#### DIU PROJECT MANAGEMENT SYSTEM

 $\mathbf{BY}$ 

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This Report Presented in Partial Fulfillment of the Requirements for The Degree of Bachelor of Science in Computer Science and Engineering.

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# DAFFODIL INTERNATIONAL UNIVERSITY

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#### **APPROVAL**

This Project titled "DIU Project Management System", submitted by Ariful Islam, Md. Shamim Al-Deen and Idris Ali to the Department of Computer Science & Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science & Engineering (CSE) and approved as to style and contents. The presentation has been held on 12<sup>th</sup> December, 2019.

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We hereby declare that, this project has been done by us under the supervision of **Ms. Tania Khatun Senior Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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#### **ABSTRACT**

This project named "DIU Project Management System" is a web application and online platform where faculty members and students will work collaboratively. This project will mainly focus on automating the project submission process and reduce hassle. This is a way of handling or managing students submitted proposals of thesis or project. The key features of this project are to take part in proposal form, do submission and get proposal approval by the relevant authority. Most of the time supervising a project or thesis becomes harder for a supervisor. This project will be helpful for handing those issues and tries to solve it. Using this web application, it is possible to inform all the students for upcoming their title defense, pre-defense or final defense. This project is able to justify student's activity related to project and supervisor can evaluate them according to their performances. Students can update their project according to their task and see supervisor message from their own profile also. All supervisors, co-supervisors and committee member information are available. This is will give opportunity to find out their contact or email for easy communication.

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#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Introduction

DIU Project Management System is a collaborative platform for faculty members, students to make project related works easier for both supervisors and students. This hassle-free platform will help to manage student's tasks, evaluates them and also used for marking a student as well.

#### 1.2 Motivation

At present we are living in the age of mobiles and technologies. In most of the places we see the effects of technology. Sometimes it creates easier life and sometimes it makes life more critical and puts inside a bonding. Apart all from this we are taking help of technology every day. After admitting in a university all the students have to complete a project or thesis. Most of the time a student has to face some issues and troubles to find exact information related to title defense or pre-defense. To make it easier we thought to find out a solution that will be helpful a student. After finally proper thinking and planning we designed a structure to make a web application. We actually tried to find out an easy solution that can be accessed by anyone easily. For this reason, we've started to make our "DIU Project Management System". We used web programming language PHP as base language and for following standard and coding pattern we've selected one of the most popular framework "CodeIgniter".

# 1.3 Objectives

The main goal of "DIU Project Management System" to make work easier as well. Other related goals of our systems are....

- To focus on automating the project submission process
- To take part in proposal form fill up
- To manage students submitted proposals of thesis or project or internship
- To get proposal approval information
- To upload project and commenting system
- Review by Authorities
- Approve/Deny Project by the Authorities
- To manage pre-defense and final defense also
- To evaluate student and give mark

**1.4 Expected Outcome**The system of submitting projects/thesis and getting approval will be easy via the online application. Students can upload and download documents files. Projects will be monitored by all relevant supervisors and authorities. Authorities can approve/deny proposals. Students will be able to submit their proposal and supervisor will review/deny proposal

#### **CHAPTER 2**

#### **BACKGROUND**

#### 2.1 Introduction

DIU Project Management System is a web application that can provide easy access facility to faculty member and students also. This is a platform for collaborative work of supervisor and students. Here students can submit their proposal for project or thesis for final year. They can also easily submit proposal and upload project proposal form to the relevant authority. Then assigned superiors will start to work and help individuals for completing their project by providing proper guidelines and information. Each members of a student's group can access to their dashboard/profile to see their assigned task by their supervisor. They can also see supervisor's message to their profile from task menu located in sidebar. Supervisor can assign individual task for several project or thesis group. He/she can also monitor work progress and give a message from comment for students. Authority has ability to approve or deny project/thesis. Several users such as supervisor, co-supervisor and authority has different roles in this system. They will be able to do different job according to their given role. This system is also useful for giving notices for all students as well as all relevant faculty members. Here there is also a menu of all departments and faculty members. From faculty member list students are able to find out required their contact details.

#### 2.2 Related Works

There are several technologies and works are available in the market similar to our system. Most of them are not similar to our system but a little bit. Git is a awesome technology for managing project. But we have tried to focus on special features to include in our system. Different systems are:

GitHub: GitHub is a popular project management tools and useful as well as popular in all over the world. But this is mainly useful for developers, not for general people [1]. mantishub.com: This is another popular website for managing projects [2]. Stackoverflow: Stackoverflow is the most popular bug and issue tracking website and has become number one in all over the world for giving free services to the developer's

community. [3].

#### 2.3 Comparative Studies

Purpose: Apart from all available technologies and application in the market our system is different and can beat all. Here any students can submit his/her proposal groupwise or individually. Several unique features are adding in this application. Approve, Mange, Task Management, Message for students has given this web application extra identity.

Approach: This system has built focusing on students and faculties. Students can complete their thesis/project by the guidance of supervisor using this system easily.

Originally: This project is more useful for the users (students, supervisors) of this application. Any student can get facility from this system.

#### 2.4 Scope of the problem

Most of the time it is not possible to manage and find out real information of our requirements. There are lot of websites and platforms such as slack.com, trello.com, GitHub project are available on internet for managing as well as handing team, team members, their works. But they are not able to fulfill our requirements for making a joined platform of faculty, students and other members. Our website has those facility to make it easier for them so that authority and students can use the system, get benefit from it.

#### 2.5 Challenges

- i. The main challenges our web application is usability. Because most of the students are not familiar with this system still now. They need to be cope with it.
- ii. We have used English for making our application.
- iii. This web application is run in a browser by using internet. So, it is not possible to use this without availability of internet.
- iv. Another challenge of this is to maintain and update process.
- v. Using and finding capable database for managing and handing several user requests.

