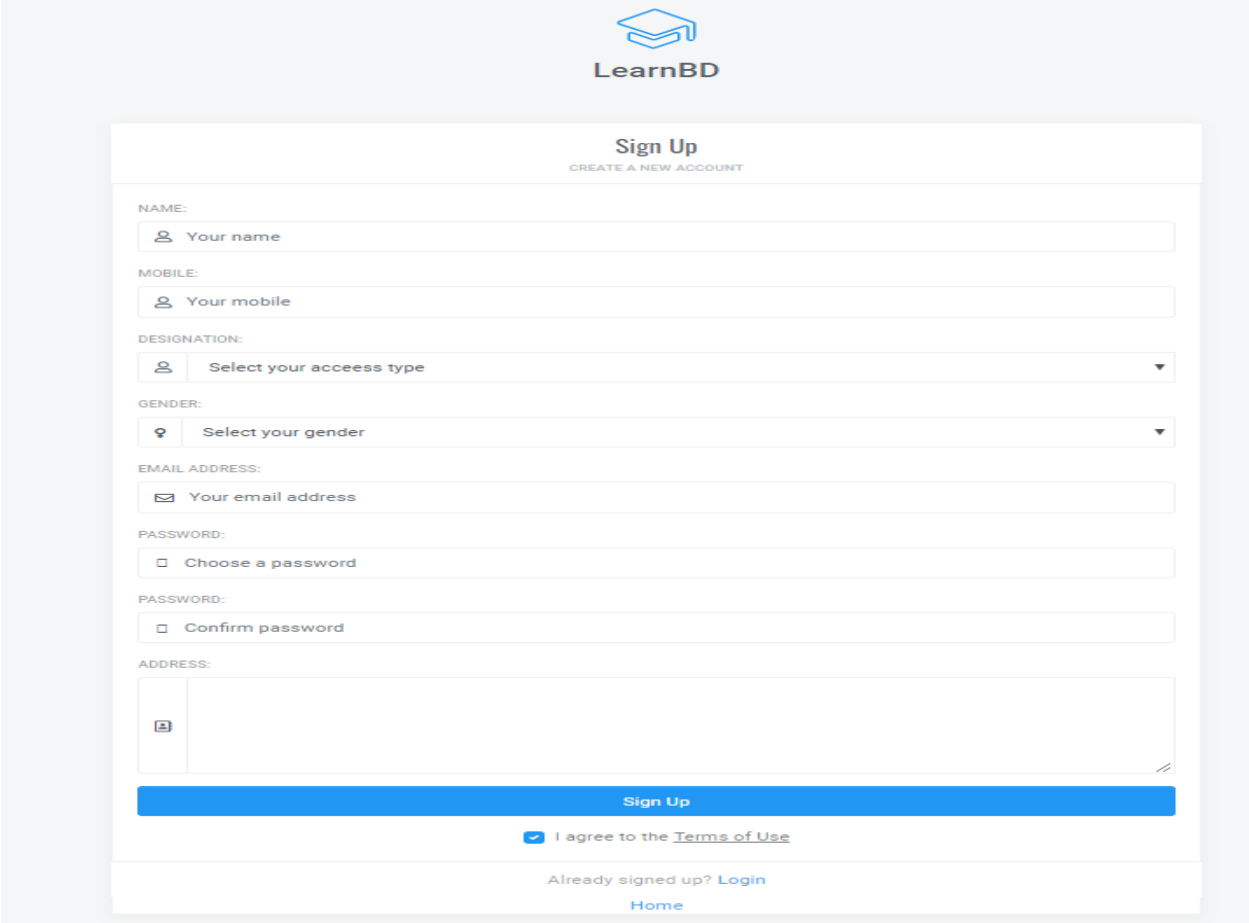

Figure 45: Teacher signup interface

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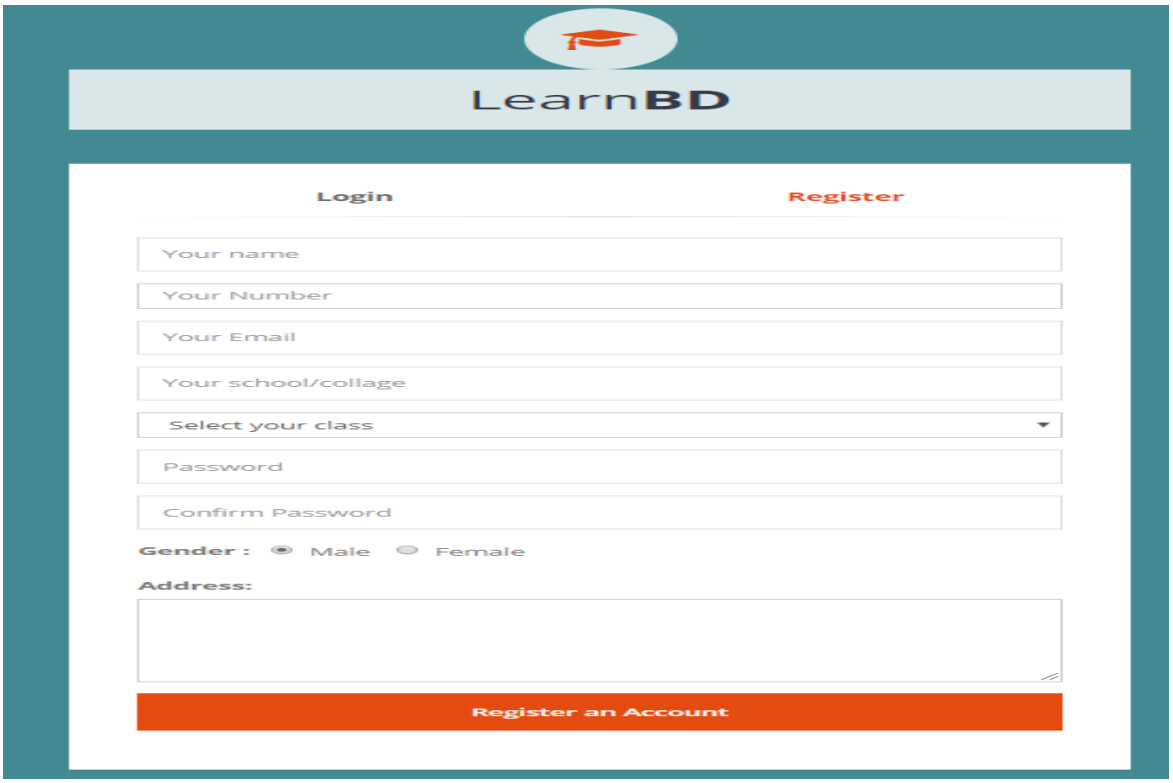

Figure 46: Student registration interface

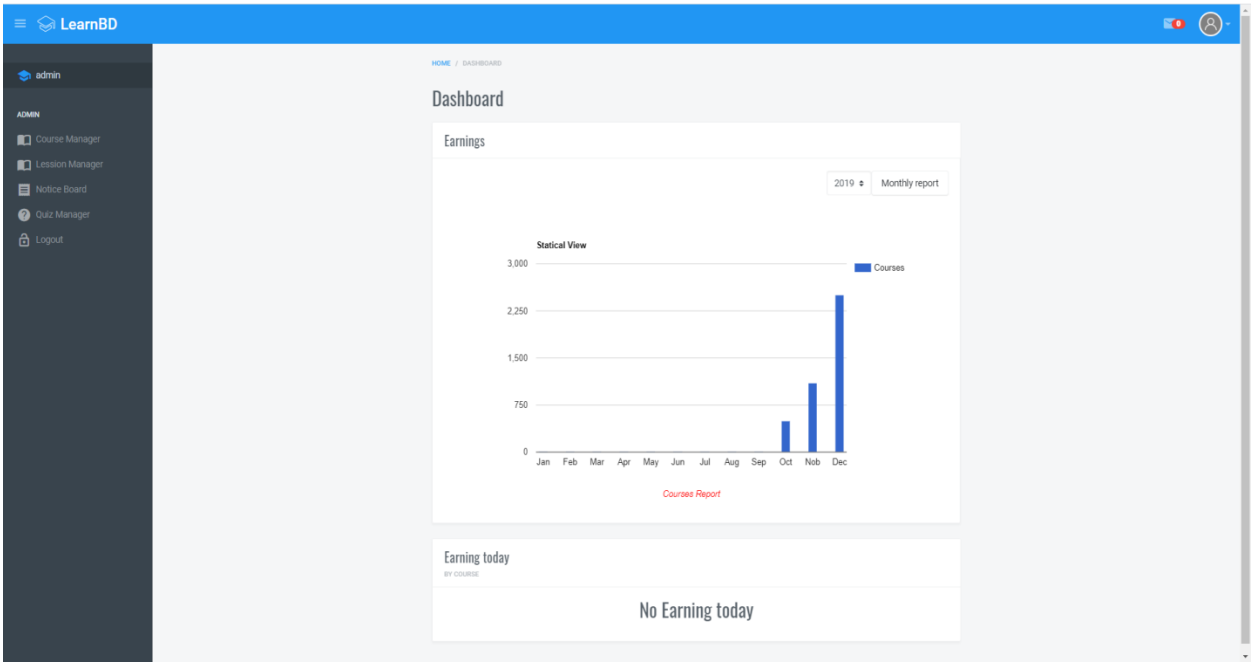

Figure 47: Dashboard interface

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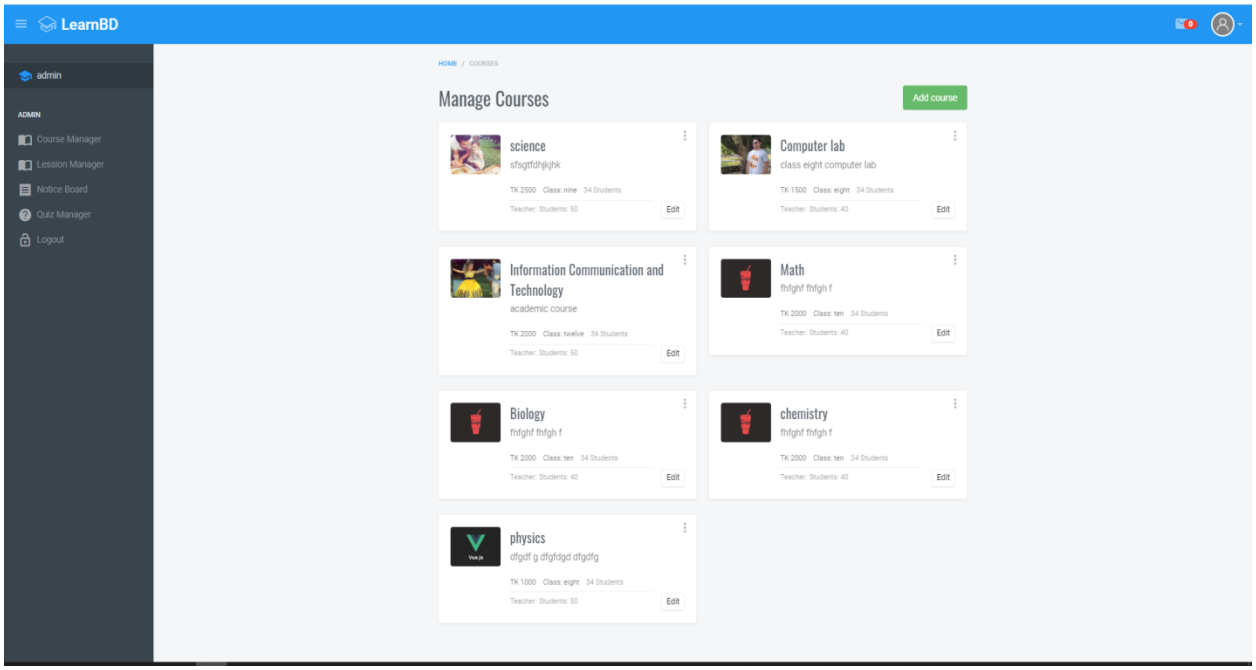

Figure 48: Course management interface

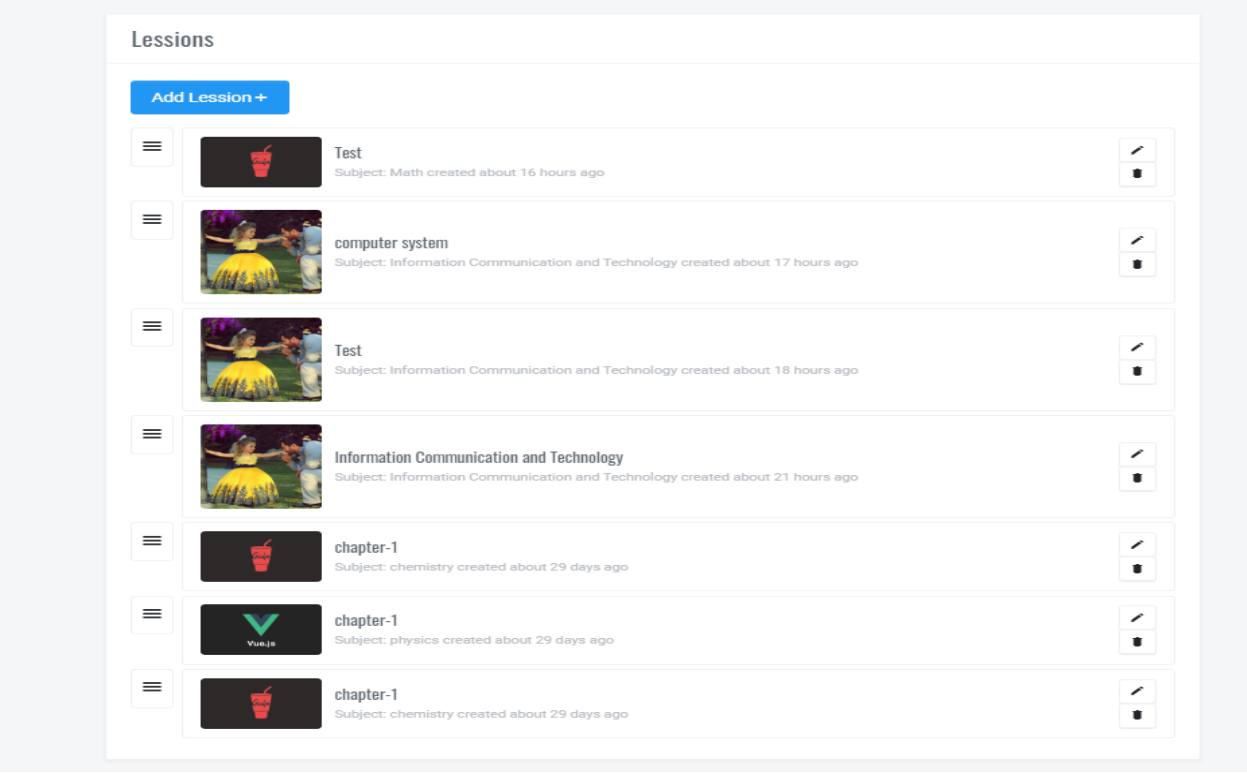

Figure 49: Add lesson interface

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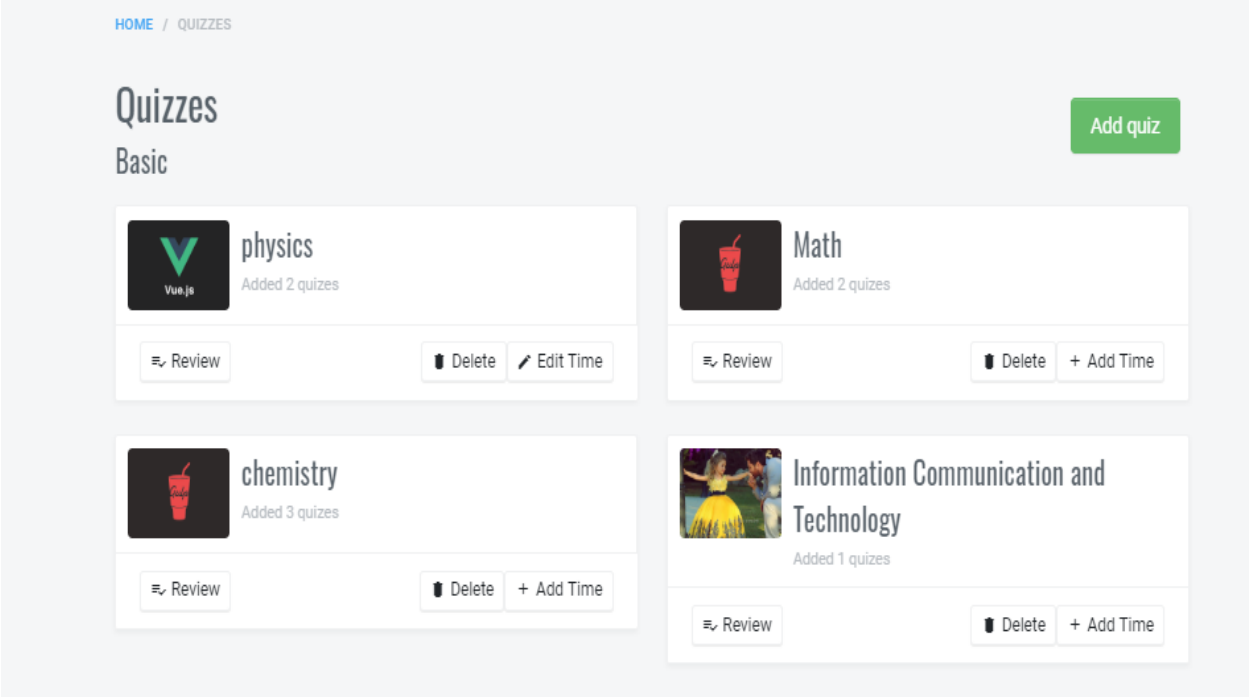

