Department of CIS

TITLE OF THE PROJECT

System (CPISS)

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APPROVAL

This Project titled **"CPISS"**, Submitted by Rinve Ismail, ID No: 181-16-233 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 Systems and approved as to its style and contents. The presentation has been held on- 23-08-2022.

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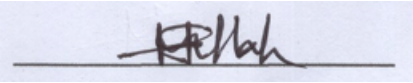

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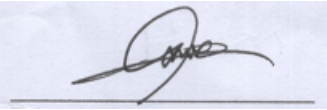

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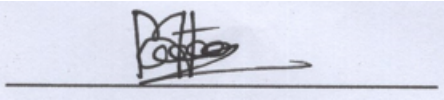

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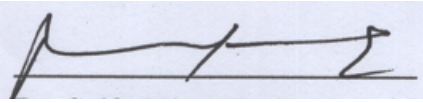

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DECLARATION

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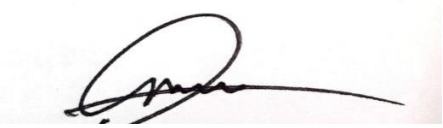

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First of all, I would like to express my gratitude and appreciation to Almighty Allah for giving me the ability to create and complete project and project documentation.

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Dedication

I'd like to thank my parents for guiding me through my whole life and dedicate this project to them. Their appreciation and encouragement really helped me to concentrate, if they had not supported me through the difficult time, I would not have made it this far in this society.

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Chapter 1 - Introduction

1.1 Introduction

Technological advancement has come a long way. In spite of that, our education system hasn't advanced far enough to meet the needs. Most Bangladeshi students do not have a career goal, and even when they do, it's too late to emphasize it. Several studies have shown that most students start thinking about their career after completing their undergraduate degree. As a result they feel lost. The years of education they completed were without purpose. As a result they remain unemployed for a long time. This problem can be solved if the system can be changed and students made aware of the careers available to pursue. They can prepare for it from the start if they decide early what they want to do with their career. The CPISS project will help students who are interested in setting goals early by providing them with resources and guidance relevant to their hobbies and dreams.

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1.2 Document Contents in Project Document

This publication or documentation will cover the following chapters to chronicle the project's development.

Chapter 1: Introduction

A quick overview of the proposed project and system.

Chapter 2: Initial Phase

This chapter discusses the preliminary research results for the proposed system, including the primary aims and objectives, problem area, potential remedies, and project history.

Chapter 3: Literature Review

The issue domain, solutions, evaluation of current solutions, and ultimately suggestion are all discussed in detail in this chapter.

Chapter 4: Methodology

This section will examine the significance of employing methodology, the various ways that may be applied, the preferable methodology, and its application.

Chapter 5: Planning

This chapter covers project plans such as project plans, test plans, risk and change management, and so on.

Chapter 6: Feasibility

This is where you'll find the full feasibility study report and cost-benefit analysis.

Chapter 7: Foundation

This chapter will contain information regarding the identification of the problem area, a list of general requirements, the proposed technologies, and the underlying causes.

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Chapter 8: Exploration

It includes basic UML diagrams and a need list for both the existing and new systems, as well as a prototype.

Chapter 9: Engineering

This chapter contains the proposed system's logical and behavioral models.

Chapter 10: Deployment

Here, we'll talk about coding samples and how to split down a development challenge based on development priority.

Chapter 11: Testing

This chapter includes a number of test ideas and outcomes.

Chapter 12: Implementation

This section covers the implementation strategy, training model, and other related topics.

Chapter 13: Critical Appraisal and Evaluation

The review of the initial objectives that were reached and those that were not met in great detail.

Chapter 14: Lessons Learned

The learnings and obstacles encountered during the project are mostly included in the pre-project-closing evaluation.

Chapter 15: Conclusion

Here you will find a summary of the project, as well as its goals, successes, and lessons learned.

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Chapter 2 – Initial Study

2.1 Project Proposal

The Career Path Information and Support System is designed with a single objective in mind: to assist students in determining their career and how to pursue it with success. Too many students are unemployed because they do not know what they are excellent at or should be doing. Therefore, the purpose of this project is to train students to avoid encountering this issue, and it will be built and developed to do so.

Background Study

There are many career consulting agencies out there. But not one of them starts from the beginning and only provide services to go abroad in the name of higher education. There is no agency or service that is working for school, college and university students when the time is very crucial to plant the seed of their career. So, there is a very wide field of are that can be worked to consult and facilitate students to set a track for their career. The information and consultancy will be very helpful for them. A market can be created based on this as this is new concept.

Description of the proposed system

Career Path Information and Support System is a web-based system that helps the students to select a career path, provides necessary information and consultancy to step forward in pursuit of the selected career path. The system will suggest a career based on the students requirements.

Students can search their desired field of career and browse information related to that career. They can also get an idea the type of work they have to do when they reach their goal. Also, students can book appointment with an expert of their desired career path to talk about more which will give them clearer idea and if they have any questions that need to be answered while also sharing experience.

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Prioritized Features according to MoSCoW

MoSCoW is a strategy for prioritizing requirements that is used during the requirement analysis stage. It aids in comprehending the significance of the criteria.

SL	Requirement	Priority
1	Registration/Login	Must have
2	Information of careers	Must Have
3	Categories	Must Have
4	Admin manipulation	Should Have
5	Search option	Must Have
6	Appointment system	Must Have
7	Payment	Must Have
8	Integrate educational institution	Could Have
9	Email notification	Must have
10	Career Planning	Must have
11	Report of students initiative towards career	Should Have

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Table 1: Prioritized Features

Exploration & Engineering

The final criteria are based on the Prioritized Requirements List (PRL).:

- Registration/Login
- Information of careers
- Categories
- Search option
- Appointment system
- Payment
- Email notification
- Career Planning

Iterative development – Timeboxing

During iterative development, the tasks have to be broken down into segments, and an expected amount of time must be allotted to finish each segment. The amount of time spent on actual development during this phase is between 50 and 60 percent, the amount of time spent on the feasibility and foundation stage is between 15-20 percent, and the remaining 15-20 percent of the overall development time is spent on documentation.

It is required that the planned project be finished within three months, which is equivalent to about seventy-two working days. Eleven distinct time intervals have been allotted for the project.