#### **CHAPTER 3**

#### REQUIREMENT SPECIFICATION

#### 3.1 Business Process Modeling

Business Process Model is a way of representing and showing user demands and showing business data graphically. Several topics are related to Business Process Model such as context, functional flow, cross-functional flow etc. It creates a diagram or visual representation that can be easily understood. model shows in Figure 3.1

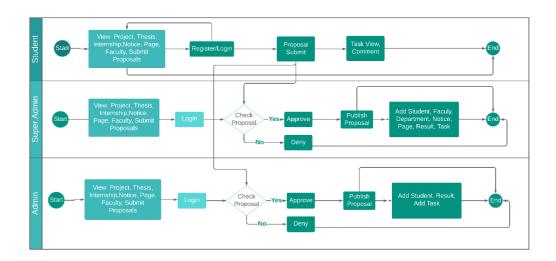


Figure 3.1: Business Process Model

#### 3.2 Requirements Collection and Analysis:

For developing a system and platform it is needed to collect data, information from the users. It is an important part in software development lifecycle (SDLC). The main goal of requirements collection and analysis is to get clear idea as well as functional specification of the system. This gives a clear concept of features, troubles, barriers and issues of the whole system. Actors of the system can be easily identified by requirements collection. The main goal of our system is to create a platform so that students as well as teacher can interact with each other. Authors, committee members, supervisors, students are related to each other using this system.

#### 3.2.1 Students Requirement

In this system users are students and faculty members. After login to the system student can view their assign task and also see supervisor's guidelines in their dashboard. Using submission form students are able to submit proposal for final year thesis/project. They are also able to see notice board. For using this system, they have to fill some criteria.

- Submit Proposal
- Login to Dashboard
- View notice board

#### 3.2.2 Supervisor Requirement

Supervisor is another actor of *DIU Project Management System*. Here supervisors will play an important role for managing student's group as well as thesis. He can also approve/deny project/thesis according to the requirements and guidelines. Here some special task is done by supervisors...

- Login to Dashboard
- Approve/deny project or thesis
- Assign task
- Manage result and progress
- View notice board

#### 3.2.3 Admin Requirement

Admin is the special type of user of the system. He/she has superpower. He has the ability to add, modify or delete contents from the web application. Usually faculty member, students, notice board are managed by admin. Here are some duties are performed by admin...

- Manage student functionality
- Manage faculty functionality
- Manage department functionality
- Manage result and progress
- View notice board
- Assign faculty member for several roles such as supervisor, cosupervisor and also committee member

#### 3.2.4 Technical and Legal Requirement

We have developed this project by using one the popular framework CodeIgniter which is built using sever side scripting language PHP. We have to ensure that this system is more secure and reliable. CodeIgniter has default many secure protections so that user's data can't be stolen from the system.

- Protecting this application from SQL Injection
- Protecting cookies from hackers.
- Protecting with Cross-site Request Forgery (CSRF) Protection
- Password is protected with strong hashing algorithm.

# 3.2.5 Hardware and Software Requirements

For using and accessing to this system minimum software and hardware requirements should be fulfilled. Here are the requirements are given below.

# **3.2.5.1** Hardware Requirements

Table 3.2.5.1 Hardware Requirements

Processor	Intel Pentium or Above
Motherboard	Any
Ram	513MB or More
Hard Disk (HDD)	20GB
Monitor	Any
Internet Connection	Mobile Network, Broadband or Wi-Fi

# **3.2.5.2 Software Requirements**

Table 3.2.5.2 Software Requirements

Browser	Google Chrome, Dolphin,
	Edge, Firefox, Opera Mini, UC
	Browser, Safari

# 3.3 Use Case Modeling

Use case model is a way of showing or representing user's interaction in a system. Usually several kinds of users are linked in a system. In our system we have different users such faculty member, student, admin, supervisor, co-supervisor. All of them are playing individual role in our system.

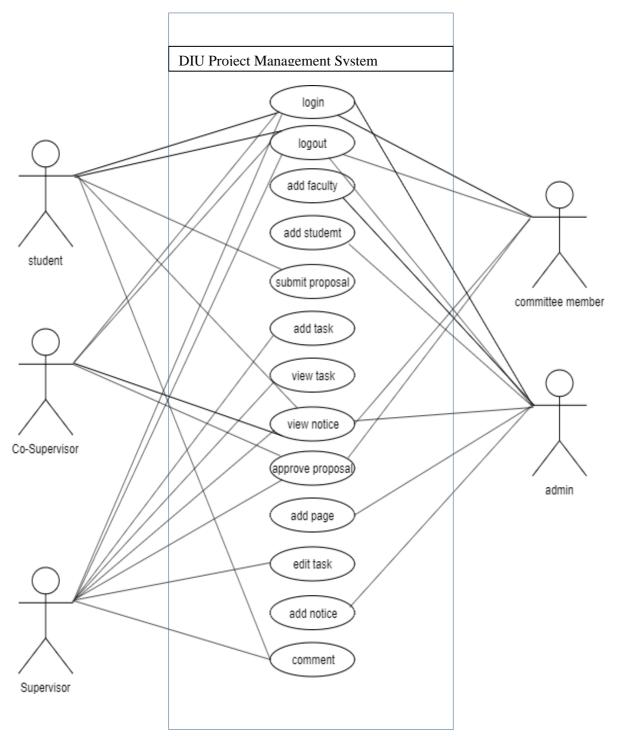


Fig 3.3: Use Case Diagram

# 3.3.1 Use Case Description

Table: 3.3.1.1 Use Case for Sign up

Case Id	1
Statement Name	Sign up
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Instruction and user can register successfully
Primary Actor	Admin, Student, Supervisor, Co-supervisor, Faculty
Secondary Actor	None
Precondition	None
Postcondition	None

Table: 3.3.1.2 Use Case for Sign in

Case Id	2
Statement Name	Sign In
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Students can register
Primary Actor	Students
Secondary Actor	None
Precondition	Student has to go to register page
Postcondition	Student can see the home page