Figure 50: add quiz interface

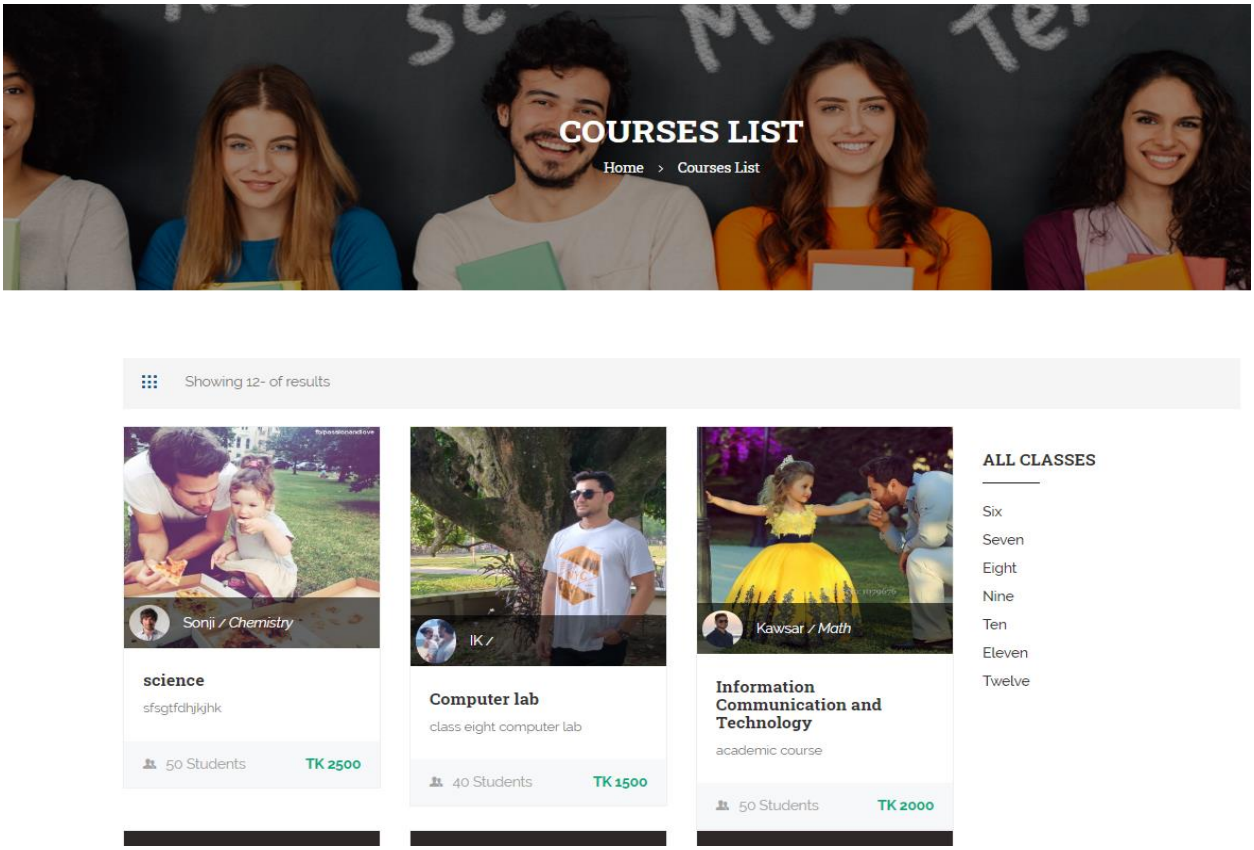

Figure 51: Course list interface

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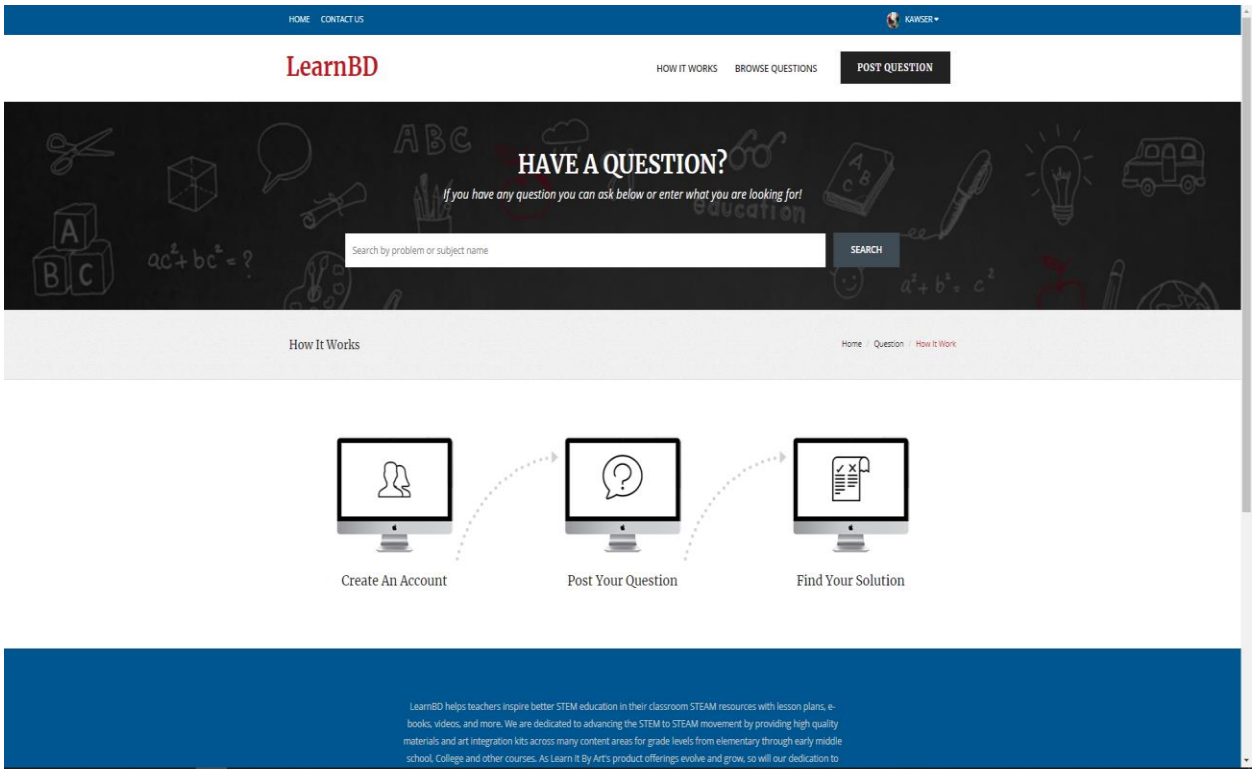

Figure 52: How system work interface

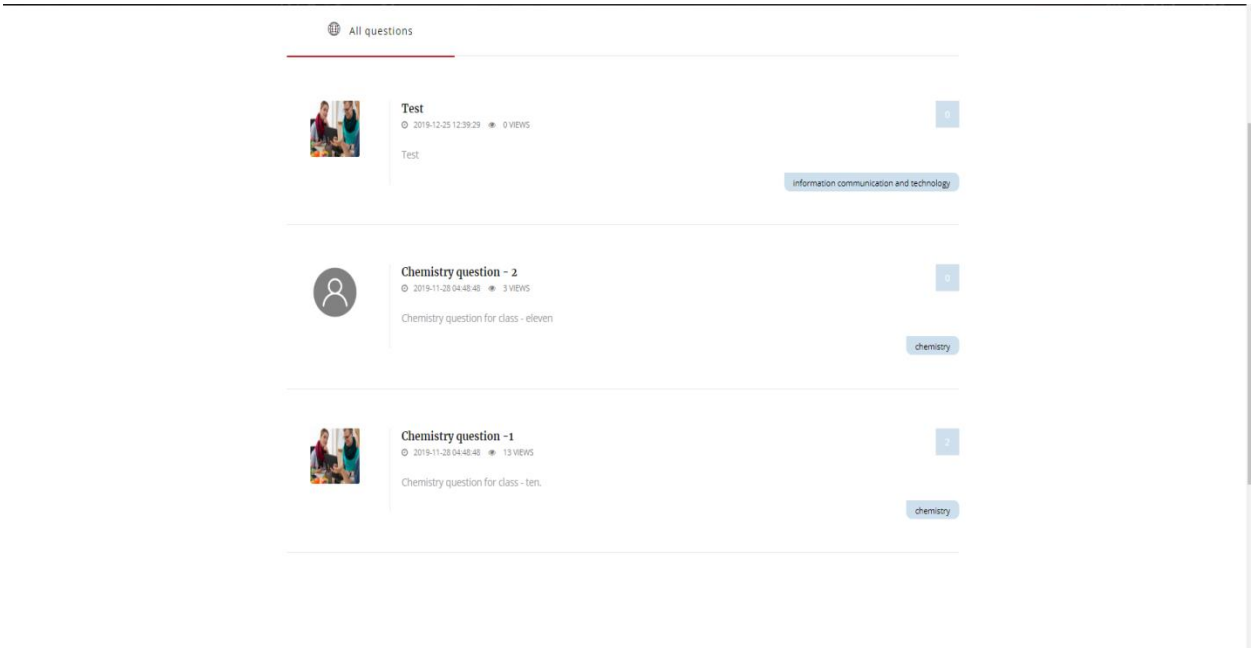

Figure 53: Question interface

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Chapter – 10 – Deployment

- Sample of core module codding
- System deployment time boxing
- Break down the possible problems
- Prioritization of problems

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10.1 - Sample of core module coding

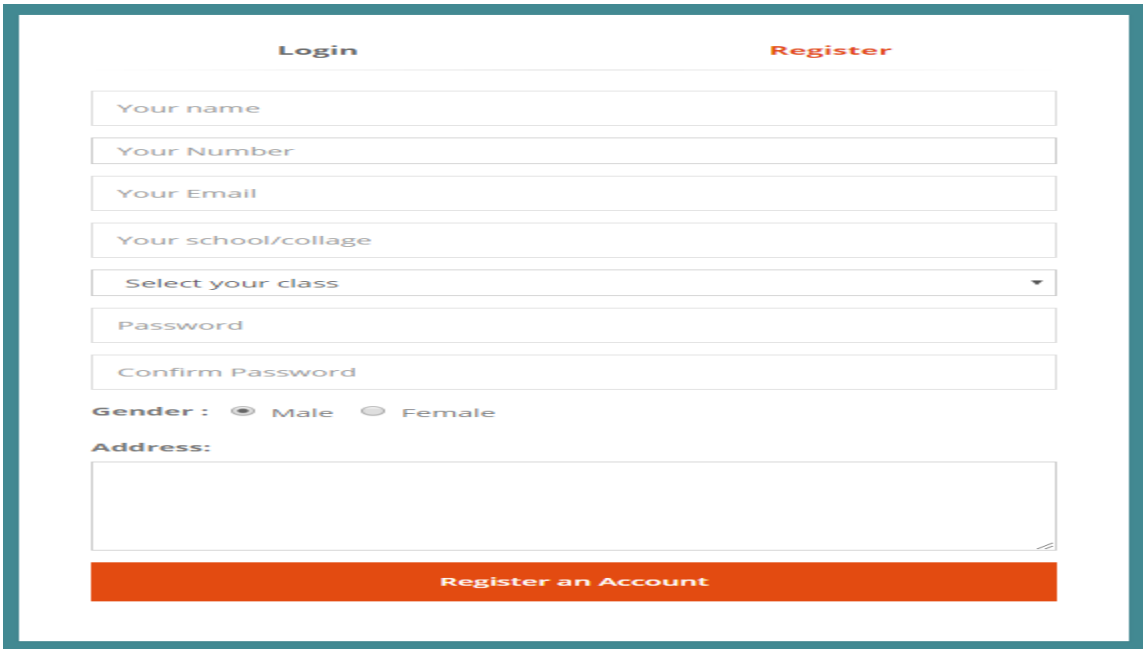

Figure 54: Registration interface design

```php
<?php
include 'lib/Session.php';
Session::init();
include_once 'lib/Database.php';
include_once 'helpers/Format.php';
include_once'classes/User.php';


$db=new Database();
$fm=new Format();
$ur=new User();
 ?>
<?php
$login= Session::get("userlogin");
if ($login==true) {
   header("Location:order.php");
}
 ?>
 <?php
    if ($_SERVER['REQUEST_METHOD']=='POST'&&isset($_POST['login'])) {
     $userLog=$ur->userLogin($_POST);
       }
    if ($_SERVER['REQUEST_METHOD']=='POST'&&isset($_POST['registration'])) {
     $userReg=$ur->userRegtration($_POST);
       }

  ?>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1">
    <meta name="description" content="">
    <meta name="author" content="">
    <meta name="keywords" content="">
    <title>LearnPLUS | Learning Management System HTML Template</title>
    <link rel="shortcut icon" href="images/img/favicon.ico" type="image/x-icon" />
    <link rel="apple-touch-icon" href="images/img/apple-touch-icon.png" />
    <link rel="apple-touch-icon" sizes="57x57" href="images/img/apple-touch-icon-57x57.png" />
    <link rel="apple-touch-icon" sizes="72x72" href="images/img/xapple-touch-icon-72x72.png.pagespeed.ic.lf5d8kCpOf.png" />
    <link rel="apple-touch-icon" sizes="76x76" href="images/img/xapple-touch-icon-76x76.png.pagespeed.ic.ATZZpSeito.png" />
    <link rel="apple-touch-icon" sizes="114x114" href="images/img/xapple-touch-icon-114x114.png.pagespeed.ic.Fi5O5s2tzL.png" />
```


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```
                    <button type="submit" class="form-control btn btn-default" name="login">Login Account</button>
                </div>
            </div>
        </div>
        <div class="form-group">
            <div class="row">
                <div class="col-lg-12">
                    <div class="text-center">
                        <a href="password-forget.php" tabindex="5" class="forgot-password">Forgot Password?</a>
                        <span class="pull-right">
                        <a href="index.php" tabindex="5" class="forgot-password">Home</a>

                        </span>
                    </div>
                </div>
            </div>
        </div>
    </form>
    <form id="register-form" action="" method="post" role="form" style="display: none;">
        <div class="form-group">
            <input type="text" name="name" id="username" tabindex="1" class="form-control" placeholder="Your name" required="required">
        </div>
        <div class="form-group">
            <input type="tel" name="mobile" id="username" tabindex="1" class="form-control" placeholder="Your Number" required="required">
        </div>
        <div class="form-group">
            <input type="email" name="email" id="username" tabindex="1" class="form-control" placeholder="Your Email" required="required">
        </div>
        <div class="form-group">
            <input type="text" name="school" id="username" tabindex="1" class="form-control" placeholder="Your school/collage" required="required">
        </div>
        <div class="form-group">
            <select class="form-control" id="sel1" name="class" required="required">
                <option value="">Select your class</option>
                <option value="six">Six</option>
                <option value="seven">Seven</option>
                <option value="eight">Eight</option>
                <option value="nine">Nine</option>
                <option value="ten">Ten</option>
                <option value="eleven">Eleven</option>
                <option value="twelve">Twelve</option>
            </select>
        </div>
        <div class="form-group">
            <input type="password" name="password" id="password" tabindex="2" class="form-control" placeholder="Password" required="required">
        </div>
```

```
                                    </div>
                                    <div class="form-group">
                                      <label for="comment">Address:</label>
                                      <textarea class="form-control" rows="5" id="comment" name="address" required="required"></textarea>
                                    </div>
                                    <div class="form-group">
                                        <div class="row">
                                            <div class="col-sm-12">
                                                <button type="submit" class="form-control btn btn-default btn-block" name="registration">Register an Account</button>
                                            </div>
                                        </div>
                                    </div>
                                </form>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <script src="js/js/jquery.min.js.pagespeed.jm.iDyG3vc4gw.js"></script>
    <script src="js/js/bootstrap.min.js%2bretina.js%2bwow.js.pagespeed.jc.pMrMbVAe_E.js"></script>