In this section, I will estimate the time boxes using a technique called the "T-Shirt" estimation approach. The estimation of story points will involve classifying the time boxes into different sizes, such as XS, S, M, L, and XL. The larger size will require more time and work than the smaller ones do, but it will be worth it.

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Timeboxing for iterative development:

Timebox	Start Date	End Time	Duration (Day)	Tasks/Deliverable
TB1	17-11-2021	23-11-2021	5-7	Feasibility and Project Initiation
TB2	24-11-2021	26-11-2021	2-3	Requirement Analysis
TB3	27-11-2021	29-11-2021	2-3	Database Design
TB4	30-12-2021	06-12-2021	5-7	Developing user and expert portal
TB5	07-12-2021	11-12-2021	4-5	Developing Career information and category
TB6	12-12-2021	18-12-2021	5-7	Developing search and notification
TB7	19-12-2021	27-12-2021	8-9	Developing appointment feature and payment.
TB8	28-12-2021	01-01-2022	4-5	Build Career plan
TB9	01-01-2022	06-01-2022	5-7	Testing of the developed features
TB10	07-01-2022	13-01-2022	5-7	Deployment of the System
TB11	14-01-2022	25-01-2022	10-12	Documentation

Table 2:Time box estimation

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Task ID	Task Name	Start Date	End Date	Duration (In Days)
T01	Introduction	11/17/2021	11/19/2021	3
T02	Initial Study	11/20/2021	11/24/2021	5
T03	Literature Review	11/25/2021	11/27/2021	3
T04	Methodology	11/28/2021	12/2/2021	5
T05	Planning	12/3/2021	12/6/2021	4
T06	Feasibility	12/7/2021	12/10/2021	4
T07	Foundation	12/11/2021	12/15/2021	5
T08	Exploration and Engineer	12/16/2021	1/4/2022	20
T09	Deployment	1/5/2022	1/16/2022	12
T10	Testing	1/17/2022	1/21/2022	5
T11	Implementation	1/22/2022	1/24/2022	3
T12	Critical Appraisal & Evalu	1/25/2022	1/26/2022	2
T13	Lessons Learned & Con	1/27/2022	1/27/2022	1

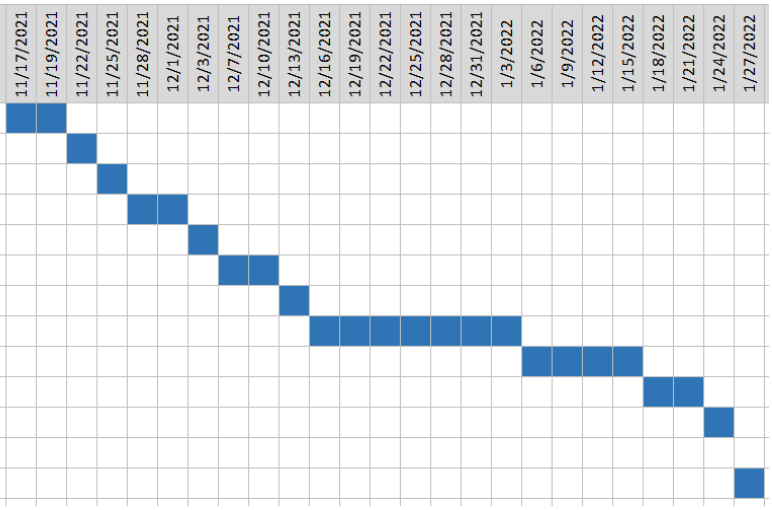

Figure 1:Gantt Chart of the Proposed Timebox Estimation

2.2 Background of the project

Unfortunately, there is no mechanism in place to help students who are having difficulty deciding which major or professional route they want to follow. When kids aren't learning what they want to, they have a hard time figuring out what they want to do when they grow up and what they want to do once they graduate. In our nation, for example, kids in grade 9 are required to choose between science, business, and the arts. What do they know about making a decision at that age? They are compelled by their parents to select one of the many job paths. The upshot is that many students are forced to take classes they don't want to take. The result of this is that students are less motivated to study and develop their skills as a result of their lack of interest in the subject matter. Unemployment and sadness are the result, as are shortages of qualified workers in some industries and the stress placed on families.

The fact that individuals are becoming more conscious of their problems means that they want to learn more about their alternatives and make an educated decision. For all of these people who are trying to make informed decisions about their future, there is no place to turn where they can get the information they need and have it structured in an accessible manner. As a result, this type of system has a market. People will benefit and businesses will make money with CPISS.

2.3 Problem Areas

The lack of a center that serves as a mentor to younger people is a significant issue that has to be addressed. And as a direct result of this, our educational system is ineffective. The pupils are not able to determine what they want to do with their lives in the future, which is the root reason of the education system's failure rather than a deficient physical infrastructure. And students who are interested in investigating different job options are unable to do so since there is nothing available to meet their requirements and provide them the opportunity to do so.

2.4 Possible Solutions

When students are trying to decide what kind of job they want to pursue and which career path would be most suitable for them, they run across a number of obstacles and difficulties. The process of collecting all of the relevant information and determining, on the basis of the students' interests, what kind of professional path would be most suitable for them is therefore a highly hard one. They will receive assistance from CPISS since all of the relevant information will be compiled in one location, and they will also have the ability to consult with specialists. It will be carried out using a platform that is web-based.

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Chapter 3 – Literature Review

As a kind of assessment, a literature review is one. When we say "literature review," we're not referring to an exhaustive survey of all the world's literature. According to the definition of "literature review," it refers to information that has been thoroughly researched and analyzed and published in a respected journal. For the creation of the system, a literature study serves as a basis for understanding a particular issue. A project literature study is helpful in identifying problem areas and potential solutions. To ensure a successful project, this component allows for a possible debate regarding research and comparisons within the same field of study.