Table: 3.3.1.3 Use Case for Department

Case Id	3
Statement Name	Add Department
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Admin can add, edit and delete department
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin must have to login
Postcondition	Admin will see dashboard

Table: 3.3.1.4 Use Case for Student

Case Id	4
Statement Name	Add Student
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Admin can add, edit, delete student
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin has to go to register page
Postcondition	Admin can see the home page

Table: 3.3.1.5 Use Case for Notice

Case Id	5
Statement Name	Notice
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Admin can add, edit, delete notice
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin must have to login
Postcondition	Admin will see dashboard

Table: 3.3.1.6 Use Case for Page

Case Id	6
Statement Name	Pages
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Admin can add, edit, delete page
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin must have to login
Postcondition	Admin will see dashboard

Table: 3.3.1.7 Use Case for Faculty

Case Id	7
Statement Name	Faculty
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Admin can add, edit, delete faculty
Primary Actor	Admin
Secondary Actor	None
Precondition	Admin must have to login
Postcondition	Admin will see faculty in dashboard

Table: 3.3.1.8 Use Case for Proposal

Case Id	8
Statement Name	Proposals
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Supervisor can see submitted proposals
Primary Actor	Supervisor
Secondary Actor	None
Precondition	Supervisor must have to login
Postcondition	Supervisor will see dashboard

Table: 3.3.1.9 Use Case for Approve/Deny Proposal

Case Id	9
Statement Name	Approve/deny proposals
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Supervisor can approve or deny submitted proposals
Primary Actor	Supervisor
Secondary Actor	None
Precondition	Supervisor must have to login
Postcondition	Supervisor will see approved/denied student in dashboard

Table: 3.3.1.10 Use Case for Task

Case Id	10
Statement Name	task
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Supervisor can add, edit, delete task
Primary Actor	Supervisor
Secondary Actor	None
Precondition	Supervisor must have to login
Postcondition	Supervisor will control task in dashboard

Table: 3.3.1.11 Use Case for Student

Case Id	11
Statement Name	Student
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Supervisor can add, edit, delete student
Primary Actor	Supervisor
Secondary Actor	None
Precondition	Supervisor must have to login
Postcondition	Supervisor will see the student information

Table: 3.3.1.12 Use Case for Student

Case Id	12
Statement Name	Student
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Co-Supervisor can add, edit, delete student
Primary Actor	Co-supervisor
Secondary Actor	None
Precondition	Co-supervisor must have to login
Postcondition	Co-supervisor will see the student information

Table: 3.3.1.13 Use Case for Proposal

Case Id	13
Statement Name	Proposals
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Co-supervisor can see submitted proposals
Primary Actor	Co-supervisor
Secondary Actor	None
Precondition	Co-supervisor must have to login
Postcondition	Co-supervisor will see dashboard

Table: 3.3.1.14 Use Case for Proposal

Case Id	14
Statement Name	Approve/Deny proposals
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Co-supervisor can approve/deny submitted proposals
Primary Actor	Co-supervisor
Secondary Actor	None
Precondition	Co-supervisor must have to login
Postcondition	Co-supervisor will see approved/denied student's proposal in dashboard

Table: 3.3.1.15 Use Case for Task

Case Id	15
Statement Name	task
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Co-supervisor can only see the task information
Primary Actor	Co-supervisor
Secondary Actor	None
Precondition	Co-supervisor must have to login
Postcondition	Co-supervisor will see the task information only.

Table: 3.3.1.16 Use Case for Faculty

Case Id	16
Statement Name	Approve/deny proposals
Created By	Ariful Islam
Date of creation	23-11-2019
Description	Faculty member can see the approved/denied proposals information
Primary Actor	Faculty
Secondary Actor	None
Precondition	Faculty must have to login
Postcondition	Faculty will see the approved/denied information in dashboard.

## 3.4 Logical Data Model

Logical data model is a representation or visual relationship between several entities in a database. For our database design web have several tables and have maintained normalization. Several entities such as students, departments, faculties are available in our database. Here below is a diagram of logical data model\_

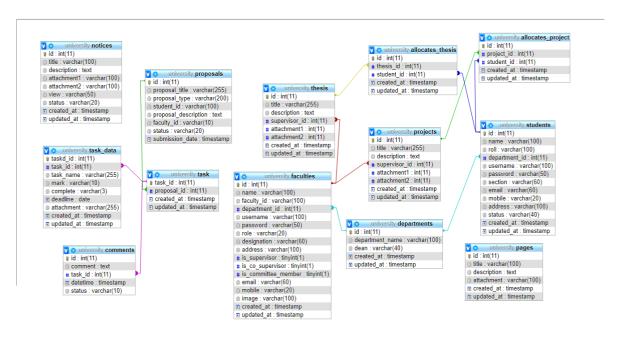


Figure 3.4: Logical Data Model

## 3.5 Design Requirements

Design is a part of graphical user interface (GUI). For taking user inputs and track their activity across website it is necessary to design a user-friendly layout. For making our web application we have used both backend and front-end also. For design front-end we've used HTML5, CSS3 and also JavaScript. We have tried to keep navigation bar so easy to that user can find their required option so easily. For backend design we've also used HTML, CSS as well. Using this system user can using input their data to the server and using that backend is formed. A well design web application is very indispensable, but we should solidify to the output design of the web app first. That's why we've tried to keep our design so simple but user friendly.

#### **CHAPTER 4**

#### DESIGN SPECIFICATION AND SYSTEM DESIGN

#### 4.1 Front end design:

We completed our design using markup language. During design we've keep in mind for user interaction to easy graphical user interface and also understandability. Our used languages are given below...