    <script>
    eval(mod_pagespeed_gFRwwUbyVc);
    </script>
    <script>
    eval(mod_pagespeed_rQwXk4AOUN);
    </script>
    <script>
    eval(mod_pagespeed_U0OPgGhapl);
    </script>
    <script src="js/js/carousel.js%2bcustom.js.pagespeed.jc.nVhk-UfDsv.js"></script>
    <script>
    eval(mod_pagespeed_6Ja02QZq$f);
    </script>
    <script>
    eval(mod_pagespeed_KxQMf5X6rF);
    </script>
</body>
```


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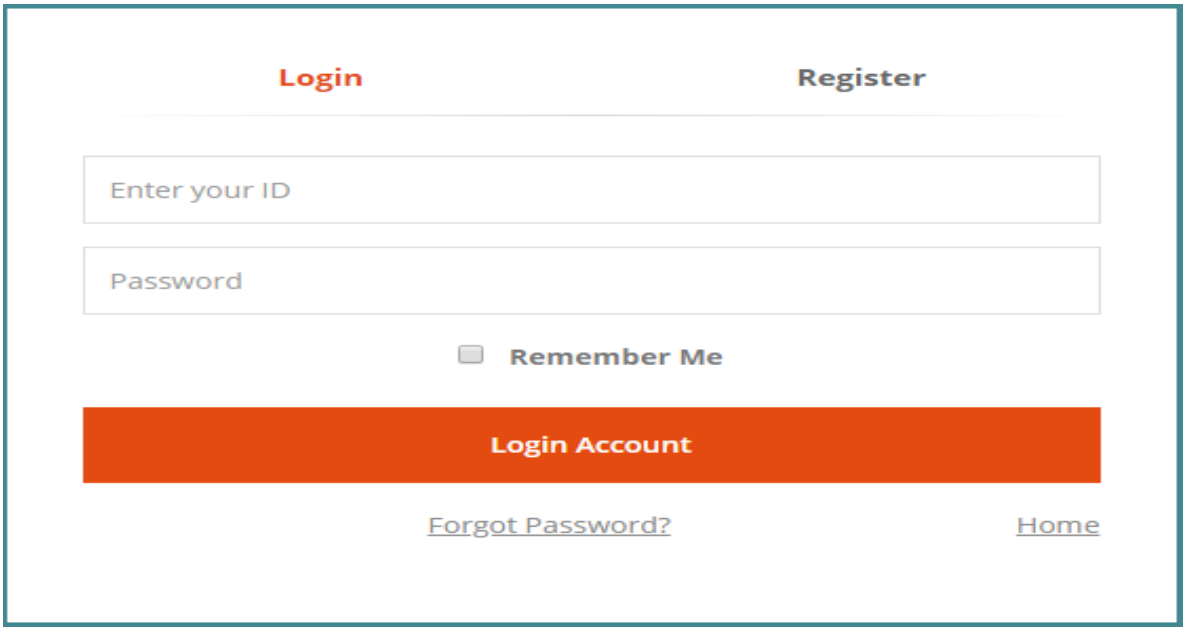
10.1. 2 – Login Role




```php
<?php
include 'lib/Session.php';
Session::init();
include_once 'lib/Database.php';
include_once 'helpers/Format.php';
include_once'classes/User.php';


$db=new Database();
$fm=new Format();
$ur=new User();
 ?>
<?php
$login= Session::get("userlogin");
if ($login==true) {
   header("Location:order.php");
}
 ?>
 <?php
    if ($_SERVER['REQUEST_METHOD']=='POST'&&isset($_POST['login'])) {
      $userLog=$ur->userLogin($_POST);
        }
    if ($_SERVER['REQUEST_METHOD']=='POST'&&isset($_POST['registration'])) {
      $userReg=$ur->userRegtration($_POST);
        }

  ?>

<!DOCTYPE html>
<html lang="en">
```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```
<div class="panel panel-login">
    <div class="panel-heading">
        <div class="row">
            <div class="col-xs-6">
                <a href="#" class="active" id="login-form-link">Login</a>
            </div>
            <div class="col-xs-6">
                <a href="#" id="register-form-link">Register</a>
            </div>
            <div class="col-xs-12">
            <?php if(isset($_SESSION['error'])) {?>
              <div class="alert alert-warning alert-dismissible" data-auto-dismiss="2000" role="alert">
                  <button type="button" class="close" data-dismiss="alert" aria-label="Close"><span aria-hidden="true">&times;</span></button>
                  <strong style="color: red;">Warning!</strong>
                   <?php echo($_SESSION['error']);

                   unset($_SESSION['error']);
                   ?>
              </div>
            <?php }?>
            <?php if(isset($_SESSION['success'])) {?>
            <div class="alert alert-success alert-dismissible" data-auto-dismiss="2000" role="alert">
                <button type="button" class="close" data-dismiss="alert" aria-label="Close"><span aria-hidden="true">&times;</span></button>
                <strong style="color: green;">Success!</strong>
                <?php echo($_SESSION['success']);

                   unset($_SESSION['success']);
                   ?>
              </div>
            <?php }?>
            </div>
        </div>
        <hr>
    </div>
```

```
                    <strong style="color: green;">Success!</strong>
                    <?php echo($_SESSION['success']);

                       unset($_SESSION['success']);
                       ?>
                  </div>
                <?php }?>
                </div>
            </div>
            <hr>
        </div>
        <div class="panel-body">
            <div class="row">
                <div class="col-lg-12">
                    <form id="login-form" action="" method="post" role="form" style="display: block;">
                        <div class="form-group">
                            <input type="text" name="student_id" id="username" tabindex="1" class="form-control" placeholder="Enter your ID" required="required">
                        </div>
                        <div class="form-group">
                            <input type="password" name="password" id="password" tabindex="2" class="form-control" placeholder="Password" required="required">
                        </div>
                        <div class="form-group text-center">
                            <input type="checkbox" tabindex="3" class="" name="remember" id="remember">
                            <label for="remember">   Remember Me</label>
                        </div>
                        <div class="form-group">
                            <div class="row">
                                <div class="col-sm-12">
                                    <button type="submit" class="form-control btn btn-default" name="login">Login Account</button>
                                </div>
                            </div>
                        </div>
                        <div class="form-group">
                            <div class="row">
                                <div class="col-lg-12">
                                    <div class="text-center">
                                        <a href="password-forget.php" tabindex="5" class="forgot-password">Forgot Password?</a>
                                        <span class="pull-right">
                                        <a href="index.php" tabindex="5" class="forgot-password">Home</a>

                                        </span>
                                    </div>
                                </div>
                            </div>
                        </div>
                    </form>
```


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10.2 - System deployment Time boxing

When I started to development the LearnBD that time boxing helps to maintain proper time for development the system in actual time. It works in a system iteratively for proper development the system. Here is given time box use in this system.

SI.NO	Time box	Development part	description
1	1	Database design	Here is design ERD diagram for relation between entities
2	2	System development and design part	First develop index page and other related pages
3	3		Then develop registration and login page.
4	4		Then develop system back end part
5	6		Then testing all the system requirements

10.3 – Break Down the possible problem

For development this project it break down intro some small pert for reduce complexity and it also helps to develop system more easy and efficient. This system requirement is too large that's why needed to break down into small part otherwise it will more difficult for development those are given below:

Making database design:

- ✓ Make database design for learnBD
- ✓ Make all possible tables which are required for development system

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- ✓ After make table create connection with primary key and foreign key with other tables
- ✓ After make ERD properly then connect with system code properly

CRUD for teacher, student and admin:

- ✓ Create class for student
- ✓ Upload lecture in database
- ✓ Admin can add student and teacher
- ✓ Teacher can give feedback
- ✓ Admin can modify quiz question

System design for front end:

- ✓ Create home page and give proper information with well design
- ✓ Proper link with other pages.
- ✓ System interface display color, background color, icon and images.
- ✓ Friendly and understandable responsible design.

Command management of this system:

- ✓ Student can choose their course
- ✓ Student can save their important files
- ✓ They can select one or more course
- ✓ Student can send massage if they face any kind of problem in any topic
- ✓ They can access anywhere in this system
- ✓ They can send payment for take course

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Course management:

- ✓ Teacher and admin can add new course
- ✓ Teacher or admin can modify course
- ✓ All course content save on database
- ✓ One student can take one or many courses after they register in system

Quiz management:

- ✓ Student can give quiz
- ✓ Teacher or admin add new quiz question
- ✓ Student only can give their chosen course related quiz

Admin management:

- ✓ Admin add all user into this system
- ✓ Admin can see all course related data or files
- ✓ Admin can see all teacher or student details
- ✓ Admin can post notice

Rating management:

- ✓ Student can give rating in each topic
- ✓ Rating save in database

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10.4 – prioritization of problems

In this proposed system for development very important prioritization because it helps to find most important part for development and it also help to find less important part development in actual time. For development this project here is used DSDM methodology that's why time is fixed for development every task of this project. Some of important prioritization part is given below:

- ✓ Proper database deign
- ✓ System front end design
- ✓ Proper use of CRUD operation
- ✓ Management command
- ✓ Upload lectures, files, videos etc.
- ✓ Add student and teacher
- ✓ Add new course
- ✓ Modify course contain and quiz questions
- ✓ Payment system for student
- ✓ View course list
- ✓ Search course
- ✓ Rating system

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Chapter – 11 - Testing

- System Criteria Testing
- Test plan
- Testing
- Summary

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11.1 - System criteria testing

For testing software there is many of testing is available in computer programing system (Rajkumar, 2015). Some important testing criteria of this system are chosen those are given below:

- ✓ Unit testing
- ✓ Integration testing
- ✓ Security testing
- ✓ Usability testing
- ✓ Performance testing
- ✓ Acceptance testing
- ✓ Accessibility testing
- ✓ Module testing

Unit testing:

- ✓ Registration validation check for testing
- ✓ Student, teacher and admin login page validation testing
- ✓ Course add validation testing
- ✓ Course list check validation testing.

Integration testing:

- ✓ It helps to check successful user login in the system
- ✓ It helps to check add course successfully in the system
- ✓ Student can successful overture in the system

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Security testing:

- ✓ Data security testing
- ✓ Recover student ID and password testing

Usability testing:

- ✓ System admin with testing

Performance Testing:

- ✓ It helps to check system speed, stability and scalability
- ✓ It also helps verify quality attributes

Acceptance testing:

- ✓ Course list links with teacher and student pages testing
- ✓ All page likes with admin page testing
- ✓ After course add in system student can see course list testing
- ✓ Course can edit after upload course content

Accessibility testing:

- ✓ Testing for color blind student
- ✓ Testing for non- professional student or users

Module testing:

- ✓ Check wrong information with system registration
- ✓ Check without any data mission submit for registration
- ✓ Check registration of login with valid data

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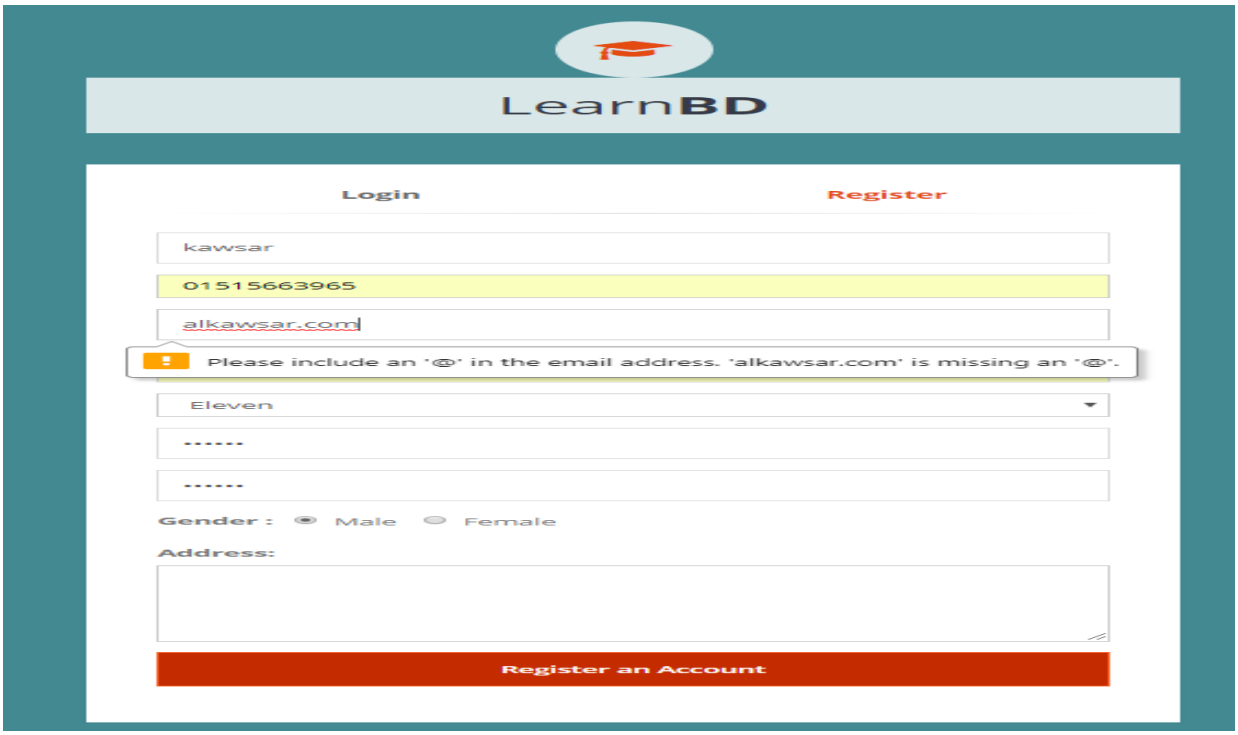
11.2. - Test plan

11.2. 1- Unit testing

Name of test plan	Unit test		
Name of Test class	Student Registration		
Description of test	Student Registration in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Email Given: alkawsar.com	Show a massage @ is missing	System shows that @ is missing in email address



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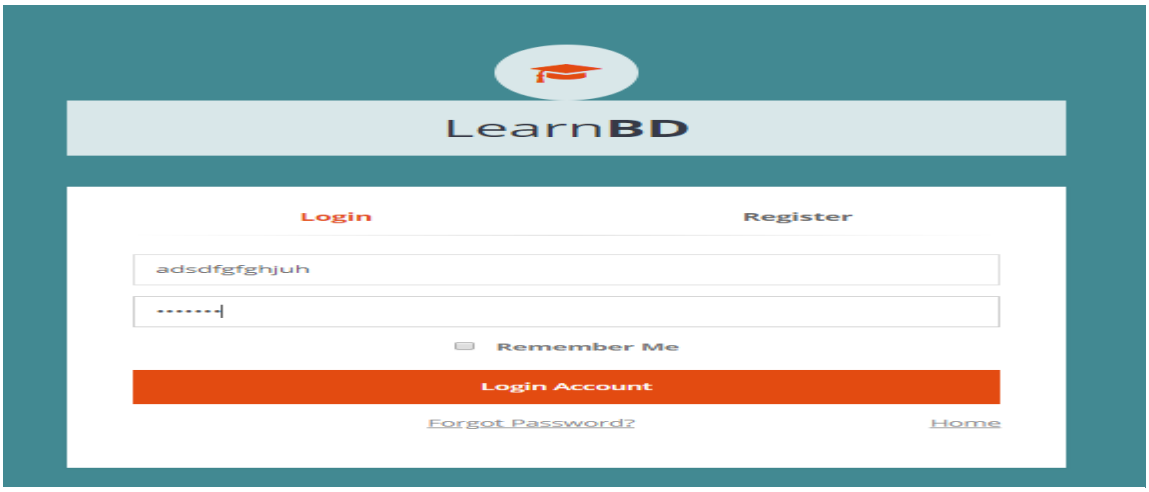
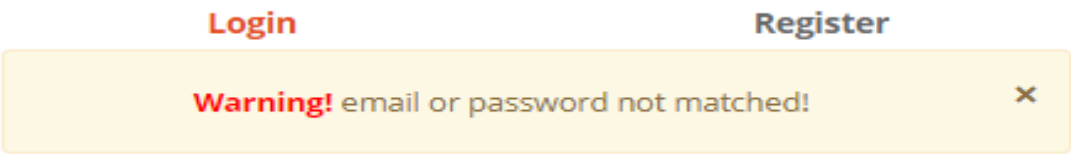
Name of test plan	Unit test		
Name of Test class	Student Login		
Description of test	Student Login in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Student ID Given: adsdgfghjuh password Given: fhfddsfj	System Show Warning ID or password not matched	System will shows you given wrong input.