3.1 Discussion on the Problem Solution

- Due to the fact that this is a web-based issue, you must have internet connection in order to take action. Through this initiative, we hope to develop solutions for students who are frustrated by the difficulty of narrowing down their search for an acceptable professional route and a career guideline. In today's world of technology and globalization, information is the key to making any kind of choice. Our country's unemployment problem won't go away because job seekers lack the necessary qualifications because their chosen topic of study doesn't excite them. Each and every day, new technology is changing the way we work. Data and computers rule the world. The following concerns should be taken into account while coming up with a solution:
- **Safety and security**

  Data security should be a high priority for the solution because the system would store sensitive data, including personal data. The system should be highly secure and include role-based data access controls.
- **Trust**
- The biggest problem these systems face is a lack of consistency. The system as a whole should be visible to the users.
- **Privacy**

  The privacy of the users and expert counselor, the problem solver in the system, and the transaction of that particular system must be protected. To guarantee privacy, the system should use encrypted data transfer and an encrypted VPN connection for client server answers.
- **Server Down or 24/7 Availability in CPISS**

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- It's important to look at whether the app can be used from anywhere in the country. Users want an application that is available round-the-clock, seven days a week. Server downtime can occur when there is a lack of bandwidth and a lot of demand to handle. As a result, there should be a back-up plan.
- **Backup**

It's important to look at whether the app can be used from anywhere in the country. Users want an application that is available round-the-clock, seven days a week. Server downtime can occur when there is a lack of bandwidth and a lot of demand to handle. As a result, there should be a back-up plan.

3.2 Comparison among the leading solutions

As previously stated, there is no mechanism in place to give career guidance. However, even if there are a few institutes that offer services for students who want to study abroad, they do not deal with students who are just beginning their journeys. Because of the quick pace of change in the world, today's students are eager to be ahead of the curve and avoid the uncertainty of deciding what career path they want to pursue when they finish college. They're eager to get started whenever it's convenient for them. They rely on their interests and hobbies to do this. There are advantages and disadvantages to working with different types of counseling organizations.

The strengths are:

- Their advertising
- Global connection
- Success rate

Limitations:

- Only work with higher education
- Costly
- Business oriented

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3.3 Recommended Approach

That there is no such system may be seen from the previous work. In addition, the current agencies don't deal with kids. As a result, the suggested system should include the following features:

- ✓ The system's design is user-friendly and appealing.
- ✓ The procedure of verifying and approving your identity.
- ✓ Appointment system.
- ✓ Latest information.
- ✓ Continuous update
- ✓ Payment.
- ✓ feedback

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Chapter 4 – Methodology

The software team that is working toward the greatest possible outcome for the project will select the software development strategy that will result in the most efficient administration of the project. A methodology for project management is a collection of concepts, techniques, and processes that are utilized by professionals in a certain business. Not only are the leading strategies built in a distinct way, but they also call for the development of project management software that is tailored to their specific outputs, methods, and even results. (Asana, 2021). This chapter will, after conducting adequate research and acquiring the necessary expertise, conduct an in-depth examination of the chosen approach and provide the appropriate reason for utilizing the technique.

4.1 What to Use

Methodologies for developing software play an important part in the process. In the field of software development, software methodology refers to the process of planning, structuring, and implementing a software system. Methodologies for software development are crucial to the process. Software development approaches include the waterfall model, the prototype model, the agile software development model, the fast application development model, the dynamic systems development model, the spiral model, and the collaborative application model. As part of my system design, I've outlined three models and their merits and downsides.

Dynamic System Development Method (DSDM)

As the name suggests, this strategy is really a variation on the quick application development process. This methodology places a high value on including users in every iteration and incremental step along the way. (Tatvasoft, 2014) DSM adheres to best practices in order to develop a high-quality product with constant client input.

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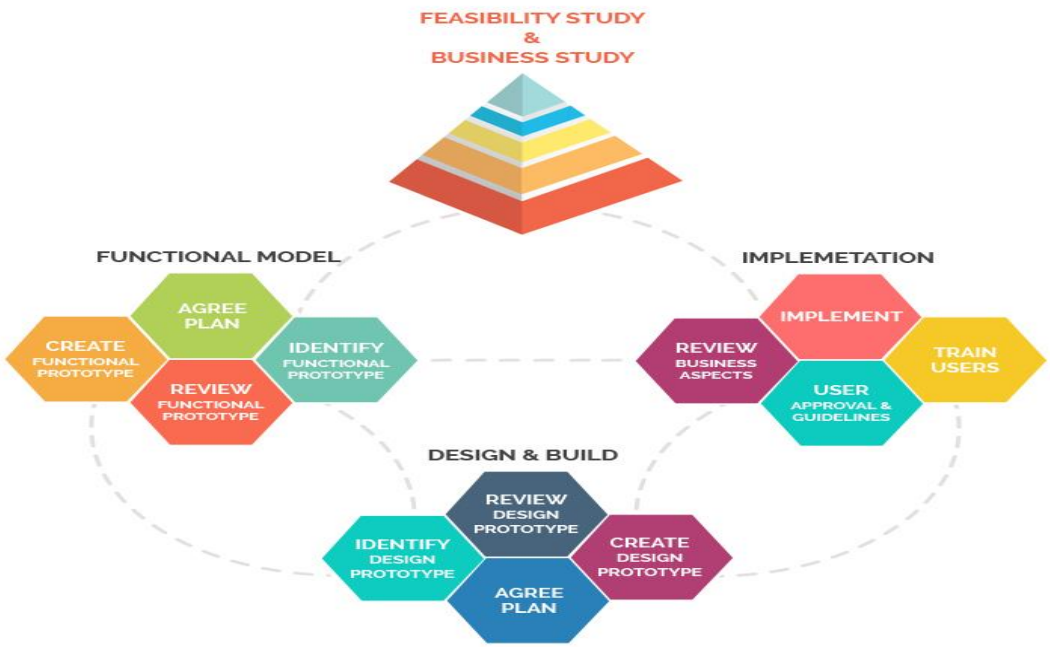

Figure 2:DSDM Methodology

Benefits of DSDM

- ✓ It offers a strategy that is not dependent on a single approach, and it is flexible with regard to the evolution of the requirements.
- ✓ It is imperative that deadlines and spending plans be followed to in a stringent manner.
- ✓ Participants from many stakeholder groups are involved in the development process.
- ✓ Because testing is of such critical importance, it is assumed that every project team will include at least one tester.
- ✓ As a result of the fact that businesspeople are responsible for its creation from the ground up, business value is identified and is anticipated to be the top priority delivery.
- ✓ Takes a one-of-a-kind technique to figuring out whether or not the current iteration is relevant to the overall goal.
- ✓ Makes it clear from the beginning to all of the parties involved in the project that the final result won't be able to fulfill all of their requirements.
- ✓ Make it possible for adjustments and prompt responses.
- ✓ It is simple for developers to communicate with their end consumers.