- > HTML
- > CSS3
- **▶** Bootstrap
- > JavaScript
- > jQuery

#### 4.1.1 HTML

HTML is a markup language for making layout of a website. The full form of HTML is Hypertext Markup Language. This is not a programming language that can interacts with server but it can make user layout where several visual graphics, text, buttons are located. Using that button users can do specific task. Mainly html tag is started by less than (<) operator and ends with greater than (>) operator. The example of simple html is <article>This is a test blog</article>.

#### 4.1.2 CSS3

CSS or cascading style sheet is a helper of modern html. Html creates layout and CSS adds rules on several html tags. It is mainly used for stylish design for the user of a website. CSS can used in a website in several way. Those are...

- ➤ Internal CSS
- > External CSS
- ➤ Inline CSS

#### 4.1.3 Bootstrap

Bootstrap is a popular and most used HTML framework or library. It is mainly a library of several pre designed button, form, sliders, navigation bar and so on. Any layout can be built easily within 10minutes using bootstrap. For its continuous updates and continuous support bootstrap is becoming popular in all over the world.

#### 4.1.4 JavaScript

JavaScript is a web programming language that is used for making a web page more dynamic for the user. Using JavaScript, it is possible to create animation, motion, slider, effects easily in a website. Modern JavaScript is more popular. Now with the help of NodeJS JavaScript has been grown around the market among developers.

#### **4.1.5 jQuery**

jQuery is a library of JavaScript that is created for writing code easily. Using jQuery, it is possible to reduce code lines and it also saves time for a developer. But due to some popular frameworks such as reactjs, angular and vueJs jquery is losing market at present.

#### 4.2 Backend Design:

Backend is another important part of our application. The main users of backend are admin, supervisor, co-supervisor and also student. Individual dashboard is private and that can be accessed using their credentials. No one can interact with others private data or property. Here security is the main issue to solve. For latest updates and ensuring security we've used most popular web programming language PHP 7.2.3 for interacting with server. CodeIgniter is another popular PHP framework that is built following MVC (Model View Controller) pattern ensures security, standard coding pattern and fast development. For this reason, we chose CodeIgniter for developing *DIU Project Management System*. For storing and proving data to the web application we've used more popular open source database MySQL in our system. Some technologies are...

- > PHP
- CodeIgniter
- > MySQL

#### 4.2.1 PHP

PHP stands for Hypertext Pre-Processor which is used in web technology for making a web application. After first release in 1995 by Rasmus Lerdorf PHP becomes popular among web developers around the globe. This is more simple and easy web programming language in web technology. Nowadays, a lot of websites in all over the world are using PHP for making web apps. More updates, communities, and participation have made this language more efficient and user-friendly. PHP is a light language. And for this reason, it runs from server efficiently. Another reason is, server cost for hosting PHP application is cheaper than others such as ASP.NET or Java. Now stable PHP version is 7.3.8. Before this 5.6 was used by developers for a long time

# 4.2.2 CodeIgniter

CodeIgniter is one of the popular php frameworks which is used for making website. The structure of **CodeIgniter** has been built by following MVC (Model View Controller). For its simple way of under stability CodeIgniter has raised and grown popularity in all over world. CodeIgniter is a lightweight framework. *Ellislab* is the fundamental author of CodeIgniter. On February 28, 2006 CodeIgniter was launched and step by step it gets more updates and bug fixing. Now stable release of CodeIgniter **is** 3.1.1

#### **4.2.3 MySQL**

MySQL is the most popular and open source database for web application. Anyone can use this database to their system. MySQL can interact with any kind of programming language such as PHP, Python, Java, C# etc.

#### 4.3 Interaction Design and UX

Interaction design describes the relationship between an application and user. A user

interaction is very important for a web application or android application. Depending on the user interaction a software or application gets popularity in the market. Smart and clear design of a layout is always recommended so that user can easily access to several menus, options or features of an application. Most of the users have no prior technical knowledge. In this in mind it is needed to design an application. Proper design can lead an application to gain more income in the market. In our application we've tried our best to make easily accessible layout for the user so that they can find out their required features within short moment. UX design or user experience design is the most challenging part for a programmer. Always they need to focus on the experience of user for using android app and how they become satisfy with a product. We keep attention on this sector and tried to implement an application that has satisfactory interface which should be accepted by the user.