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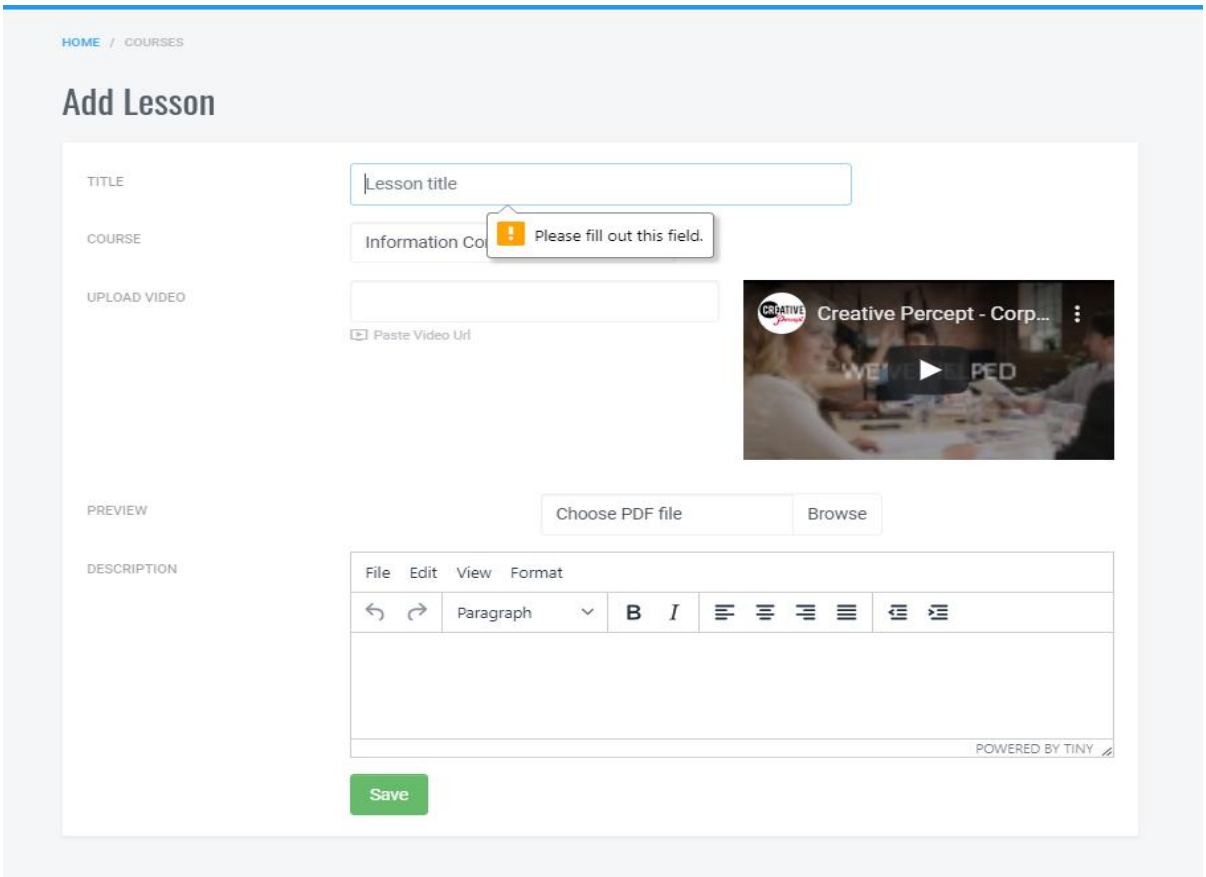
Name of test plan	Unit test		
Name of Test class	Add lesson		
Description of test	Add lesson in the system		
Source of data	Test task	Actual Result	Expected Result
Teacher Entry	No input in lesson title	System Show fill out this field	System Show fill out this field



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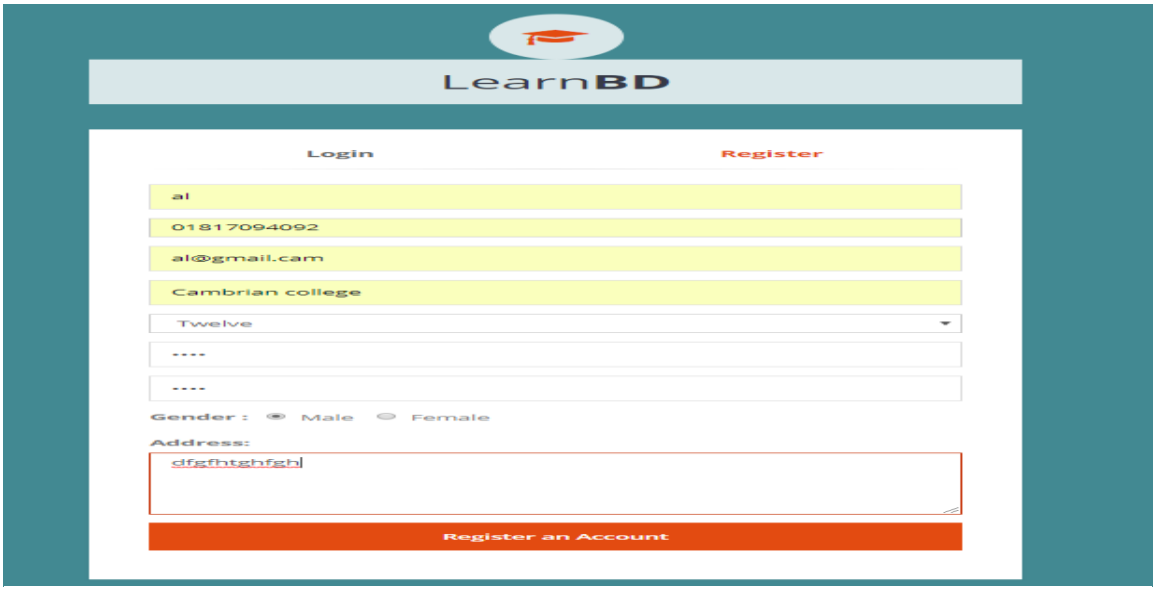
Name of test plan	Unit test		
Name of Test class	Student Registration		
Description of test	Student Registration in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Student given name: Al Student given phone: 01817094092 Student given email: al@gamil.com	System show success user data insert	System show success user data insert



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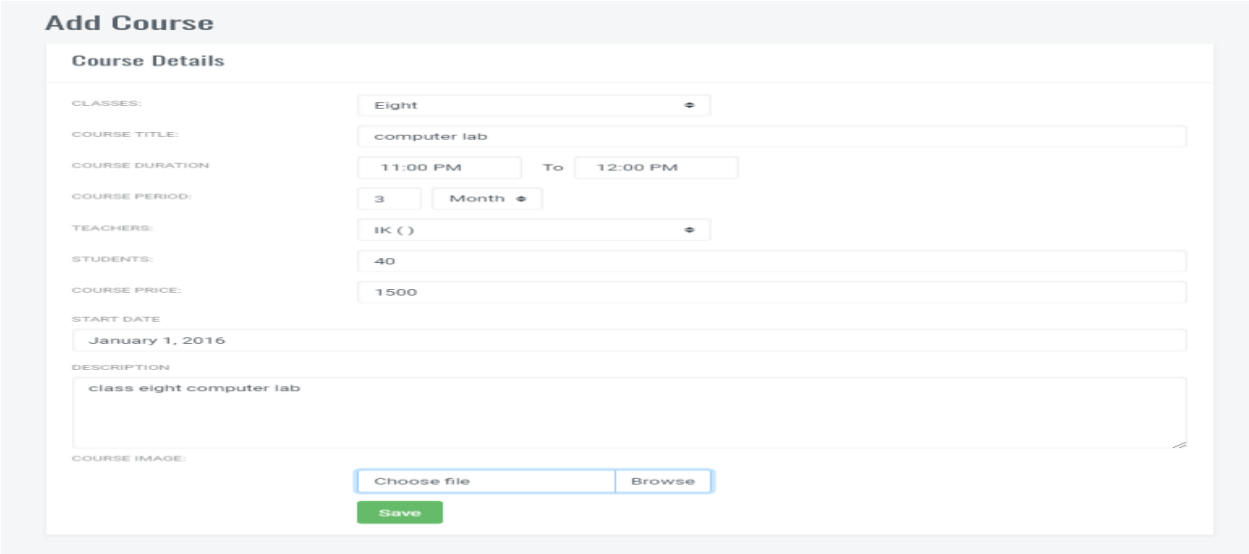
11.2.2- Integration testing 1

Name of test plan	Integration test		
Name of Test class	System Course controller		
Description of test	Successful add course between and admin		
Source of data	Test task	Actual Result	Expected Result
admin entry	Admin given class: eight Admin given course title: computer lab Admin given teacher name: IK Admin given course price- 1500 Admin given course duration – 3 months	System will show success! Coues data insert	System will show success! Coues data insert



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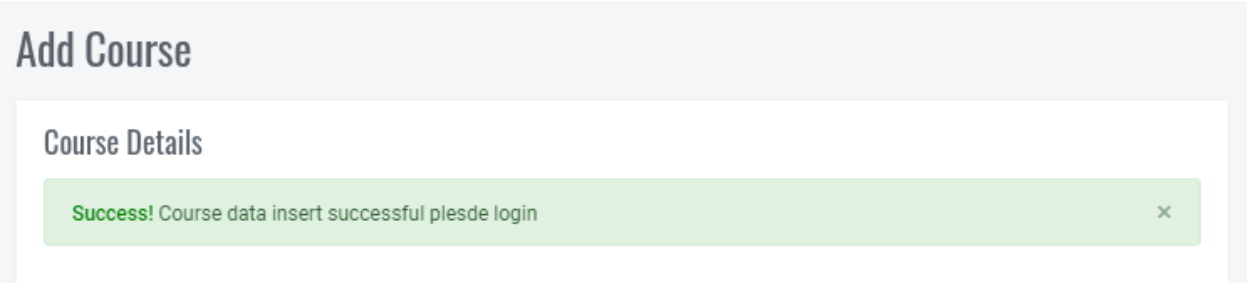

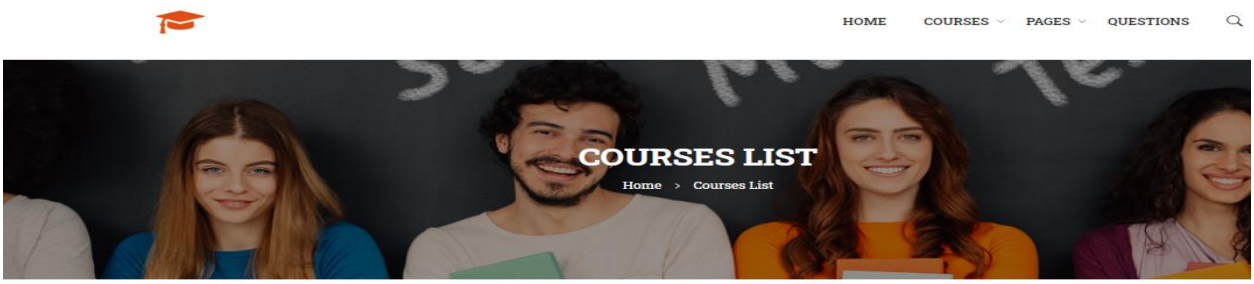

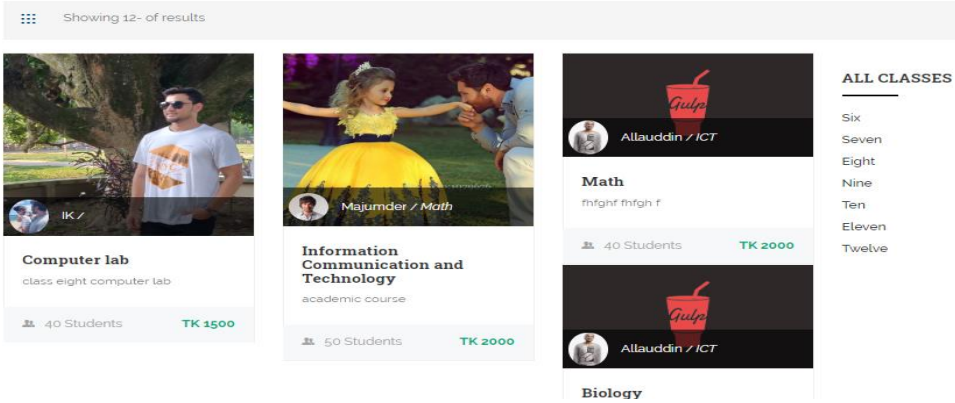

Integration testing 2

Name of test plan	Integration test		
Name of Test class	Assign teacher in the system		
Description of test	Successfully assigned teacher		
Source of data	Test task	Actual Result	Expected Result

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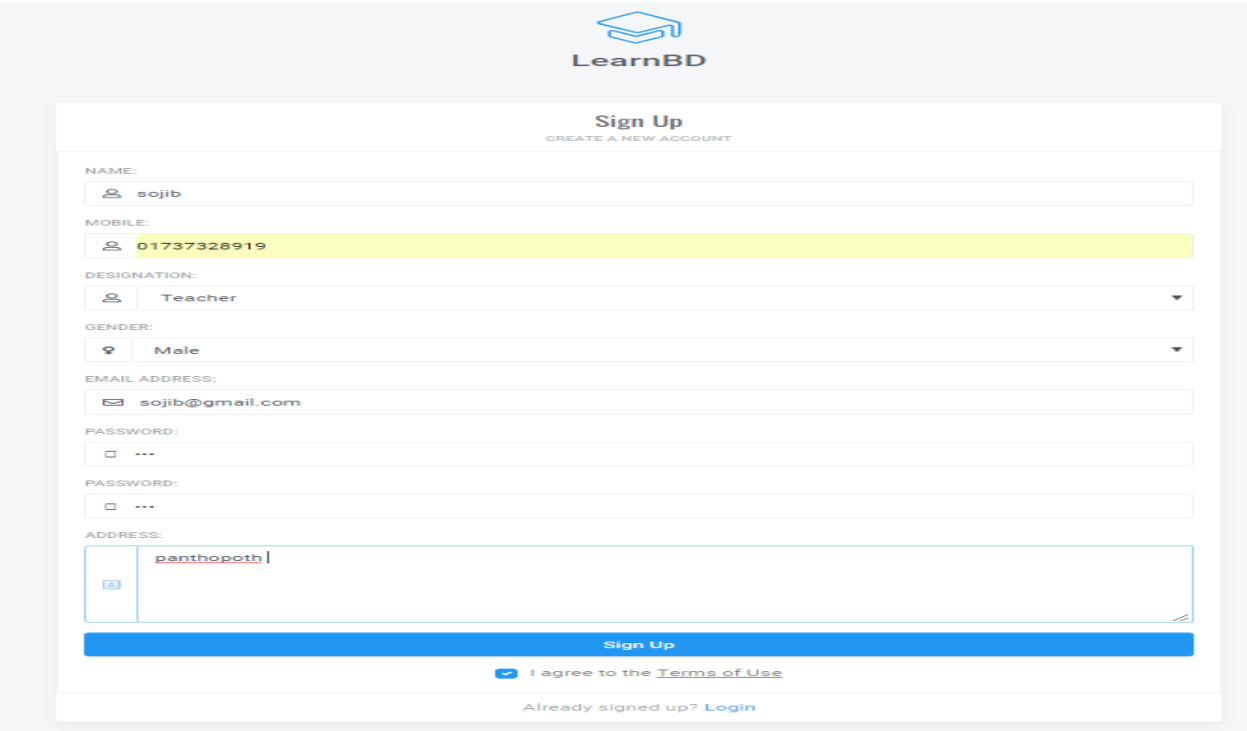
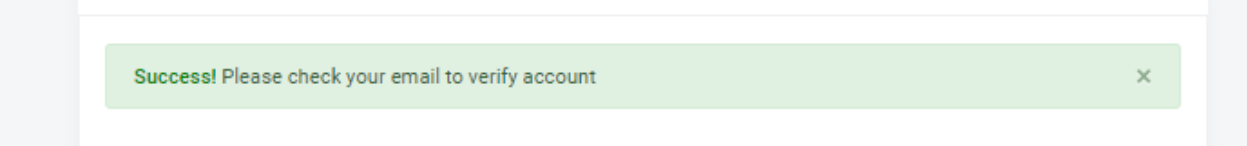
Teacher entry	teacher give name: sojib teacher given mobile:01737325919 teacher given occupation- teacher teacher given email- sojib@gmail.com	System will show success! Please check your mail to verify account	System will show success! Please check your mail to verify account





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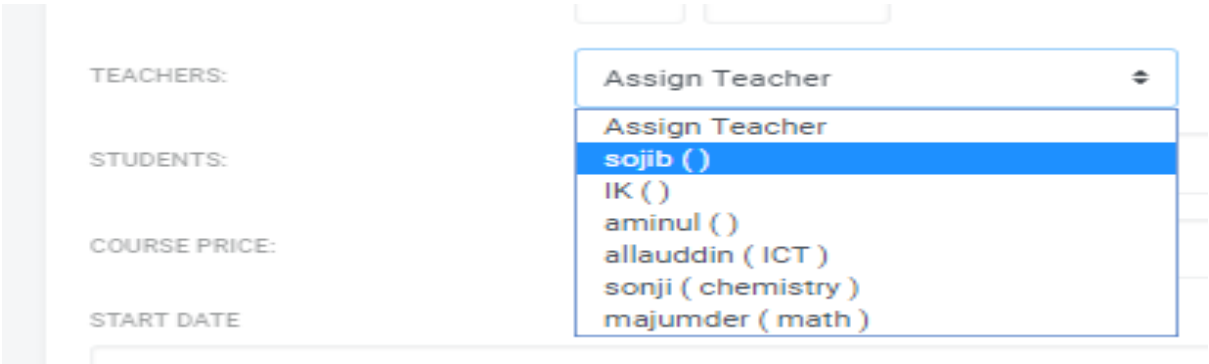

Integration testing 3

Name of test plan	Integration test		
Name of Test class	Add lesson by teacher		
Description of test	Successfully add lesson		
Source of data	Test task	Actual Result	Expected Result
Teacher entry	teacher give course title : computer system teacher given course: information communication and system teacher given description- computer system theory	System will show success! Lesson data insert successfully.	System will show success! Lesson data insert successfully.