Drawbacks of DSDM

- It entails the gradual buildup of needs.
- It necessitates complete commitment to the DSDM process; it necessitates significant user involvement; it necessitates a skilled development team in both business and technical areas; and it necessitates a skilled development team in both business and technical areas.
- This is most likely the most important project in this survey. • Focusing on RAD can reduce the robustness of the code. [1]
- The project may be doomed to failure if the client is deceived and does not have a clear understanding of the end result of the work being performed.
- The DSDM does not foster inventiveness among software developers.

Waterfall Model or Structured System Analysis and Design Method (SSADM)

The Waterfall technique, often known as the Waterfall model, is a sequential development process that flows through all stages of a project (such as analysis, design, programming, and testing), with each step completed before going on to the next. The waterfall technique is a project management methodology that stresses the linear flow of a project from start to finish. This front-loaded method, which relies on rigorous planning, accurate documentation, and consistent execution, is often used by engineers. (Anon., 2021). Among software development approaches, this is the most popular model. This methodology's approach is frequently compared to the traditional manner of software development. (2018) (acodez, acodez.in)

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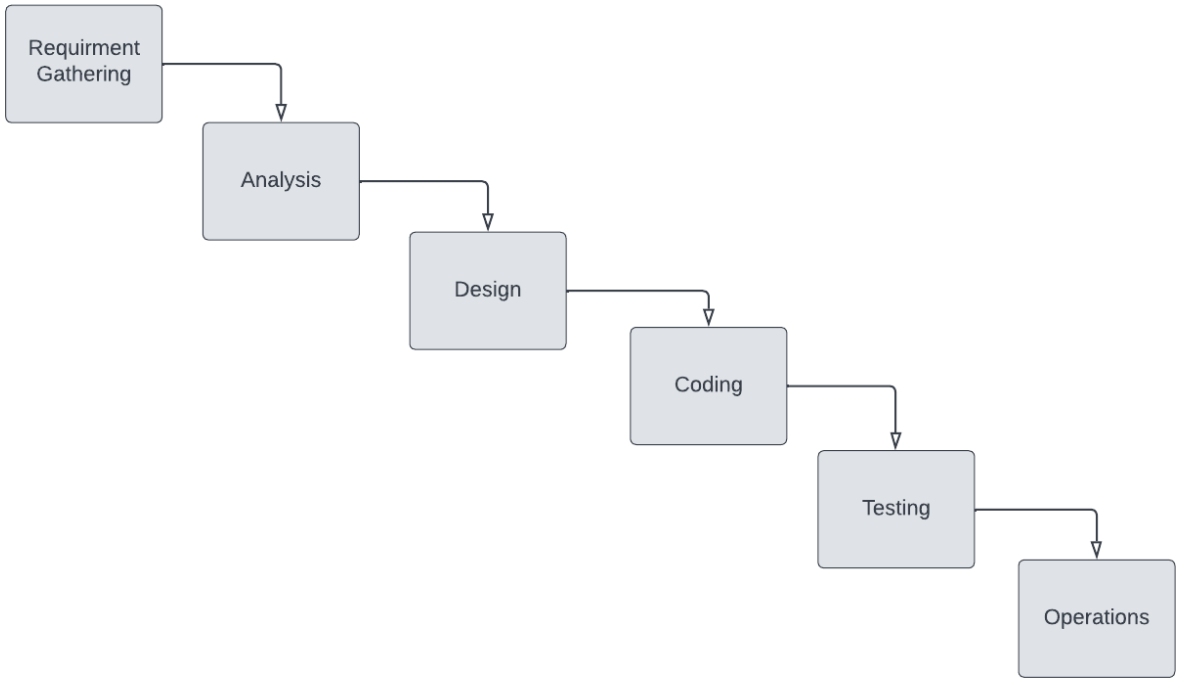

Figure 3:Waterfall methodology

Benefits of Waterfall

- ✓ It is possible for developers to identify design flaws during the analysis and design stages, therefore preventing them from creating wrong code during the implementation phase.
- ✓ Easy to grasp and apply. It saves time and makes tracking progress more convenient.
- ✓ Defined point in time
- ✓ It is possible to estimate the project's overall cost and duration after the criteria have been established.

Drawbacks of Waterfall

- ✓ There is no rewind option;
- ✓ New requirements cannot be added once the development begins
- ✓ Suitable for small and medium projects
- ✓ Near zero maintenance

Rapid Application Development

Prototyping and iteration with little (or no) planning ahead of time are key components of the Rapid Application Development (RAD) methodology. According to the "RAD" philosophy, developing software should be done in an iterative manner rather than a sequential manner. Instead than focusing on meticulously defining and preparing requirements like the waterfall paradigm does, the RAD approach focuses on continually developing needs as development continues. (Anonymous, 2021):

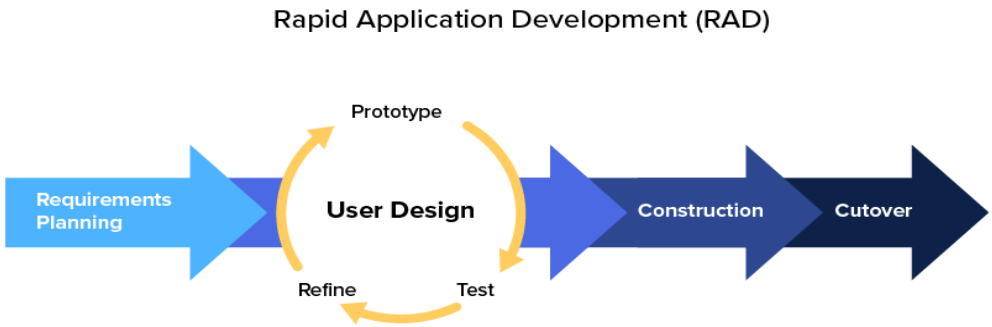

Figure 4:Rapid Application Development methodology

The primary goal of this approach is to speed up the whole software development process. This methodology's objective is easily attainable due to the active user's engagement in the development process. (acodez, acodez.in, and acodez.com, 2018)

Benefits of RAD

- ✓ Reduce the danger to the software development business to the barest necessity.
- ✓ Suitable for a little project .'s
- ✓ The development process begins with the receipt of feedback.
- ✓ Using this technique, customers are encouraged to provide feedback, which aids in the process of improving the product.
- ✓ It is flexible and adaptive to new situations.