# **4.4 Entity Relationship Diagram**

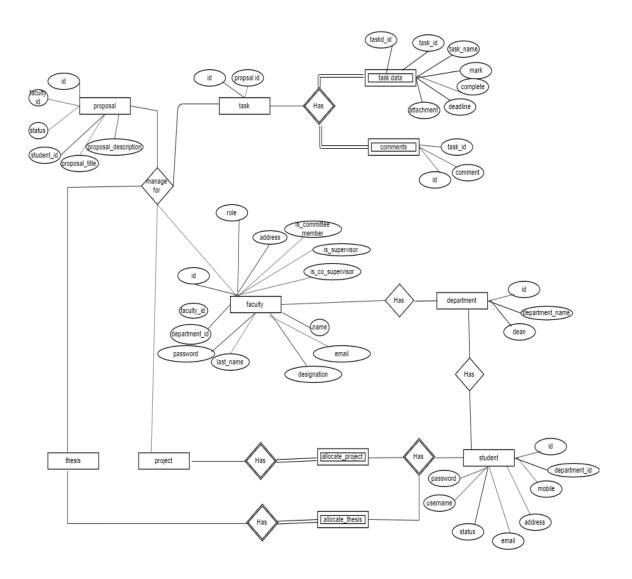


Figure 4.4: Entity Relationship Diagram

# 4.5 Data Flow Diagram

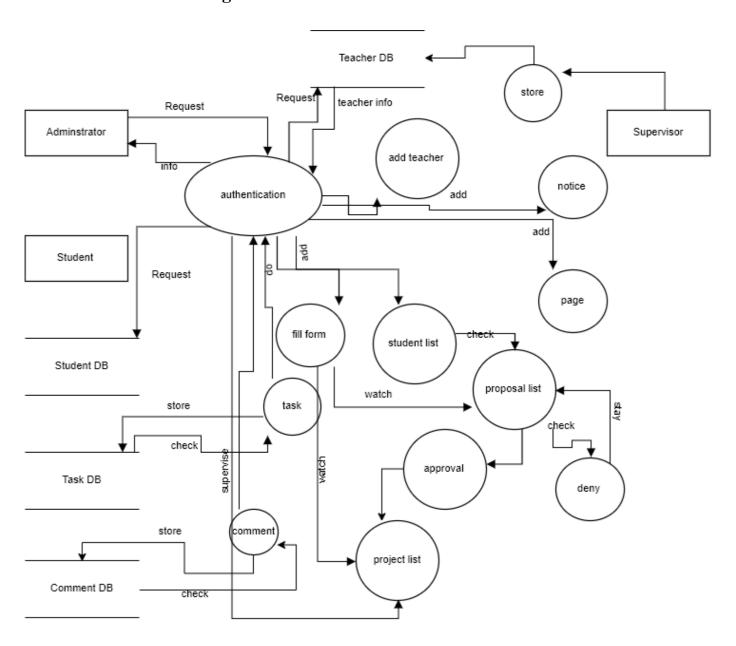


Figure 4.5: Data Flow Diagram

# **4.6 Implementation Requirement**

To make this web application we require several types of software such as a browser (Chrome, Firefox), text editor or ide (Sublime Text, PhpStrom) and also need to install local php executing server (Wamp, Xampp). Finally, Git is needed to be installed in our system for easy managing of code and maintain version as well as release software for users.

#### **CHAPTER 5**

#### **IMPLEMENTATION & TESTING**

#### **5.1 Implementation of Database**

Database is a data storing and processing system that is used for saving, delivering data to the user page according to their request. For easy use and handle more request we have used MySQL for storing data [6].

- ➤ Install DBMS and Configure it
- > Running in a system
- ➤ Database and Table Creation
- ➤ Integration with application

## 5.2 Implementation of front-end Design

For interacting with our application there is a backend and also frontend. In frontpage there is a nice layout having some menus and visual as well as some text. In navigation menu most important part of website is kept. User can go to several section of the application by simple clicking of a mouse. A slider is placed at the homepage of the website for making and increasing decoration of the website.

# 5.2.1 Home Page

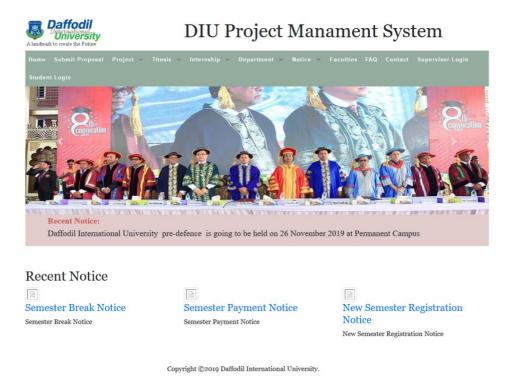


Figure 5.2.1: Home page

# **5.2.2 Submit Proposal Page**

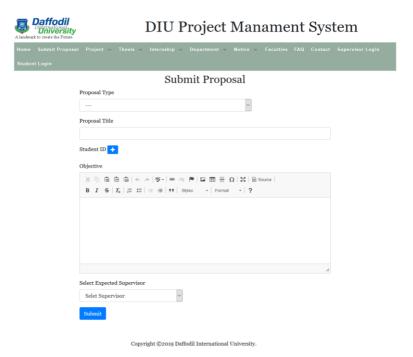
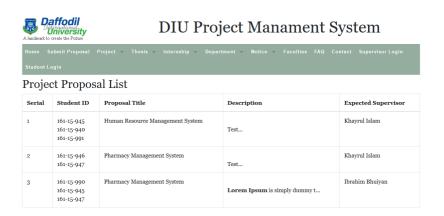


Figure: 5.2.2: Submit Proposal

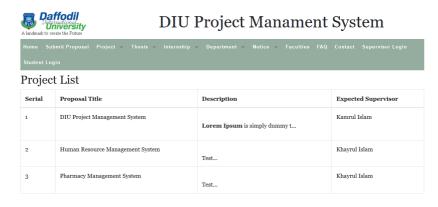
# **5.2.3 Project Proposal List**



Copyright ©2019 Daffodil International University.

Figure 5.2.3: Project Proposal List

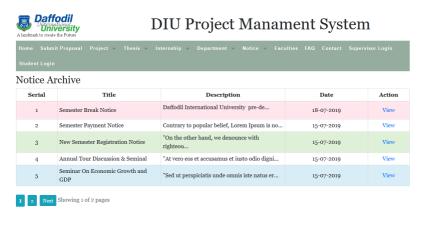
# **5.2.4** Approved Project List



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Figure 5.2.4: Approve Project List.

#### **5.2.5** Notice Archive



Copyright ©2019 Daffodil International University.