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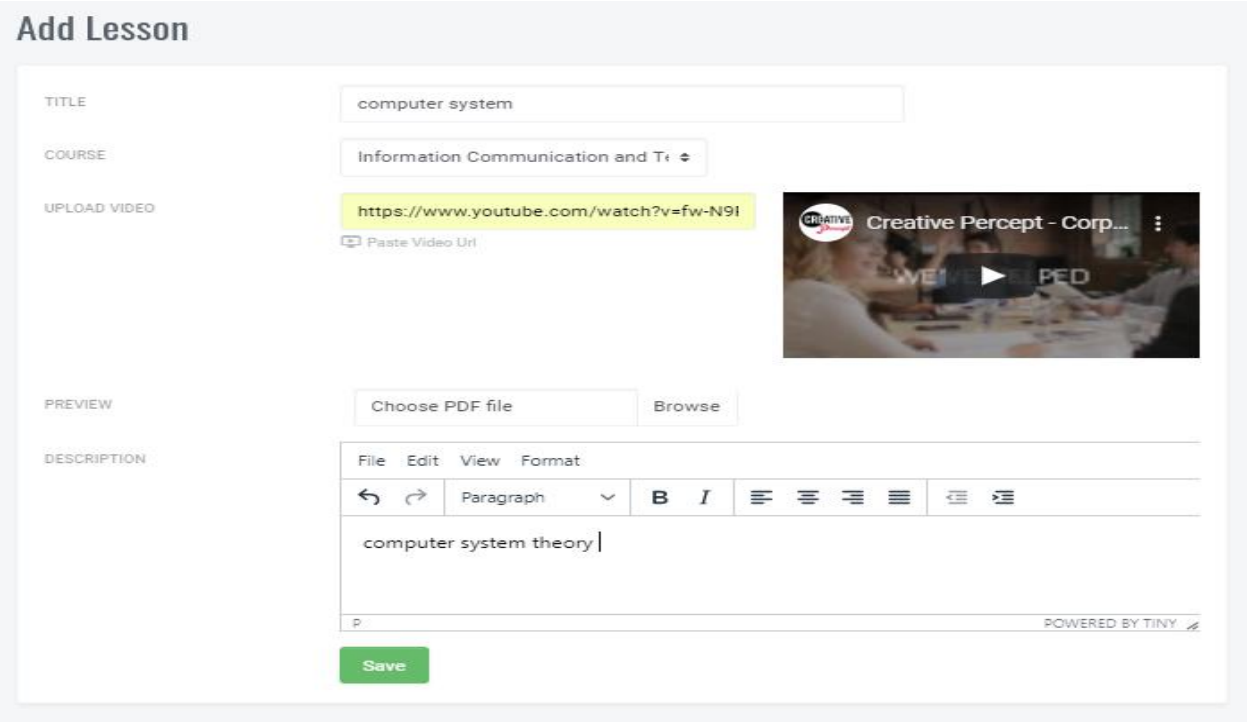

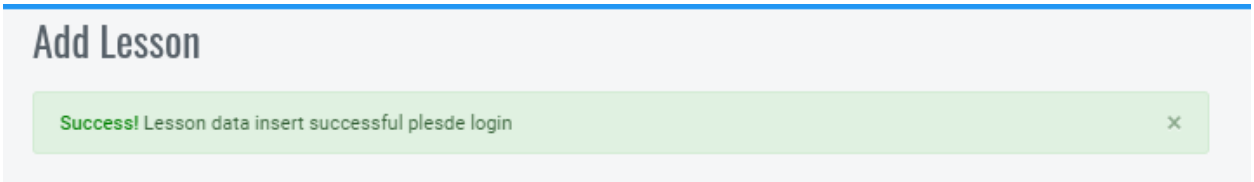

Course Lessons

Type	Lesson Title	Time	Status
	Lesson Name : Information Communication and Technology	20 Min	✔
	Lesson Name : Test	20 Min	✖
	Lesson Name : computer system	20 Min	✖

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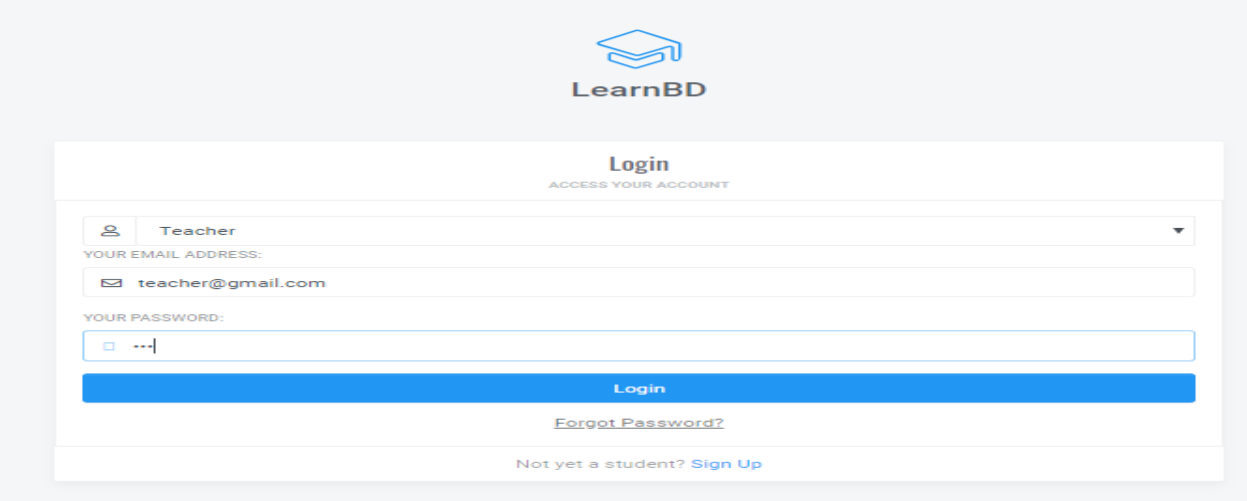
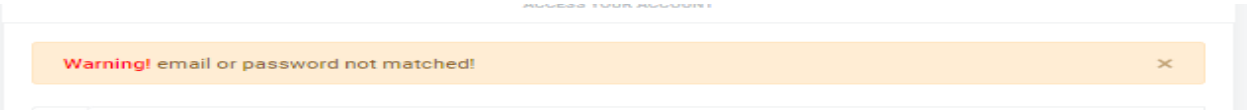
11.2.3 Security testing 1

Name of test plan	Security testing		
Name of Test class	Teacher Login		
Description of test	Teacher Login in the system		
Source of data	Test task	Actual Result	Expected Result
Teacher Entry	Student given name: Al Student given phone: 01817094092 Student given email: al@gamil.com	System show success user data insert	System show success user data insert





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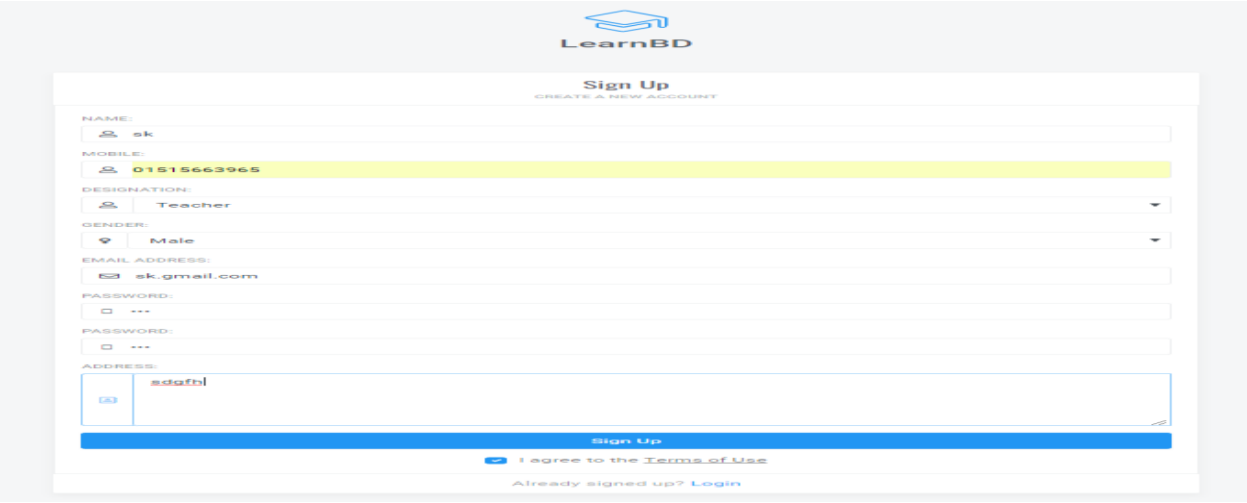
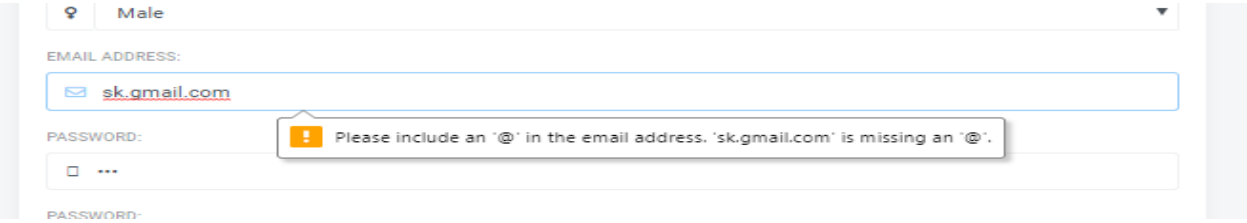
Security testing- 2

Name of test plan	Security testing		
Name of Test class	Teacher Registration		
Description of test	Teacher Registration in the system		
Source of data	Test task	Actual Result	Expected Result
Teacher Entry	Teacher given name: sk teacher given email: sk.gamil.com	System show please include @ in the email here is @ missing	System show please include @ in the email here is @ missing





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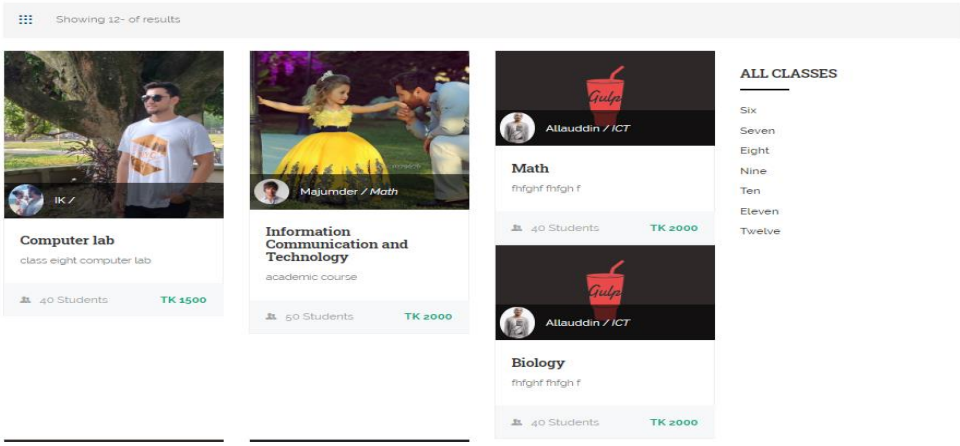
11.2. 4 - Usability testing 1

Name of test plan	Usability testing		
Name of Test class	Viewing courses		
Description of test	Viewing all courses in the system		
Source of data	Test task	Actual Result	Expected Result
Admin Entry	Admin add courses	System show all courses of this system	System show all courses of this system



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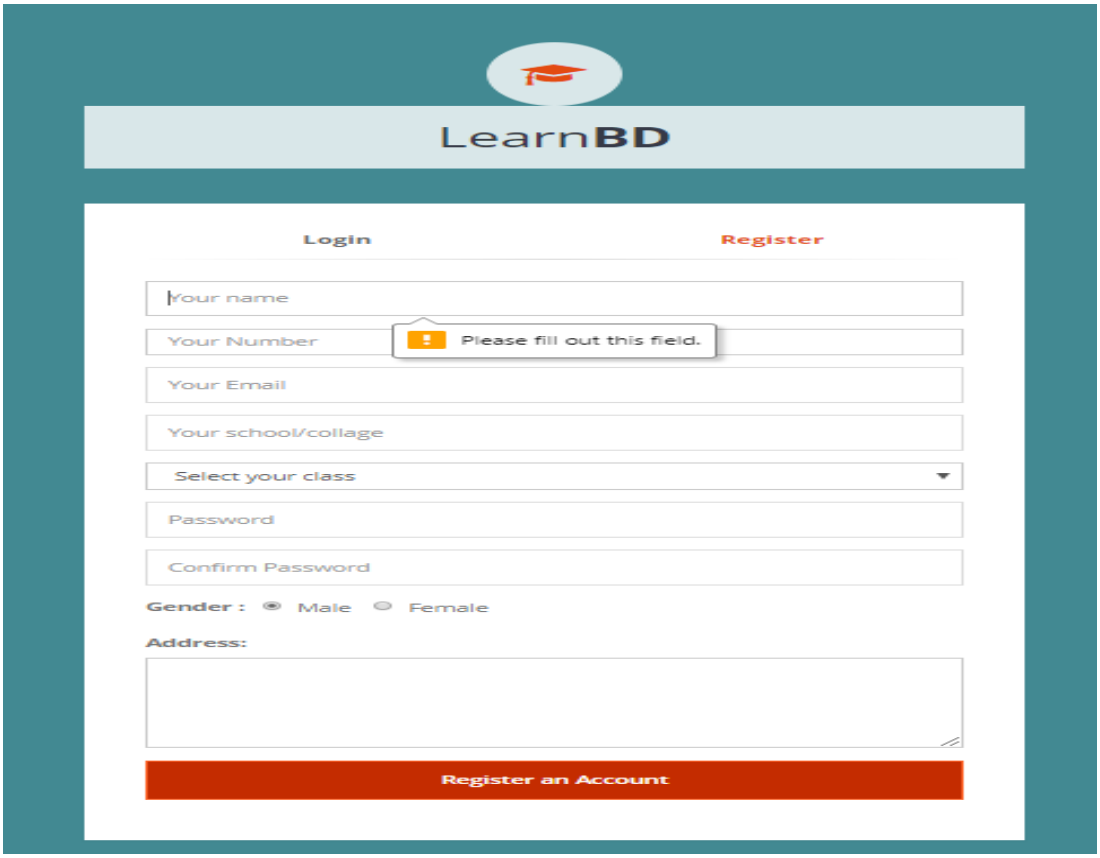
11.2. 5 – Module test 1

Name of test plan	Module Testing		
Name of Test class	Module test of student registration		
Description of test	Module test in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Submitting form without any data	System will show massage please fill out this filed	System will show massage please fill out this filed



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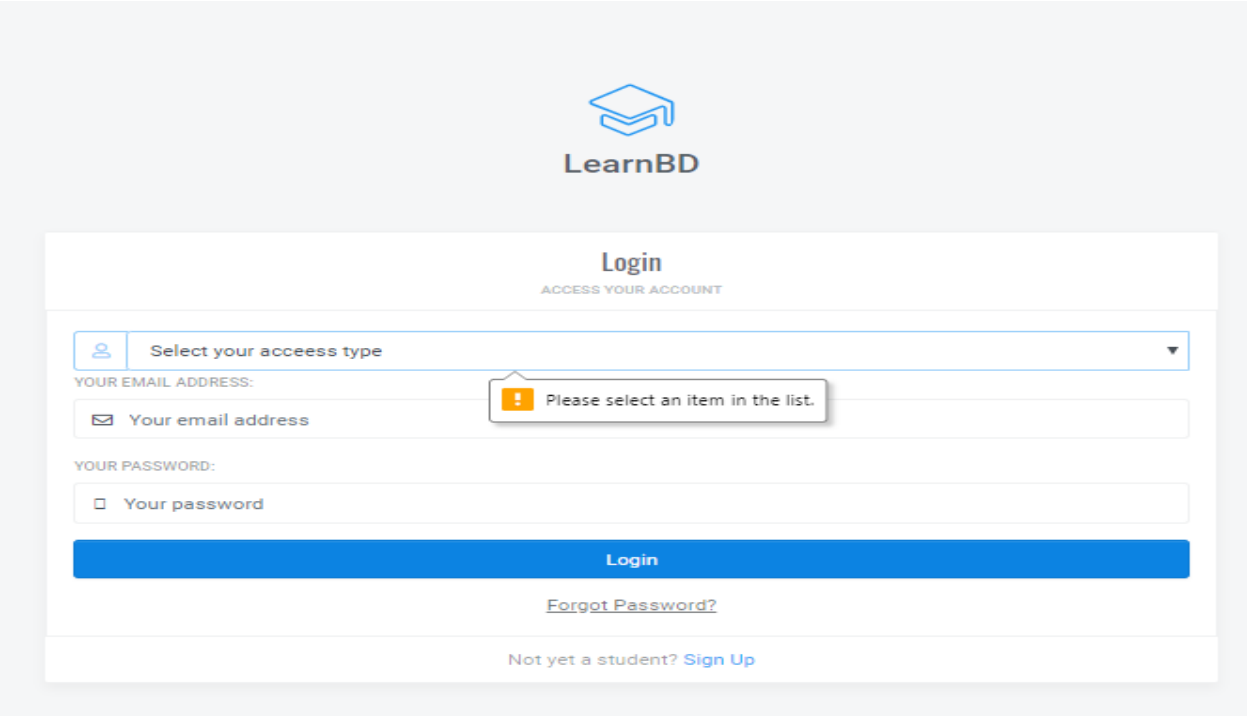
Module test 2

Name of test plan	Module Testing		
Name of Test class	Module test of admin Login		
Description of test	Admin login Module test in the system		
Source of data	Test task	Actual Result	Expected Result
Admin Entry	Admin want to login without data	System will show massage please fill out this filed	System will show massage please fill out this filed