- ✓ Deliverables may be easily transferred via scripts, high-level abstractions, and intermediate programs.
- ✓ Prototyping is likely to lead to fewer errors in the final product because of the reduction in human coding that has occurred as a result of the widespread usage of code generators and abstraction layers. "(Martin, 2021/22)" "

Drawbacks of RAD

- ✓ Dependent on the experts for handling.
- ✓ Too costly because of required expertise.
- ✓ Rapid application development can only be used to design systems that can be modularized throughout the life cycle of the product.(Martin, 2021)

Choosing Methodology

I opted to employ the DSDM approach for the CPISS project based on the aforementioned criteria. It's clear that DSDM will be the ideal solution for CPISS since it assures project quality and on-time delivery while also allowing for adaptability inside any firm or organization. Requirements might be modified during the development phase if necessary.

4.2 Why to Use Methodology

The system's development must adhere to a set of guidelines in order to meet the project's needs in a timely and cost-effective manner. In order to make sure that the project's major objectives are reached, a methodology follows the project's planned milestones. Even though picking the best method for an academic assignment might be challenging, doing so will help to guarantee that the project is completed on schedule and meets all of its objectives.

4.3 (CPISS) Sections of Methodology

Some aspects of the DSDM methodology must be followed by the development team, just like in other methods These are the subsections that make up this section:

Pre-project Phase

In this section the initial project plan is initiated with time duration, budget and primary requirements.

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Feasibility Study Phase

This section examines the project's financial, technical, and operational viability.

Requirement Gathering Phase

A variety of methods, including interviews, questionnaires or surveys, user observation, etc., are used to uncover the project's functional and non-functional needs.

Requirement Analysis and Prioritization Phase

In this stage, collected requirements are reviewed and prioritized using a technique like MoSCoW.

Using MoSCow prioritization:

To help in the development of the system, MoSCoW has created a prioritizing tool. There are a few parts that are listed below:

Must have:

In this part, it is important to determine the primary functions that are required of the system; otherwise, the system would be useless to the consumers.

Should have:

This section aids in the discovery of critical criteria and the creation of a key that benefits everybody.

Could Have:

This section assists in identifying a few needs that are not important and have no influence on the system.

Won’t Have:

This element of the system assists in identifying needs that aren't required by this system.

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Exploration and Engineering Phase

Iterative development of the supplied requirements and testing of the created features are employed in this portion of the DSDM approach.

Review Phase

After testing the created deliverables, if any adjustments are necessary, they can be submitted back to the development process in this area.

4.4 Implementation Plans

The development process has come to a close with this step. This is the point at which the finished work is made available to the wider public. During this stage, any issues that may arise before to the release are addressed. Product release requirements are defined here, and only when all criteria are met may the product be released to the public at large.

Chapter 5 – Planning

5.1 Project Plan

The project's completion strategy is laid out in this section. Parts of a project are broken down at the planning phase. The projected completion time for each of these components has been provided. It's up to here to determine how to finish these portions on time.

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5.1.1 Work Breakdown Structure

During this phase, the project is broken down into smaller jobs so that it may be completed in a timelier way and more effectively. We can estimate the amount of time it will take to perform each activity using this framework. The execution of this project might be more difficult if it lacks structure and order, as well as being disorganized.

Task Name	Duration	Start Date	Finish Date
Introduction	3 Days	11-17-2021	11-19-2021
Initial Study	5 Days	11-20-2021	11-24-2021
Literature Revie\	3 Days	11-25-2021	11-27-2021
Methodology	5 Days	11-28-2021	12-02-2021
Planning	4 Days	12-03-2021	12-06-2021
Feasibility Study	4 Days	12-07-2021	12-10-2021
Foundation	5 Days	12-11-2021	12-15-2021
Exploration & Er	20 Days	12-16-2021	01-04-2022
Deployment	12 Days	01-05-2022	01-16-2022
Testing	5 Days	01-17-2022	01-21-2022
Implementation	3 Day	01-22-2022	01-24-2022
Critical Appraisa	2 Day	01-25-2022	01-26-2022
Lessons Learne	1 Day	01-27-2022	01-27-2022
Total	72 Days		

Figure 5: CPISS Work Breakdown Structure of the

5.1.2 CPISS Resource Allocation

This project's assets are handled and allocated in an orderly manner to prevent confusion over the course of the project's development. This is a critical stage in the process of becoming an adult. It is a requirement of my academic assignment that I play several parts in order to accomplish it. The planned CPISS project has the following resource allocation:

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SL	Task	Duration(day)	Resources
1	Introduction	2	Analyst
2	Initial Study	3	Analyst
3	Literature Review	2	Analyst
4	Methodology	3	Analyst, Developer
5	Planning	3	Analyst, Developers, Team Leader
6	Feasibility	3	Analyst, Users
7	Foundation	2	Analyst, Designer, Developer, Team Leader
8	Exploration & Engineering	15	Analyst, Designer, Developer, Team Leader
9	Deployment	10	Developer
10	Testing	3	Developer, Tester, Users
11	Implementation	2	Developer, Designer
12	Critical Appraisal & Evaluation	1	Analyst
13	Lessons Learned & Conclusion	1	Analyst, Designer, Developer, Team Leader, Tester

Table 3: CPISS Resource allocation list

5.1.3 Time Boxing

One of the most essential aspects of the DSDM approach is the use of this technique. Tasks are broken down into time blocks because of this feature. Time boxes include a list of tasks that must be done within a predetermined amount of time, and each task has a due date. Iterative and ad hoc jobs are completed within the given time frame.