Figure: 5.2.5 Notice Archive

#### **5.2.6 Notice View**



Figure: 5.2.6 Notice View

# **5.2.7 Faculty Members**

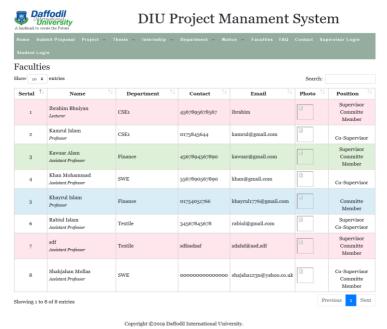


Figure 5.2.7: Faculty Members

#### 5.2.8 Student Task

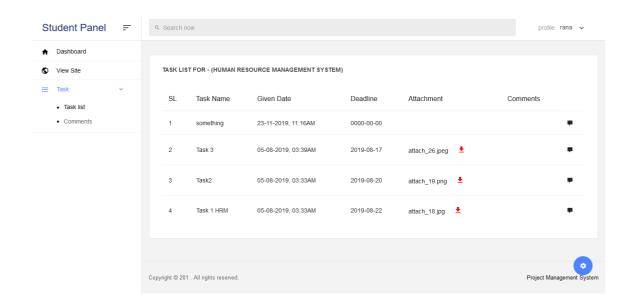


Figure 5.2.8: Student Task

### **5.2.9 Student Comment**

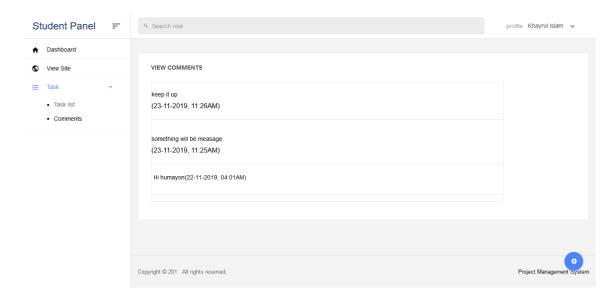


Figure 5.2.9: Student Comment

# **5.2.10 Supervisor Created Task**

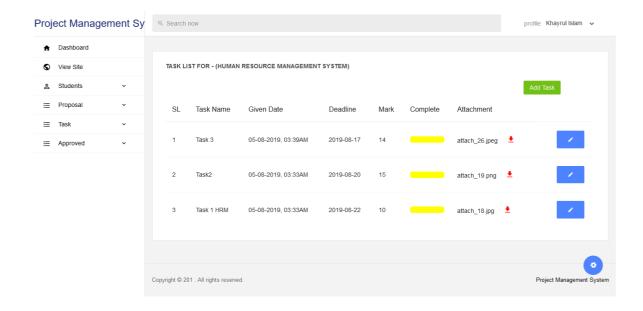


Figure 5.2.10: Supervisor Created Task

# 5.2.11 Add Task by Supervisor

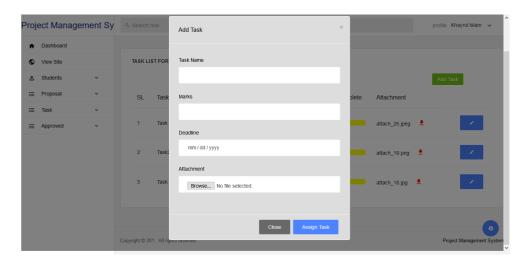


Figure 5.2.11: Add Task by Supervisor

# **5.2.12** Add Comment by Supervisor

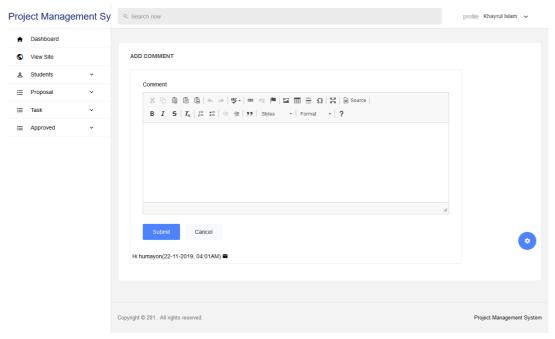


Figure 5.2.12: Add Comment by Supervisor

# 5.2.13 Admin Login



Figure 5.2.13: Admin Login

# **5.2.14 Add Faculty Member**

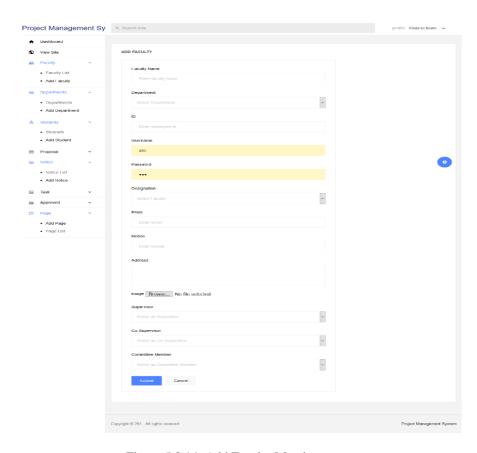


Figure 5.2.14: Add Faculty Member

# 5.2.15 Faculty List

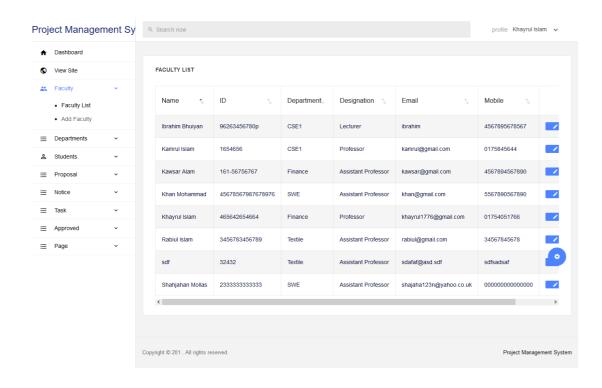


Figure 5.2.15: Faculty List

# **5.2.16 Department List**

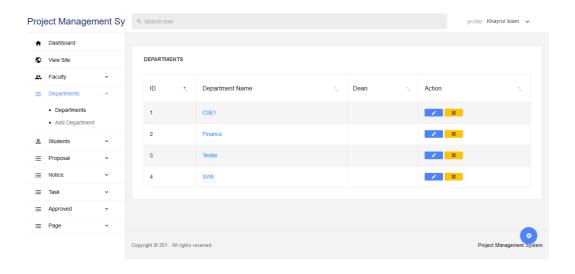


Figure 5.2.16: Department List

## 5.2.17 Student List

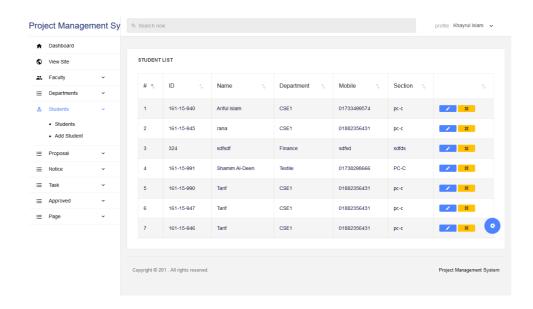


Figure 5.2.17: Student List

# **5.2.18 Internship Proposal List**

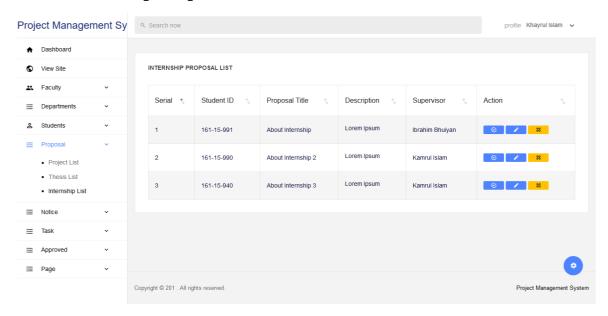


Figure 5.2.18: Internship Proposal List

#### **5.2.19 Add Notice**

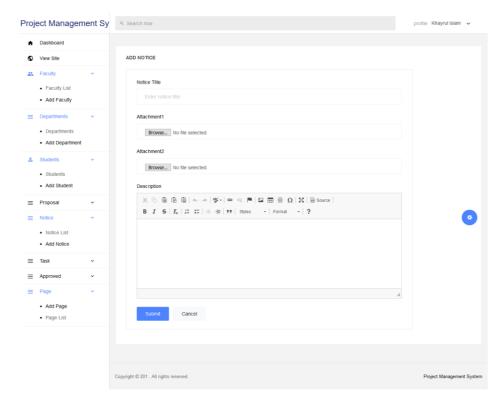


Figure 5.2.19: Add Notice

#### 5.2.20 Notice List

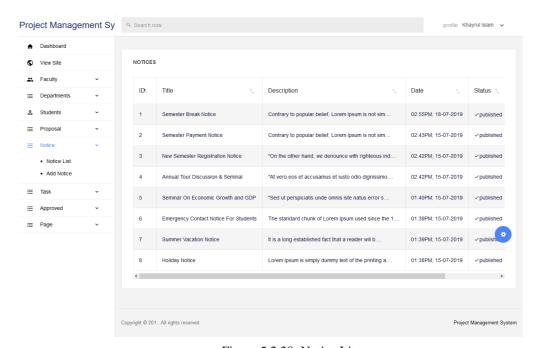


Figure 5.2.20: Notice List

# **5.2.21 Page List**

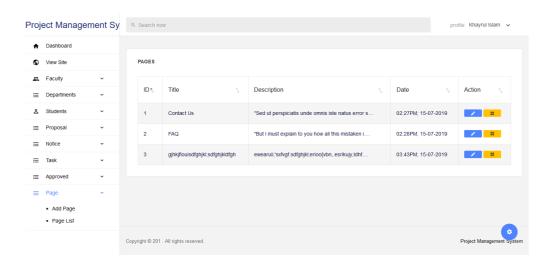


Figure 5.2.21: Page List

## 5.2.22 Add Faculty Member

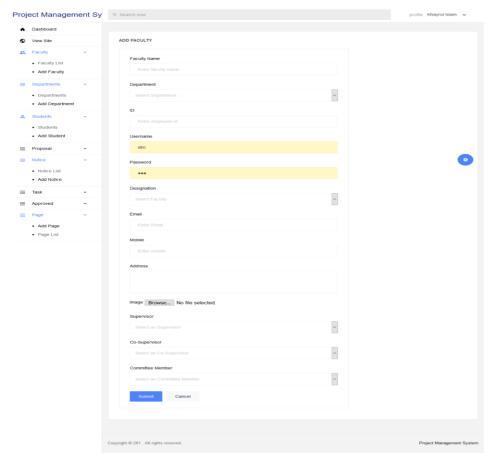


Figure 5.2.22: Add Faculty Member

# **5.2.23 Edit Faculty Member**

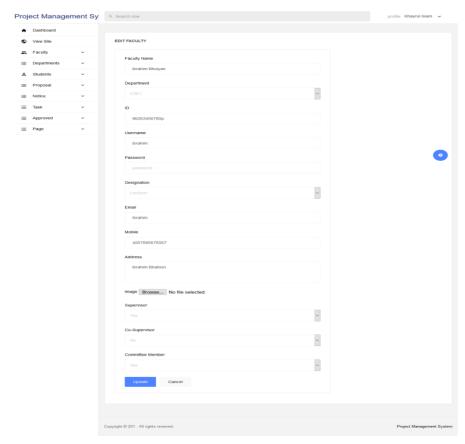


Figure 5.2.23: Edit Faculty Member

## 5.2.24 Admin Dashboard

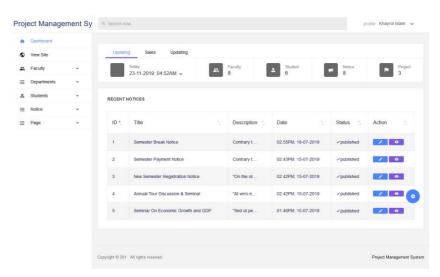


Figure 5.2.24: Admin Dashboard

## 5.2.25 Pre-Defense List

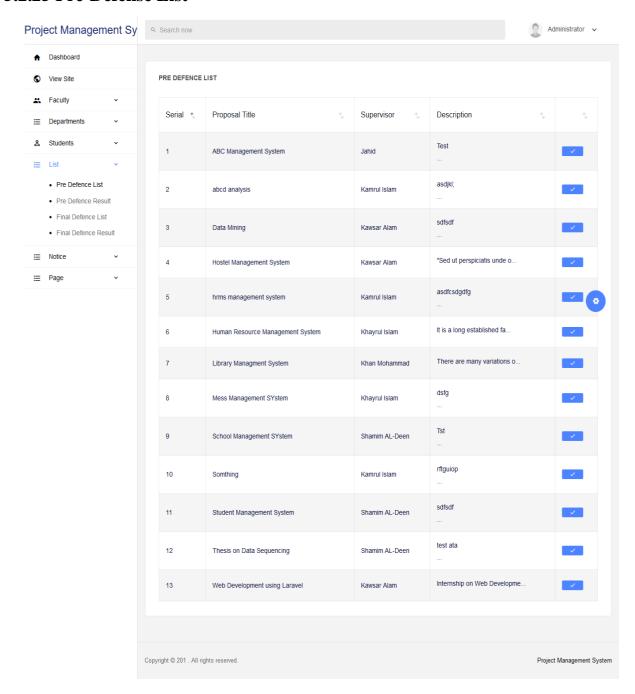