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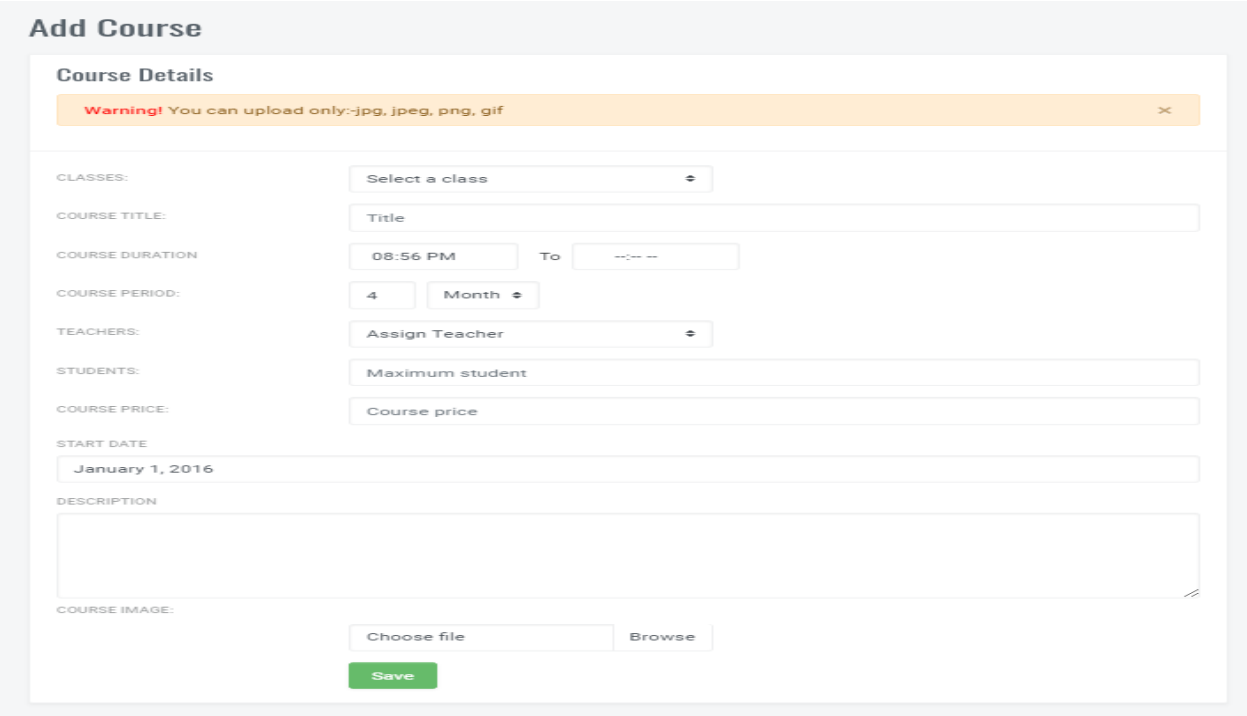
Module test 3

Name of test plan	Module Testing		
Name of Test class	Module test of data validation		
Description of test	Data validation Module test in the system		
Source of data	Test task	Actual Result	Expected Result
Admin Entry	Admin want to course	System will show warning! You can upload only – jpg, jpeg, png, gif	System will show warning! You can upload only – jpg, jpeg, png, gif



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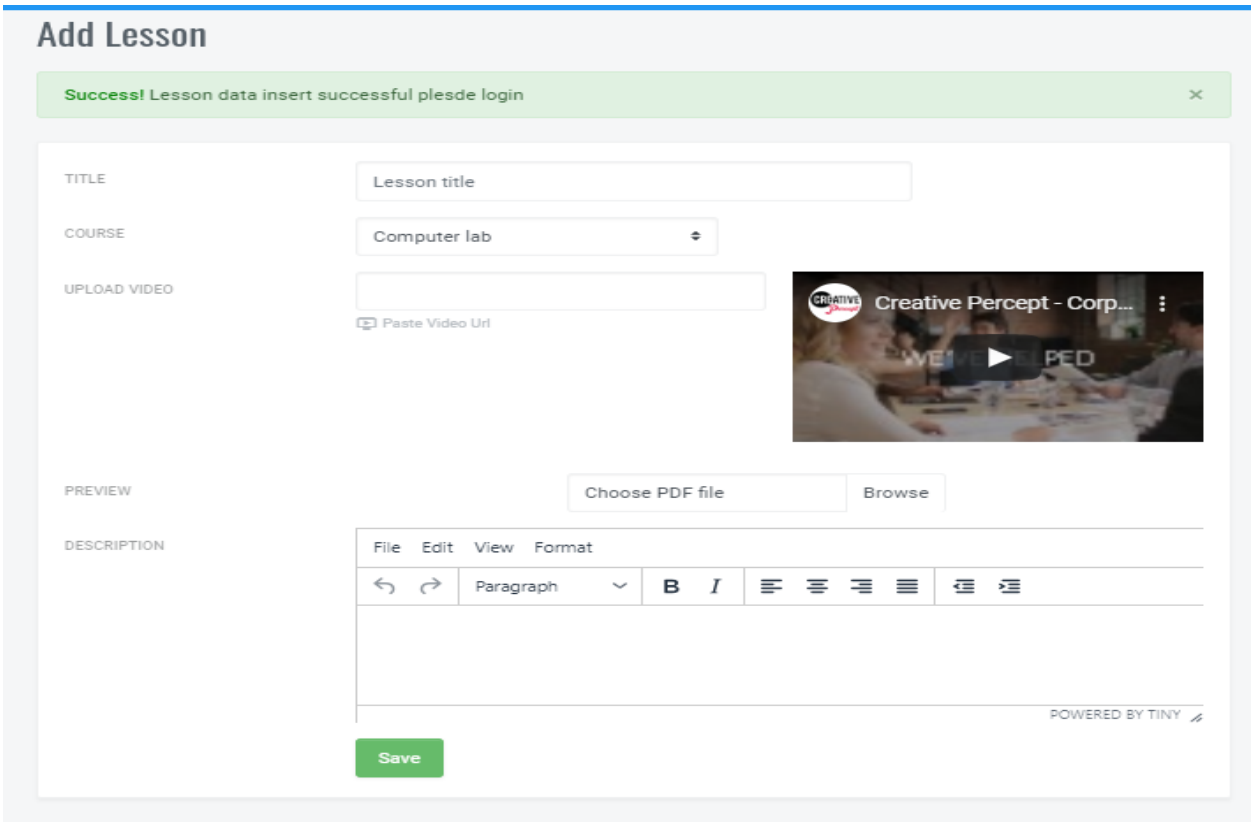
11.2. 5 – Acceptance test 1

Name of test plan	Acceptance testing		
Name of Test class	Lesson manager		
Description of test	Lesson manager Acceptance testing in the system		
Source of data	Test task	Actual Result	Expected Result
Teacher Entry	Teacher can watch lesson details.	System will show massage lesson details list	System will show massage course details list



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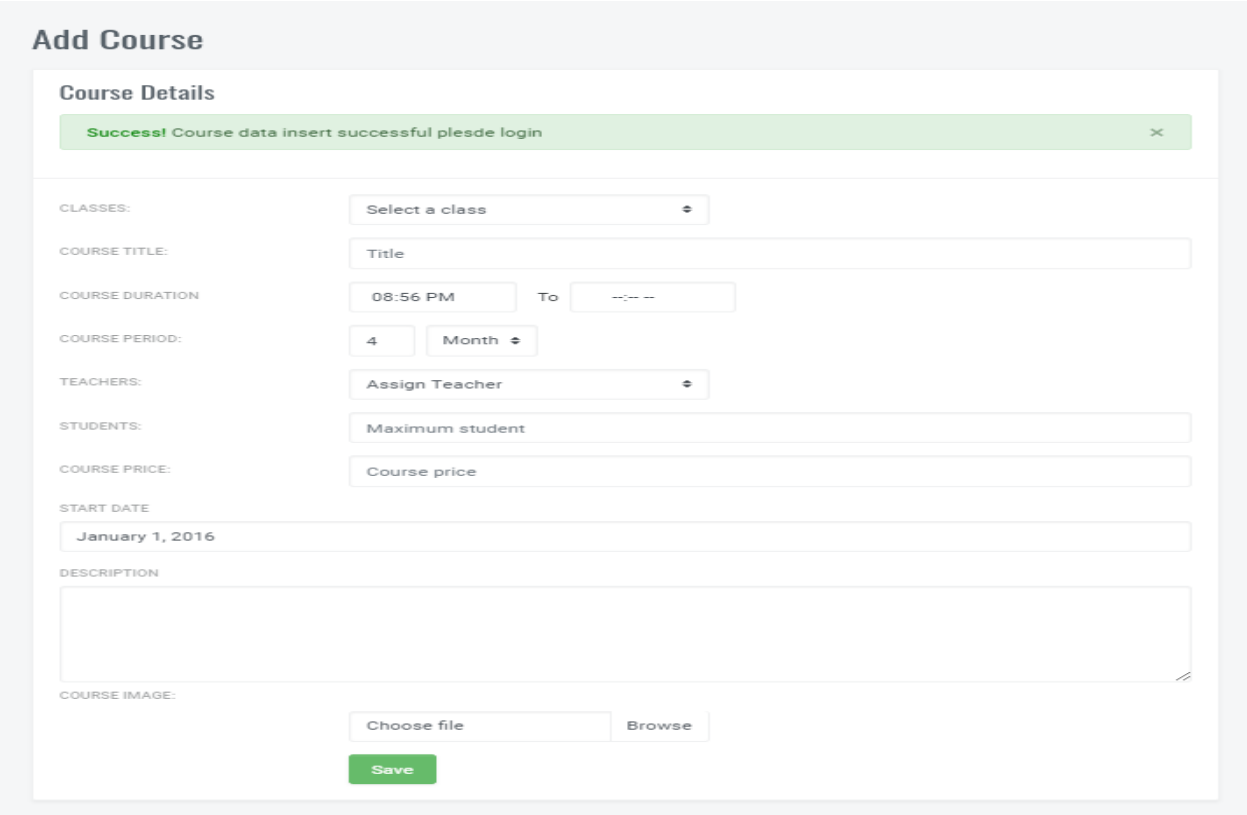
Acceptance test 2

Name of test plan	Acceptance testing		
Name of Test class	Course manager		
Description of test	Course manager Acceptance testing in the system		
Source of data	Test task	Actual Result	Expected Result
Admin Entry	Admin can watch course details.	System will show massage course details list	System will show massage course details list



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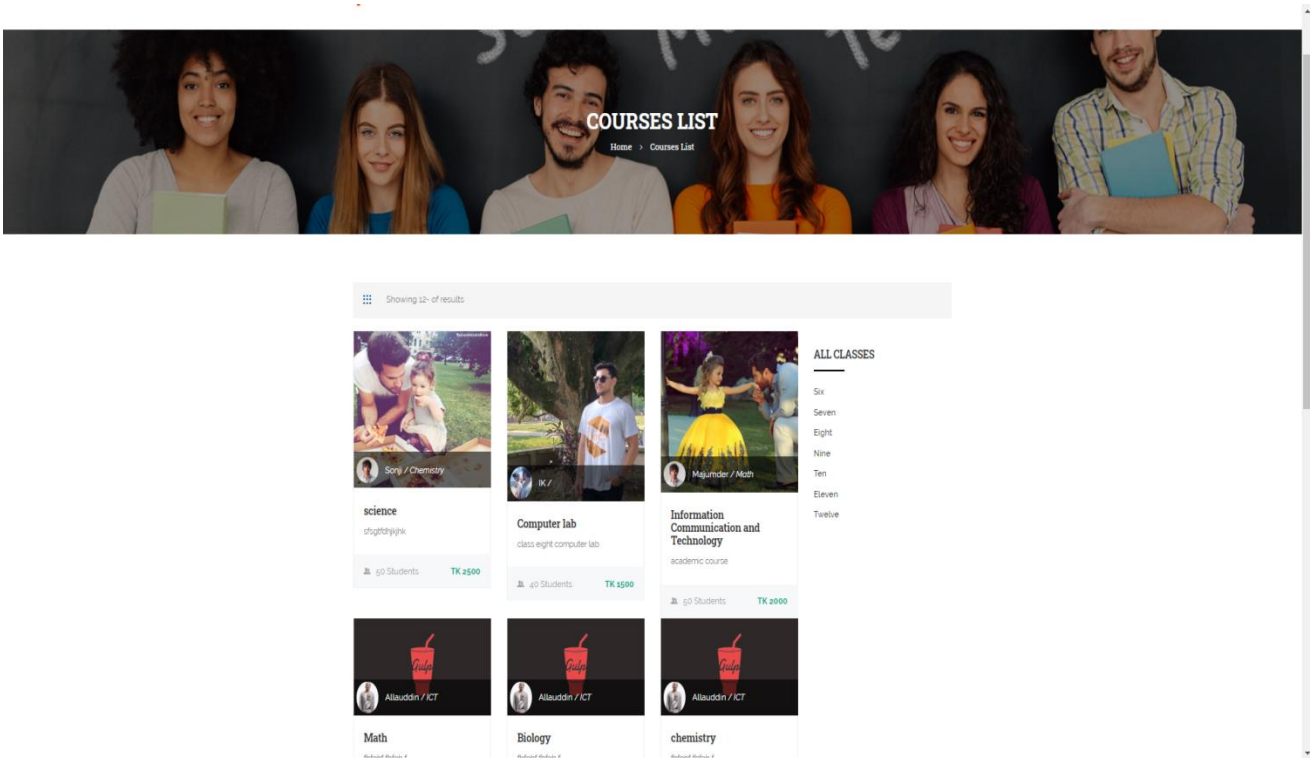
Acceptance test 3

Name of test plan	Acceptance testing		
Name of Test class	Student view		
Description of test	Student view Acceptance testing in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Student can see their courses	System will show all course details list	System will show all course details list



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11.2. 6 - Accessibility test

Name of test plan	Accessibility testing		
Name of Test class	Student controller		
Description of test	Student control Accessibility test in the system		
Source of data	Test task	Actual Result	Expected Result
Student Entry	Give abnormal students for use the system	System will show no any kind of problem occurs	System will show no any kind of problem occurs

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Chapter – 12- Implementation

- Tanning
- System Implementation
- Scaling
- Balancing

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12.1 – Training

Training is a process for system alive to the user. Training help customer for use the system properly and helps to know every features and function then new user learn the system easily. Here is given tanning time duration for different types of user. (Guinn, 2019)

SI.NO	User of the system	Time Duration	Description
1	Student as customer	30 minuets	This system is web – bases application needs to train all students for understand the system easily all of the features and function is well organized that's why 20 minutes is good enough for understand about the system functionalities.
2	Admin as user	1 hour	Admin has lots of works maintain database, student registration, all subject content etc. that's why needed to take 1 hour time for train about the functions.

12.2 – system Implementation

In this project there is different types of implementation scheme is used those are given below:

Direct implementation: In a system direct implementation means remove old system and implement new system and its design also implement directly in a system. This implementation is mainly use after testing the system is confirmed.

Pilot implementation

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Pilot implementation means in a system will use in new system only for some of branches of a company for test the system. They will check system usability, system performance which are pilot implementation is required. After check the system and system is all right then it is consider for user properly.

Parallel implementation

Parallel implementation is a process for implementation of new system same as old system is running and it take system backup for new system.

Big bank

Big bank implementation process is quicker than other implementation process. This process helps to implement new system directly after system testing is complete. There is some problem when new system take data from new system that time can be risk because in this time some data might be loss or system might be crush.

12. 3 – Recommendation implementation process

During analysis all the process of implementation, I chose direct implementation process for my system because its implementation process is more suitable for my system.

12.4 – Scaling

In this project I do not use any kind of scaling. This system is newly implemented and it also in my academic project that's why I think no need to use scaling in this system.

12.5 – Balancing

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Balancing of the system means system requirement and user requirements hit on the system. it need to balance for develop well system and after testing it is implement directly in a system for reduce problem and achieve system goals.