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TIME BOX	Task	Resources
TB1	Introduction	Analyst
TB2	Initial Study	Analyst
TB3	Literature Review	Analyst
TB4	Methodology	Analyst, Developer
TB5	Planning	Analyst, Developers, Team Leader
TB6	Feasibility	Analyst, Users
TB7	Foundation	Analyst, Designer, Developer, Team Leader
TB8	Exploration & Engineering	Analyst, Designer, Developer, Team Leader
TB9	Deployment	Developer
TB10	Testing	Developer, Tester, Users
TB11	Implementation	Developer, Designer
TB12	Critical Appraisal & Evaluation	Analyst
TB13	Lessons Learned & Conclusion	Analyst, Designer, Developer, Team Leader, Tester

Table 4: List of the Time Boxes

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5.1.4 Gantt Chart of CPISS Working

A Gantt Chart is a visual depiction of the project's schedule of activities. It shows the time from the start date to the finish date as a progress bar rather than in days. The accompanying Gantt chart shows the CPISS's schedule:

T01	Introduction	11/17/2021	11/19/2021	3
T02	Initial Study	11/20/2021	11/24/2021	5
T03	Literature Review	11/25/2021	11/27/2021	3
T04	Methodology	11/28/2021	12/2/2021	5
T05	Planning	12/3/2021	12/6/2021	4
T06	Feasibility	12/7/2021	12/10/2021	4
T07	Foundation	12/11/2021	12/15/2021	5
T08	Exploration and Enginee	12/16/2021	1/4/2022	20
T09	Deployment	1/5/2022	1/16/2022	12
T10	Testing	1/17/2022	1/21/2022	5
T11	Implementation	1/22/2022	1/24/2022	3
T12	Critical Appraisal & Evalu	1/25/2022	1/26/2022	2
T13	Lessons Learned & Con	1/27/2022	1/27/2022	1

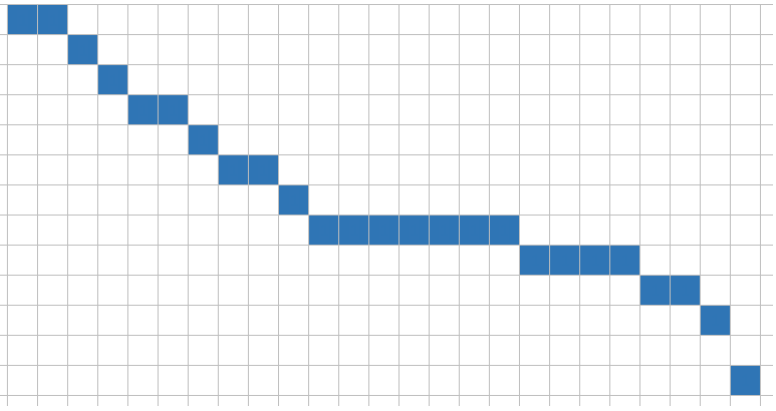

Figure 6: CPISS Project File cycle Gantt Chart

5.2 Test Plan

During this stage, the system's input and output discrepancies in a specific scenario are planned for testing. Following the verification and validation phase of the software development life cycle, testing is carried out.

5.2.1 CPISS Testing Against the Time Boxes

The time box was created by estimating the minimum and maximum number of working days necessary to complete a particular section of the system in light of the complexity and requirements of the software development process. Analyzing Results in the Light of Time Limits:

User Name	Example	Role	Example
Time Box ID			
Time Box Content			

Test Type	Test Steps	Expected Results	Actual Results	Comment

Unit Test				
Integration Test				
System Test				
Acceptance Test				
Security Test				
Usability Test				
Reliability Test				

Figure 7: Sample of Testing Against the Timebox

5.2.2 Required Test

The two most required tests are functional and nonfunctional testing. Apart from these there are more tests to test a system. But I will be discussing are functional and nonfunctional testing.

Functional Testing:

- The smallest components of the design are tested using unit testing. The separated units are put through their paces in this phase of testing. Small units are also tested in groups to evaluate how they operate when combined. The developers use basic input and output to accomplish this task.
- Integrating tested units into a program infrastructure shows the system's overall architecture after the unit tests have been completed. These components are put together to deliver the intended outcome based on input provided by developers. Integration testing includes both black-box and white-box testing. (geekforgeeks)
- A wide range of operating systems are supported, including Windows, Linux and Unix. Black box testing is all that is required to get it to work properly. Taking in the necessary information and demonstrating the desired outcome using internal workings (GreekForceGreeks)
- This testing is done with the full participation of the end users. The functional test is complete after this one is completed. If it meets and exceeds the needs of its intended audience, then it is a success.

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Non-functional Testing:

- This is done by a third-party security testing company. Unauthorized access is verified by testing, which also safeguards against internal and external attacks such as SQL injections.
- To assess how easy it is for consumers to utilize the system, usability tests are carried out to discover just how user-friendly it is. The main goal of the test is to ensure that the system is easy to use and engaging for users.
- Reliability testing allows users to directly participate in the testing process. It safeguards the system's dependability. It assures that a system is safe against a wide range of errors.

5.2.3 Test Case of CPISS

Test case included test case no, test type, test description and test steps:

Test Case No.			
Test Type			
Test Description			
Test Steps	Expected Results	Actual Results	Comment

Table 5: Sample Test case

5.2.4 User Acceptance Test Plan

User acceptance is the last phase of the testing segment. It refers to and checks testing performance by the active user.

Test Case No.
Test Type

Test Description			
Precondition of Testing			
User's Name			
Act as			
Test Steps	Expected Results	Actual Results	Comment

Table 6: CPISS User Acceptance Test Plan

5.3 Risk Management

As a project progresses through the lifecycle of the project, risks are identified, analyzed, and prioritized in order to keep the project on track and accomplish its goals and expected outcomes. It is possible for a project's timing, budget, or actual results to be jeopardized. There are a variety of ways to manage risk, including:

- Risk Identification
- Risk Assessment
- Risk Precaution/Action Plan
- Steps Taken for Possible Risks

5.3.1 Risk Identification

This is the first stage in developing a strategy for managing risk. In this stage, which is the most critical in risk management, the risks that may arise and have an impact on the project are ensured and identified, as are the characteristics of the papers that may be generated as a result of those risks. The following are some valid criteria for identifying potential risks in this project:

- Identification and documentation of potential risks
- The real reasons of the risk were provided in the risk elaboration.
- The formulation of the identified dangers took into account the actual causes.

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- As well as the influence of risk on future repercussions and impacts.