Figure 5.2.25: Pre-Defense List

#### 5.2.26 Pre-Defense List

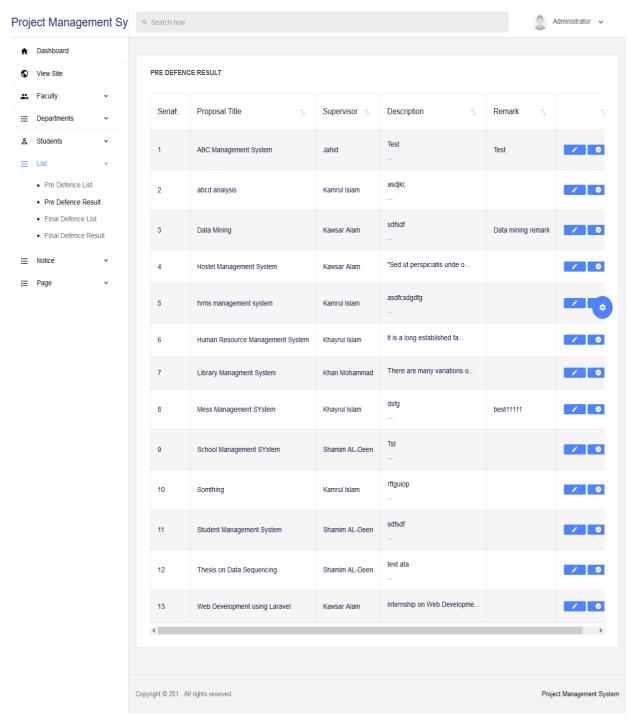


Figure 5.2.26: Pre-Defense Result

#### **5.2.27 Final Defense List**

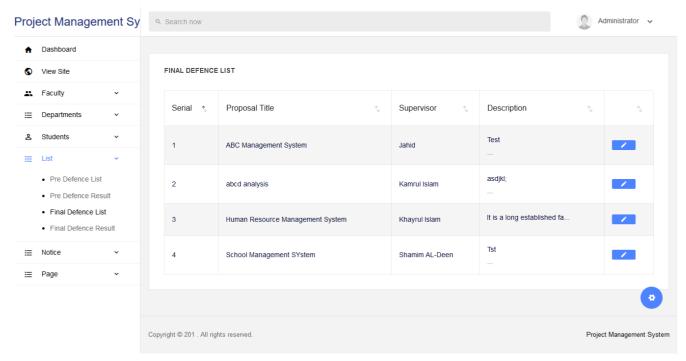


Figure 5.2.27: Final-Defense List

## **5.3 Implementation of interactions**

Implementation of interaction is a part of developing a website. Here system takes the user's interaction and according to that web application is built. Implementation is a part of developing phase of a system. Here it is needed to ensure that how our system interacts with users (students, supervisors, co-supervisors) activity in our web application

website is made to work as medium. So, it's very important that it should be very interactive with user. we make our system very much interactive for both job provider & seeker. We implement better responsive UI in our system. Its gives better user experience to the users. We make our system easily usable that give better user experience to use

### **5.4 Testing implementation**

Testing implementation is a process of testing system and get result. We have used system testing, usability testing and database testing for our project.

### 5.4.1 System Testing

System testing is a process of testing the whole system and get output according to test input. It is an internal work of an application. After testing the system we've got output results from this system that we required. Our system can generate error log and save it for further use. If user gives wrong or fraud data then system will detect and reports. Besides, if user give correct data then system will take and give response as feedback.

### 5.4.2 Usability Testing

Usability testing a way of testing how a user interacts with the system. The main focus of usability testing is to find out user's interaction in this system and flexibility of handling in control.