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Chapter 13 – Evaluation

- System Functionality system
- System Usability
- System Security

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13. 1 – System functionality

This system has many of functionalities used that's why need to check all system requirements is meet with the system or not. This system is learnBD online based online education platform for all academic student of Bangladesh. In this system here is some of major function in include like course management, lesson management, question answer system, mail verification system etc. those functionalities screen short given below:

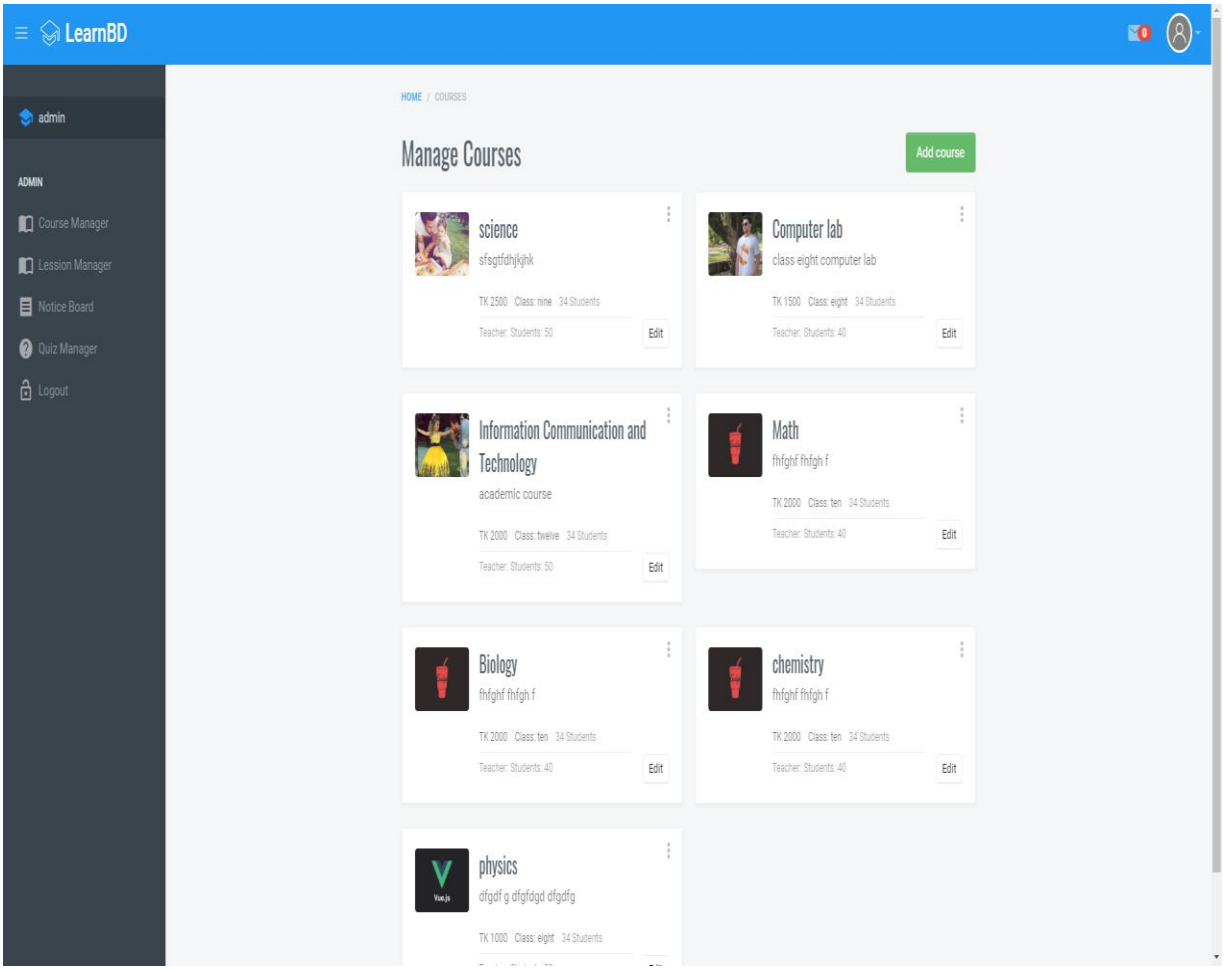

Figure 55: course management

Here admin can manage or add course admin also can do edit or delete course.

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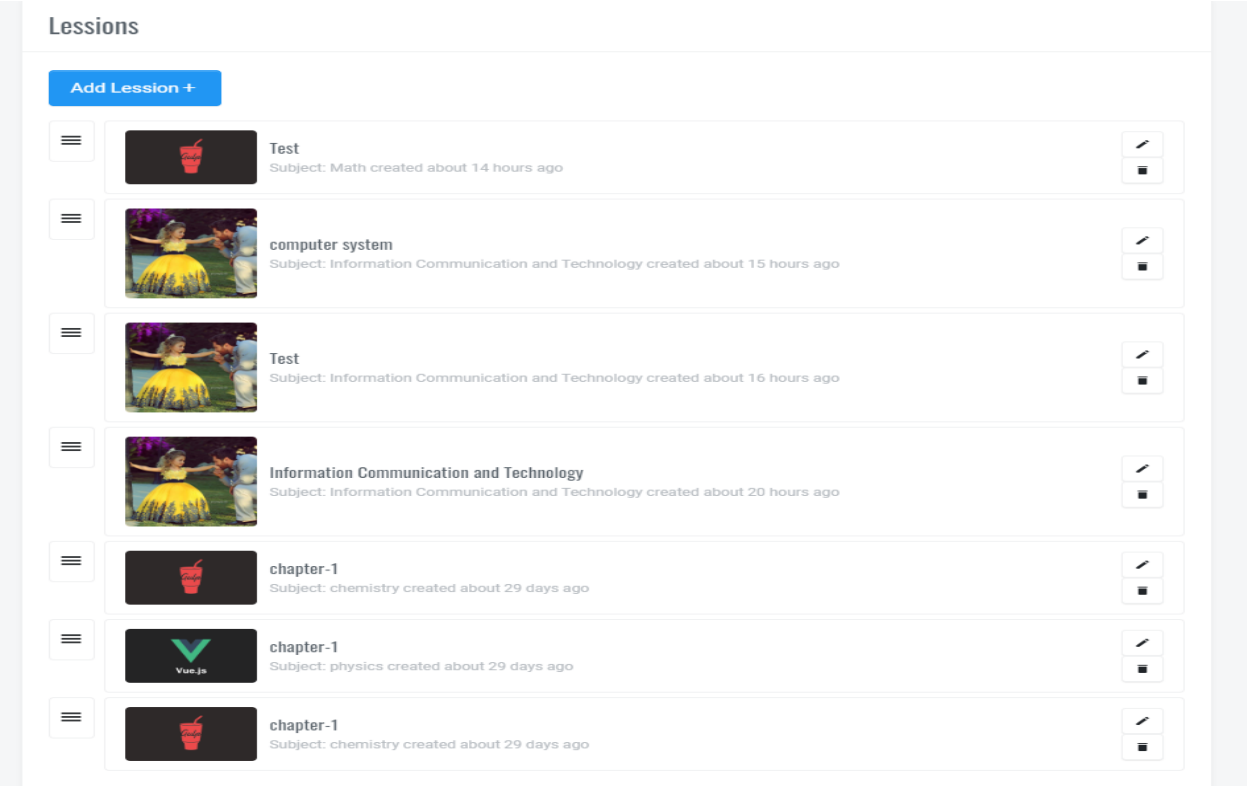

Figure 56: Add Lession

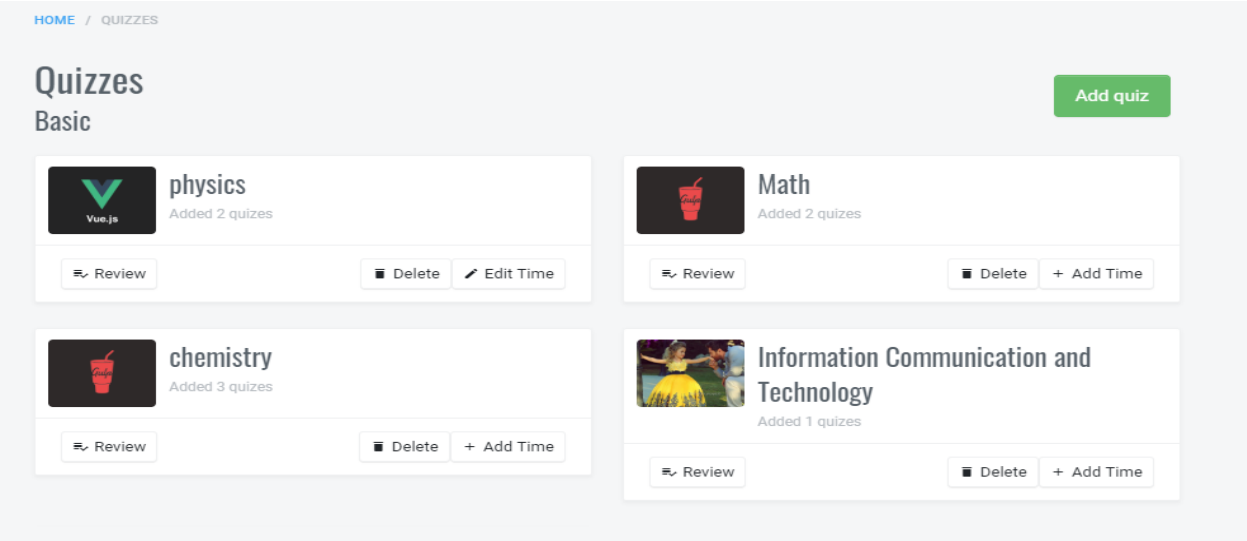

Figure 57: Add quiz

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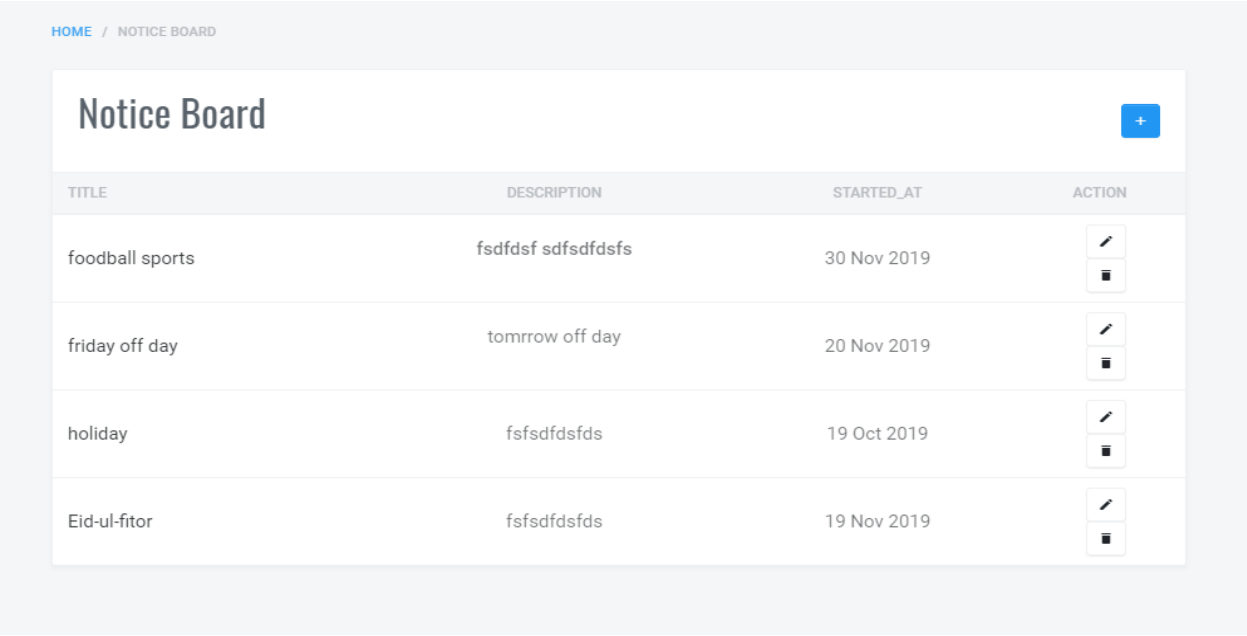

Figure 58: notice board

Here admin can post any kind of notice, edit notice and also can delete notice if needed.

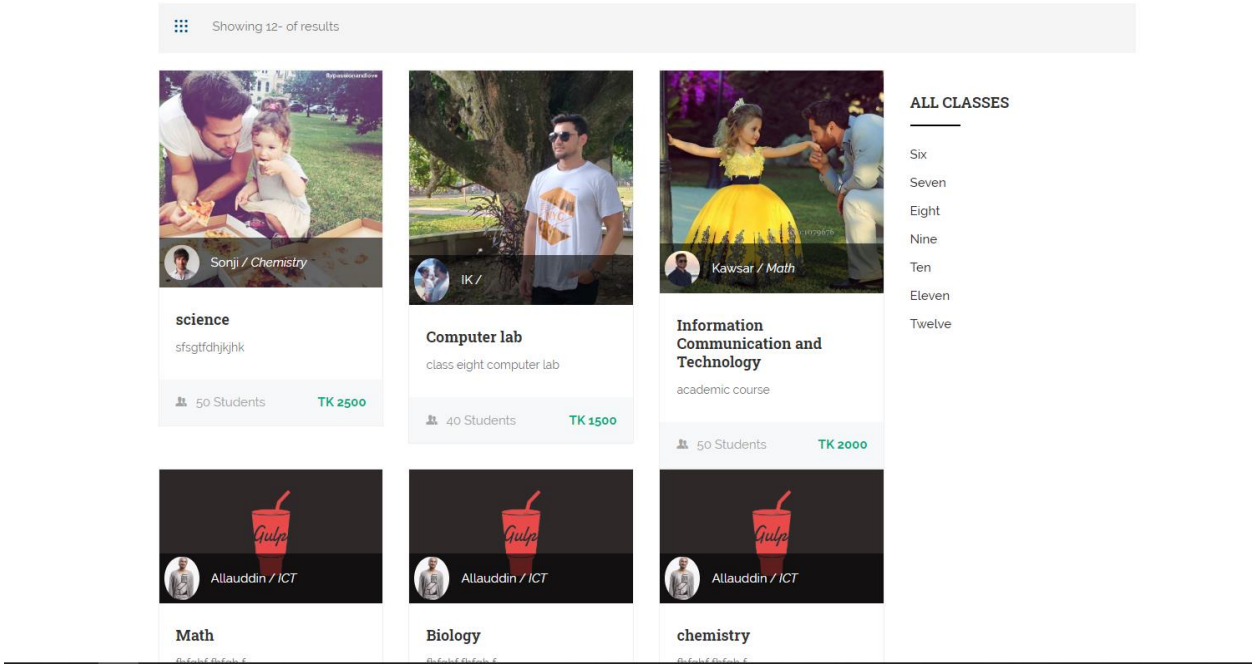

Figure 59: view course list

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13.2 – System Usability

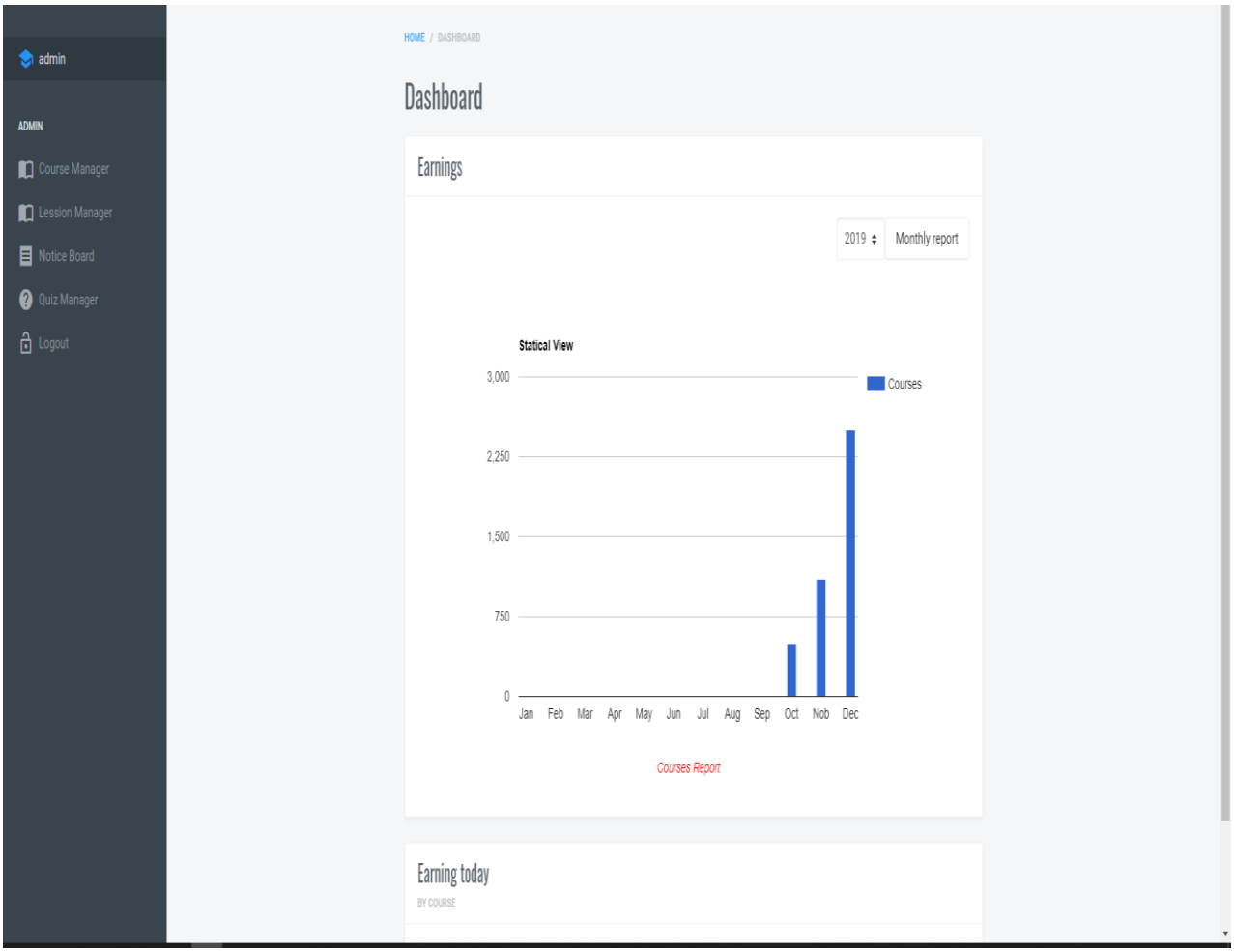

Figure 60: system usability dashboard

In this system interface show dashboard statics of every month of the year, earnings, course report every day earning report etc. it helps to identify the student satisfaction rate, daily earning rate, monthly and yearly earning rate, it also helps to identify which course is very popular and which is less popular. It helps to find out way to weak area.