Development of potential risk marker and follow the risk of this assignment exist given below:

Type of risk	Causes	Impact and significance
Scheduling	There are many causes to occur designing risks, including- • Accidental interruption cause of Natural calamity • Distinct segments' loss had data failures for users	• Delayed project submission
Database error and database getting deleted	This project includes several users like students, counselors, admin, etc. • Sometimes a user may not get to schedule a personal counseling session with expert due to database error	• Users may not find the proper career guideline
Illegal access	• When someone tries to access this system without approval. It may cause and create a problem with risks that include • May delete/change data of users	• Personal information may get hacked and may be used to cause harm.
Technical Problem	• Lack of performance • Lack of required bandwidth • No matching the required configuration	• Scheduling failure
Project Backup	• Not backing up the project at any other location or system	• Affects cost • May lose whole project
Network Failure	• Inability to provide the required connection to get access to some integrated APIs and email management	• Email/notification may not be able to sent to the user

Table 7: Risk Identification of CPISS Table

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5.3.2 Risk Assessment

Risk assessment involves with quantitative or qualitative value of risks included threats of a project

Type of risks	Likeliness	Impact	Restore time
Scheduling	5	6	8
Database error and database getting deleted	5	5	5
Unauthorized access	6	6	6
Technical Problem	4	5	5
Project Backup	5	6	4
Network Failure	4	4	8

Table 8: Risk Assessment of CPISS

5.3.3 Risk Precaution / Action Plan

Developing a strategy for dealing with risks is the final step in the process of risk identification and risk assessment. There are a variety of actions that may be taken in response to anticipated dangers.

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- To mitigate the harm caused by already-occurring hazards
- To avoid the occurrence of future dangers
- Problems that have arisen as a result of previous incidents of risk and the potential for future risk are addressed.

Type of risk	Action	Action taken by	Required Action
Scheduling	• Utilize time-saving methods like gantt charts and • forecasting software.	Developer	During projects initial planning
Database error and database getting deleted	• Make enough normalization • Make perfect relation to the table	Developer	During adding data to the database
Unauthorized access	• Perform code by maintaining code smelling • Make multi-authentication system	Developer	During setting authentication system
Project Backup	• Make Backup of project	Developer	Frequent backup
Network Failure	• In order to maintain a high level of service, maintain open lines of communication with network professionals.	Developer	During project development

Table 9: Career Path Information and Support System (CPISS) Risk Precaution

5.3.4 Steps Taken for Possible Risks

Upon recognizing and assessing the potential dangers, the capable individual takes action. They are:

Type of risk	Likelihood	Impact	Steps taken
Scheduling	Rare	high	The Gantt chart and work breakdown structure were constructed, as well as a schedule for the project.
Database error and database getting deleted	Likely	high	A data dictionary and normalization diagram in third normal form were created.
Unauthorized access	unlikely	high	We've put in place a solid authentication and

			permissions mechanism.
Technical Problem	Frequent	medium	a system of frequent backups, upkeep, and monitoring
Project Backup	unlikely	high	Backup often to a different place.
Network Failure	Frequent	low	High-speed bandwidth has been set aside by the proxy server.

Table 10: Risk dealing steps for CPISS

5.4 Change Management

5.4.1 Factors that Might Cause Change

Many changes may have to be made for this system which are:

- ✓ Modifications in the scheduling pieces
- ✓ Modifications in the core operational requirements
- ✓ Transformations in the different modules of the UI/UX
- ✓ Transitions in the security handling features

5.4.2 DSDM Welcome Change

The progress of software life cycle should be modified as needed to meet the needs of the project. We should employ a technique that accepts diverse types of challenges to address these causes of change. As a result, DSDM is a technique that is adaptable, trustworthy, suitable, and executable. We use this technique during the system development process to maintain and make improvements to the project. The following are examples of how it works using various approaches:

- A system is established to track the upgrading of any module of the system
- feedback from users is gathered to make changes during development
- It performs once modifications are completed
- it provides security
- it assures reliability and scalability

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5.4.3 Considering Business Priority

Changes are explored in order to meet the expected objectives, criteria, and vision with regard to the business purpose. This modification in functionality must be prioritized with the requirements that will be the causes of advantages for all parties concerned.

Priorities were as follows:

Area of Topic	Priority Level
Scheduling	5
Functional Requirements	7
User interface	5
Security handling	5
Users feedback	7

5.4.4 Change Workshop

Together, learning about the members of the development team and strengthening contact with customers can bring about this. A workshop with a questionnaire that will be required later to make modifications and additions to the system is arranged by the developers who are participating based on the changes and additions that are necessary to be made.

- And by having an understanding of the user profiles of various users, such as students and professionals with years of experience, a debate can be centered on the implementations that have been done to improve the user experience of the system. This review, which took place during the talks, will be kept on the workshop's website. Workshop for the necessary changes is required for:
- To define the change and involved team
- To create a strong profile of team members, including users

5.4.5 Changes That are Allowed to the system

It is necessary for changes to be approved in accordance with the priority level they have. In addition to this, it has to be backed by resources such as the cost, the schedule, the quality, and the dangers. During the process of developing a specific section of the system, it is important to ensure that modifications may be made according to their respective priorities.

5.4.6 Key Finding of Change

Key Finding Makers will be guided by their expertise in their area.
This project here included separated decision takers to changes that included

- ✓ System Requirements Analyst
- ✓ System Developer
- ✓ System Tester

If necessary, the analyst can alter the functional requirement, and the developer can alter the applicable code.

5.5 Quality Management

The goal of quality management is to ensure that the level of quality that was agreed upon between the user and the provider at the beginning of the project is preserved. The practice of quality management is predicated on a variety of criteria, including the following: •

- Career rules covering a diverse array of possible paths
- Communication between team members and end users
- Ongoing adjustments to requirement specifications

5.5.1 Rules Applied to Maintain Quality

The rules that are used can vary from system to system and from user to user; also, the same system might have a distinct set of rules for each of its users. There are certain protocols that must be adhered to throughout the process of quality management. These protocols include quality control and quality assurance.

Quality Control:

By authenticating users and experts quality should be controlled including

- By taking feedback from users.

Quality Assurance:

By evaluating the approaches taken if they are right or wrong quality assurance has to be maintained including

- By handling user request
- Sending appropriate and correct email/notification to the users

5.5.2 DSDM Standard Quality Measures

Solution quality: The quality of the solution is assured based on the anticipated consequence of the business need and the expectations of the users based on the requirements of the consumers. The completion of these procedures is determined by two different sorts of priority.