### 5.4.3 Database Testing

Database testing is a way of testing a system to ensure data integrity and consistency. Accessing in our database is possible from both frontend and backend. As our application is built to run using internet there is a possibility of storing garbage or incorrect data. This garbage data can increase memory use and also unwanted hits. To remove this type of storing incorrect data mapping and Schema testing is used

# **5.5** Test result and reports:

The output of our testing was ended after what we require from the system. Every functionality, options of our system has been executed and tested by different types of system test. All the test result was fine and the output was right. In future we want to add more functionality in our system and also some extra test will be added in the system, then output can be different.

#### **CHAPTER 6**

#### **Conclusion and Future Work**

#### **6.1 Discussion and Conclusion:**

DIU Project Management System always focused on automating a process and task. The main goal of this project was to include students, supervisors, co-supervisors in a frame. The idea was to reduce hassle during project submission, review and approve/deny. Here all the users are related to each other through this system. We are living at the age of technology where everything is improving day by day. We just wanted to take the facility of internet and implemented in a system so that everyone gets benefits from it.

## **6.2 Scope for Future Developments:**

Web is a modern technology where anyone access using internet from computer or smart devices. We've implemented this application and in future we want to add more features on it. We have a plan to launch an android application that will work with our system so that all the users get instant notification from their smartphone within a second. After successful implantation for a single university we will plan to launch this web application is other university also.

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