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13.3 - System Security

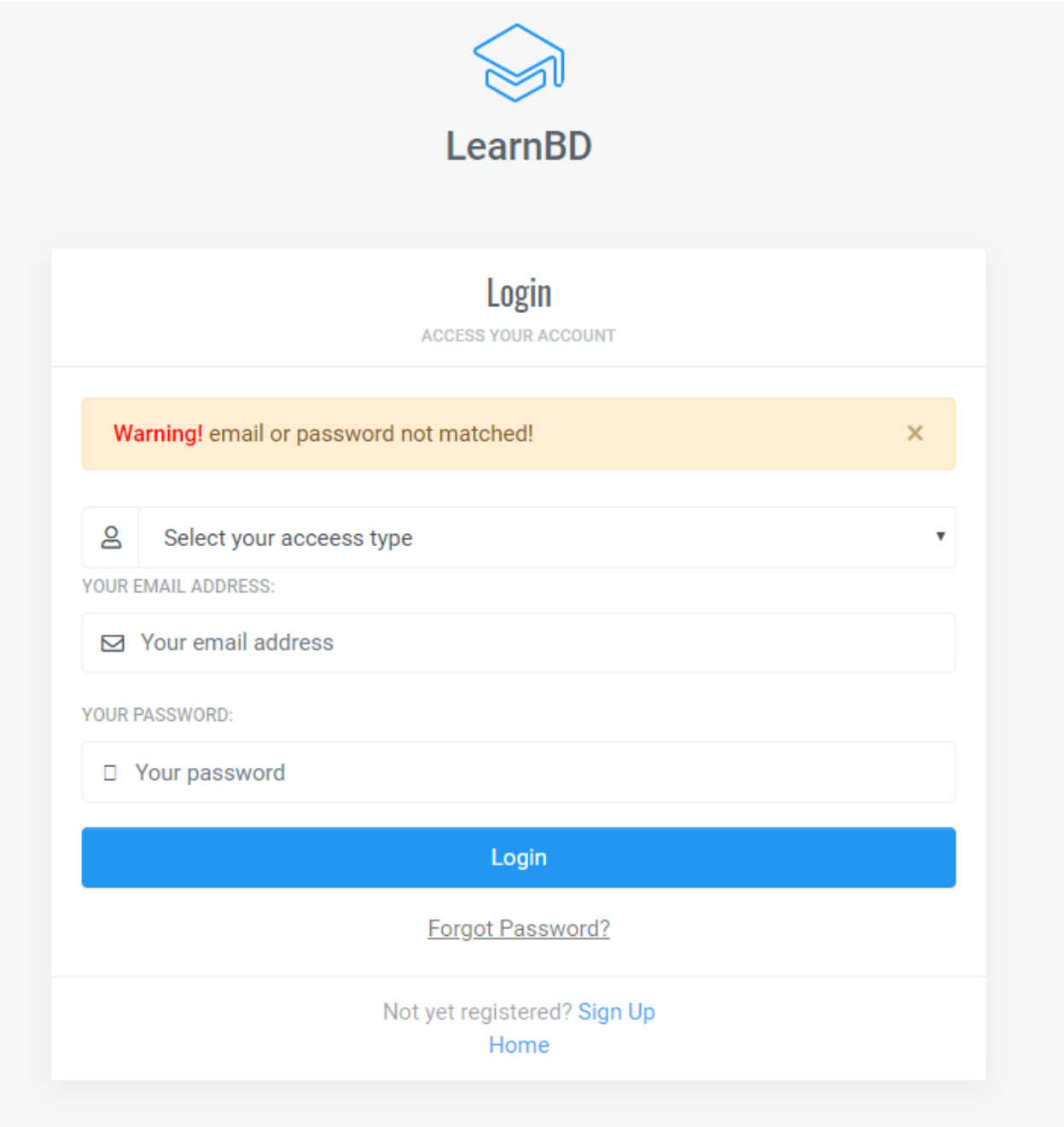

Figure 61: system security for admin login

Here is show system security warning massage email or password not match. If you to login for admin you need to provide valid email or password.

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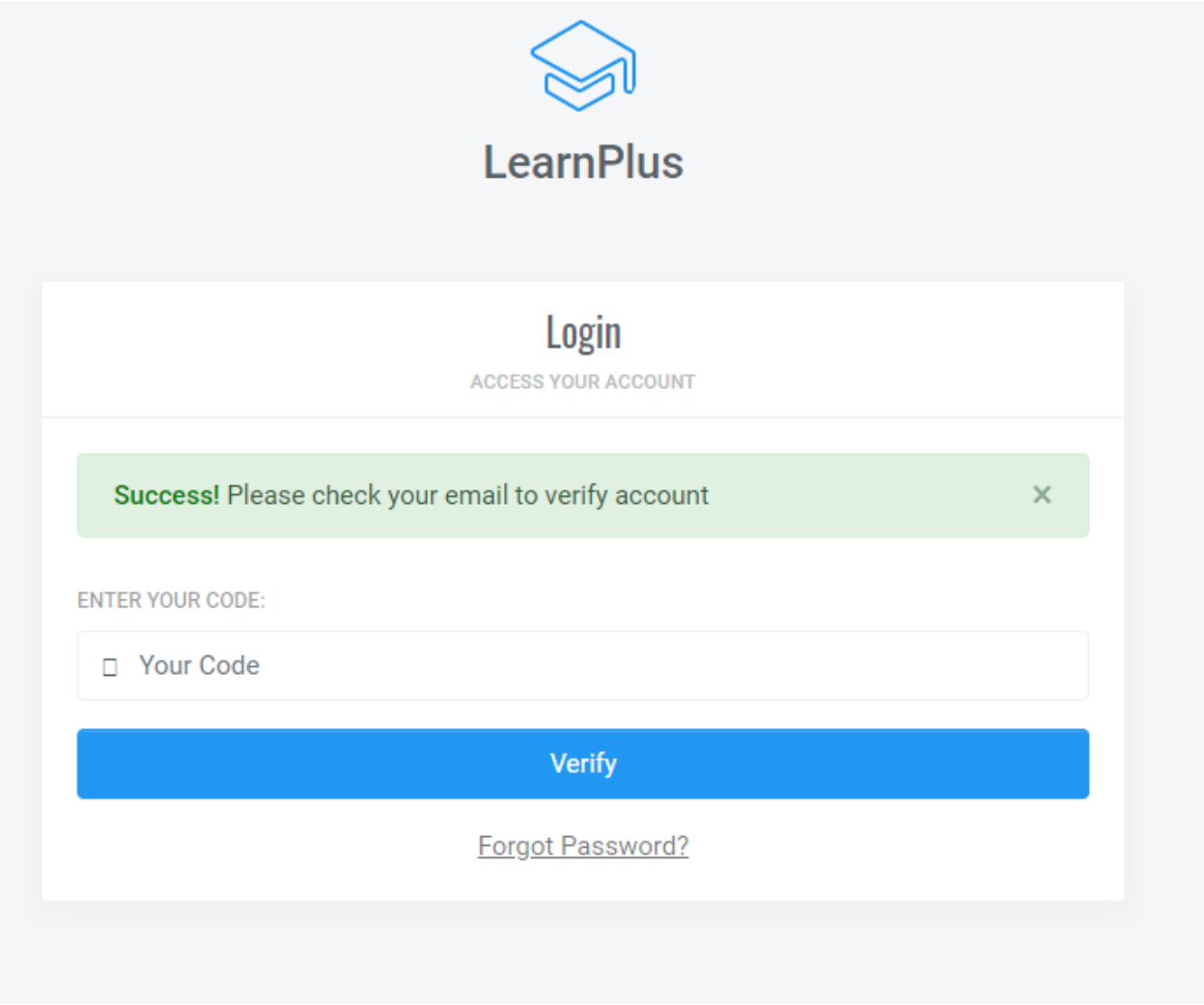

Figure 62: security for email verification

Here is show successful massage for teacher registration but here is need valid email and need to give verify code for proper registration.

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Chapter -14 – Critical Appraisal

- **Objective met**
- **Objective not met**
- **Further development**

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14.1 - Objective met

In this system there is some objectives. For successful this project there is need to complete part of system objective those are given below:

Academic objectives:

- Implement the project with project documentation
- For development this project using the system methodology
- Make report and follow academic instruction
- Feasibility study need to analysis for the system
- Need to design database properly
- Need to test system for check output of this system and implement it properly.

Business Objectives:

- Need to provide all quality lecture
- Provide feedback system
- Provide system ways question option.
- Provide transaction process

Personal objectives:

- System requirements and functionality develop properly
- Develop error free project
- Provide well documentation
- Given all user requirements

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14.1. 1 – Academic objectives

For development this project I chose DSDM atern methodology. It helps to find out every part of the system success rate. There is some problem also both are given below:

Success factor:

Implementation this project I chose DSDM atern methodology. In a system there is many of requirements DSDM methodology is helps to identify the requirements is important for development first and are not much important. This is my academic project that's why I have limited time for development DSDM methodology help to make project in proper time. It also helps to do work in previous stage if anything need to change. It works iteratively in a system (Critical Apprisal, 2019).

Problem faced:

Every methodology have some problem, DSDM has also have problem which is time box. It is very difficult to develop whole project in target time where developer is one person.

Way of solution:

Complete every task in a time and need to plan for development time for complete the project properly.

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14.1.2 – documentation standards

Documentation is most important part of this project without documentation this project is valueless because this is academic project.

Success factors:

This is academic project that's why documentation is Compulsory for us. For make this documentation here is many of chapters. There is many of requirements that's why I make a plan and I build up this documentation. Here I take help from internet that they I given references for that.

Problem faced:

When I write this project I face some problem in different chapter one is chapter five and another is chapter seven and draw diagram for represent the system.

Way of solution:

For solve those problem I study about those problem then I solve those problem. I take help from Edraw max and Microsoft visio for draw diagram.

14.1. 3 – Feasibility's area

Feasibility study is most important for any project for know about economic and social environment situation.

Success factors: For development this system here is discuss about the economic of system, legal issue of society, technical feasibility. Project cost benefit analysis all of feasibility analysis done for achieve system success.

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Faced problem:

In this part I face problem is system budget and cost benefit of this project. Because here is added some new user requirements.

Way of solution:

For solve this problem need to manage requirements budget and manage cost of technology from different source.

14.1.4 – Database design properly

This project is online based application here is include login system here is different types of user. That's why need to proper database design.

Success factors:

In this system here are different types of users available and those user works in a system different ways that's why I implement database properly and after develop the system database for properly and also all function works properly.

Problem area:

Here is face one problem which is interacts database with system in some part.

Way of solution:

This problem solves by give my full concentration of database design then I identify the problem and I solve it properly.

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14.1.5 – Business objectives

In this system here is some business objectives are provided in the proposed system and those objective features, function is needed to implement properly.

- **Success area:**

  I develop those business requirement, features, and functions properly and I tested all system requirements and all of part works properly.

- **Problem area.**

  For development this system I faced some of problem like registration, add files, manage admin panel. Another problem is data and manage storage.

- **Way of solution:**

  For manage data in server is very costly that's why I use YouTube link system, I study about registration system and adding file a system and I solve those problem.

14.2 – Objective not met

In system lots of aim and objectives all of objectives is not possible to implementation because this is academic project and here time limited time for development that's why not to possible met all objective those problem is given below:

System implementation objectives:

Here is implemented most important objectives which is core point of this system. T those objectives are most important for run this system. For use this system I provide use guide system and they can access in this system easily and understand it and they can learn their academic topic.

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Why objective not met:

This is my academic project and here is limited time for develop this project with documentation that why unable to develop all objective of this system.

Solution:

Foe met all of the objectives need to proper time management, proper planning for development and take well preparation.

14.3 – Further Development

I already gave lots of functions, features, aim, objectives and goals. But I do not develop all of those for time. This project is my academic that's why time is limited in short time it is difficult to develop all of this in time. Some of features, functions, objectives is need to further development those are given below:

- Here I implement one subject but in future I will implement others academic and some additional courses.
- I will implement live class system. This is more difficult but possible and it is needed for students for learn more thing.
- Here I given transaction system only local system but in future I will develop it globally
- I will add blog in this system.

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Chapter - 15 – Lessons Learned

- Pre project review - closing
- What I have learned
- What problem I faced
- What solution occurred

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15.1 – Pre project – review closing

This project is online based educational system for ICT. I have to complete this project that will show actually what will carry out of the system. In this project main focus on online education, develop ICT field in our country, student satisfaction, after complete this project I have also complete this project documentation.

15.2 – what I learned:

In this project I learned many things. When was this about this project that time I analysis many of online based site and I also analysis about our education system here is major problem is ICT subject that's why I think about I develop this system, for develop this system I leaned about market value, user requirements, some system diagram, network security, some programming knowledge, planning knowledge, how to develop interface design, what is need to develop for student satisfaction, system documentation, DSDM atern framework, time box, in this project I use PHP, JavaScript, jQuery, database , Ajax, etc. domain , hosting system, web server application which is best for my system all is I learned from this project. That skill will help me in my future career and my job life.

15.3 – what problem I faced

For development this system I have face some problem like live chat system, this system is new for my development life that's why I face in this part. Then video content adding system, in this part I also face how to add this I didn't know before that's why it also differ cult for me to development, in this project I use time box system time box help to manage time properly, sometimes need to change some requirements that time also need to manage time box it is also difficult part for me. Another problem is select

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methodology for system development; because this system requirements is not fixed sometimes need to go back previous stage, that's why I select DSDM atern. I also face in documentation part here is need make lots of system diagram like use case, class diagram, activity diagram, rich picture etc. I face lots of problem in rich picture.

15.4 - what solution occurred?

In this system when I faced problem I think about this problem and I analysis about this problem and I make a solution for those problem, I reassure about the user requirements and set major requirement and easily I manage the time box, then I face methodology problem this system need iterative process that's why I select DSDM atern. I also for upload and manage videos then I think about this then I make a solution for this then I think YouTube link is the best solution then I make it.

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Chapter- 16 – Conclusion

- Summary of the project
- Goals of the project
- Success of the project
- What I have done in the document
- Value of the project
- My Experience

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16.1 – Summary of the project

This project is online based educational system for all of in our country student. This project is only ICT based. CT is very recent subject in our country this subject is most valuable subject in whole of the world, now Bangladesh is world 2nd country for freelancing. ICT subject is now a day more difficult subject in our country. Most of student face lots of problem in this subject average 35% student fail in every year in this subject, its main reason is those student do not get proper support in this subject. Some collage has no actual ICT teacher some college has not experience teacher, some teacher do not give proper lecture in class just because they have coaching center and they call student in their coaching for pass or good result. But problem is some of student is not able to pay lots of money because they have also six subject also. In this reason at the end of the day they have to pay lots of money and time.

That's why I develop this system, for development this site I use PHP, JavaScript, database, HTML, jQuery, DSDM atern Methodology and some related diagrams.

16.2 – Goal of this project

Every project have some goals, my project have also some goals like I want to provide my all lecture in whole of my country, our country need this type of system. ICT department need this system for development young starts. In our country lots of students do not get proper support in this subject that's why most of student fail in this subject for using this system they will good support and will get quality lecture, files, videos solution. Main goal is develop ICT sector and reduce fail in ICT and give proper support who do not get from their school or college teacher.

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16. 3 – Success of the Project

Success of this project is I have complete aim and objectives of this project, now student can access this system and they can take lecture, videos, and files and related all data. Teacher can upload their lectures, files, student can do registration, admin can manage do their work. Here student will get their all demand. Whole system is develop in organize way and meets all requirements which are initially deified that's why this system is successful project.

16.4 – what I have done in the Documentation

In this project documentation I have done the entire chapter properly. Here is described all system requirements, give system related data, here is describe about every part of this system, here is use system related diagrams, system testing documentation, there is describe about methodology DSDM atern and time box. System goals, objectives and planning all of system related document given properly because documentation is most important for complete the project perfectly and I have done all of this.

16.5 – Value of this project

This time is 21st century, whole world depend on technology, and my system is also web based system. for use this system need to mobile phone or computer and internet connection, for using this system student will get their academic demand in ICT subject which is very challenging subject form lots of student, for learn this subject lots of student go coaching center but this time is not time to go coaching center for learn this time is more updated for use this system they can access and learn anywhere in the world. It will save money and time.

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16.6 – My Experience

After I complete this project I lean many these. I learn about project planning, analysis about the system, comparison with other system think about new features and functions. I lean many things about PHP, JavaScript, JQuery, and MySQL. I also learn about project documentation DSDSM framework , time box, system security, lots of system diagram hot to meet user requirements in actual time with the system all of this I learn this is awesome experience in my life.

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Appendices

Use Case Description:

Use - case - 1	Registration for login
Use case Description	Every student and teacher need to register for login this system
Primary actor for this process	Student and teacher
Secondary actor	N/A
Pre- condition	Fill up all field for registration
Basic flow	Provide Name, class , phone number
Alternative flow	Provide wrong ID or password
Post – condition	N/A

Use - case - 2	login system
Use case Description	Every student and teacher and admin need to register for login this system
Primary actor for this process	Student, teacher and admin
Secondary actor	N/A
Pre- condition	Provide actual ID actual password
Basic flow	N/A

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Alternative flow	Wrong ID or password
Post – condition	N/A

Use - case - 3	Add student and teacher
Use case Description	Admin can add student and teacher
Primary actor for this process	Admin
Secondary actor	N/A
Pre- condition	Admin need to check before add student or teacher
Basic flow	Check student or teacher details and save valid user
Alternative flow	N/A

Use - case - 4	Upload Lecture, files
Use case Description	Teacher and admin can upload lecture or related files
Primary actor for this process	Teacher
Secondary actor	Admin
Pre- condition	Need to registration or login

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Use - case - 5	Payment
Use case Description	Every student need to pay for access in this system
Primary actor for this process	Student
Secondary actor	N/A
Pre- condition	Registration
Post – condition	Give payment

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