- Time boxing
- MoScoW method

These methods are completed by maintaining the schedule.

Process Quality: This ensured based on the focused company. Two types of approaches are taken to complete this

- CMMI
- DSDM

5.5.3 Quality Plan and Measuring Meter

Many different types of quality control plan have been followed to this stage including

- Proper scheduling and resource allocation
- Testing in every segment of development
- All the changes are tracked and documented properly for further improvement and execution.

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Chapter 6 – Feasibility

6.1 All Possible Types of Feasibility

Operational Feasibility:

As the functional viability of the proposed system is concerned. It's general serviceability, smoothness to use , and required functionalities makes the proposed CPISS system a model. CPISS also provides proper validation and verification for any user inputs. Easy and smooth mapping of the system, and an easy counselling booking session, all of which make the system so much easier to use and practically effortless. Users with legitimate usernames and passwords can access the system and carry out duties effectively, including Administrators, General Users, and Students.

Technical Feasibility:

There are many aspects of technical feasibility. They are:

There is evidence that CPISS users are able to readily locate a career guideline that is relevant to their interests rather than wasting time searching for information elsewhere. Even if you have a poor internet connection, you may still use the system because it was built utilizing the most up-to-date web technology. To keep data secure, the system maintains a hierarchy of users. Web-based systems are autonomous, cost-effective, and scalable, making it possible. The system's technical elements include:

Hardware:

• Desktop PC

• Wi-fi Router (Tp-link)

Software:

• Xampp

• Microsoft office (MS)

• Microsoft Excel

• Google chrome browser

• Windows 10 Pro (operating system)

•VS Code

• Brackets

Database:

• MySQL

Client Side:

- Html
- CSS
- Java Script
- Bootstrap
- Jquery
- Ajax

Server Side:

- PHP
- Laravel 8.6

Budget Feasibility:

- ✓ There are many other ways to develop the proposed system, including web-based, mobile, and desktop applications.
- ✓ Cost of web-based applications: the entire application and data are hosted online and can be accessed from anywhere through the Internet, with no installation required.

Equipment	Cost per unit	Cost
Extranet network with VPN	৳2500 per month	৳2000
Desktop pc (core i9, 3.6 GHz processor, 32 GB DDR4 RAM, 500gB SSD)	৳130000	৳130000
Cloud and squirrel server (email server)	৳10000 per month	৳10000
Total		৳142000

Mobile application cost:

Every device has to be installed with the system's app. However, this can be more expensive than other options.

- Desktop application cost: the app containing the system need to install on every device.

Equipment	Cost per unit	cost
Desktop pc (intel core i7, 2.8 - 3.0 GHz processor, 16 GBs DDR4 RAM, 500GB SSD)	৳80000	৳80000
Cloud and squirrel server (email server)	৳5000 per month	৳5000
Total		৳85000

A domain name and hosting service are mandated to make the system available online. The whole system will be developed as an efficient web application.

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The Market Research Analysis Founded on the Feasibility Facts:

There's a reference to supply and demand, both in the marketplace and among end users. There are just a few firms in the market that offer career advice, but they don't focus on secondary school; instead, they focus on studying overseas for further education. The market for foreign language students and their career aspirations remains untapped at this point in time. Because no other system or organization has taken the initiative to help pupils identify their passion and goals at a young age, the suggested method has no competition. Many people are eager to start their careers sooner as technology improves. For the first time, people may utilize CPISS to choose a vocation that matches their abilities and interests. CPISS will serve as a roadmap for their future careers. CPISS can meet the demand for such a system.

6.2 Cost Benefit Analysis for CPISS

For the most part, cost benefit analysis is concerned with determining how much money a company will make and spend. Total costs and earnings are contrasted in order to gain the full advantage. This project's cost-benefit analysis is outlined below:

Total Cost:

SL no	Equipment	Year 1	Year 2	Year 3	Year 4	Year 5	Total
	Web based application	৳142000					৳142000
	Mobile application	৳135000					৳135000
	Desktop application	৳135000					৳135000
	Domain and hosting	৳10000	৳10000	৳10000	৳10000	৳10000	৳50000
	Employee expense	৳50000	৳50000	৳50000	৳50000	৳50000	৳250000
	Other cost	৳20000	৳20000	৳20000	৳20000	৳20000	৳100000
	Total cost	৳492000	৳80000	৳80000	৳80000	৳80000	৳812000

Table 11: Cost Approximation for the project CPISS

Total Revenue:

SL no	Sectors	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Total income	৳450000	৳490000	৳540000	৳610000	৳630000	৳2720000
2	Total Equipment	৳492000	৳80000	৳80000	৳80000	৳80000	৳812000
	Total revenue	-৳42000	৳410000	৳460000	৳530000	৳550000	৳1908000

Table 12: Earning estimation for the project CPISS

So it is clear that the system can generate a huge amount of profits if implemented correctly while also helping the students choose a career which will ultimately help the country's job market.

6.3 Is DSDM Good or Bad for this Project

An academic assignment must be done in a short period of time with all of the necessary features. The project should be developed iteratively since it may have to accept modifications during development. There are tight rules and constraints imposed by DSDM to ensure the iterative development process. It guarantees that the project is completed on schedule and on budget. In addition, it assures that the project's users are actively involved throughout its duration. Since DSDDM is clearly the best approach for CPISS, we may conclude that.

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Chapter 7 – Foundation

7.1 The Problem Area Identification

The easiest way to begin any endeavor is to identify the problem at hand. Because users are the ones who bear the brunt of a lack of these systems and tools, it is possible for them to do so themselves. Problems can be discovered using a variety of methods. The following is a breakdown of my problem-solving process:

7.1.1 Interview

Interviews are an excellent method for obtaining relevant information on any issue. This opens the door to further discussion of the problem and potential solutions. As part of the interview, some of the following issues were discussed:

- There aren't enough resources to pursue a certain job path.
- People who: Have no idea where to begin their search;
- Lack the resources necessary to pursue a job in which they have a genuine interest;
- Are unable to locate opportunities that match their goals;

7.1.2 Observations

Observation is one of the most used problem identification techniques. I have seen this by observing the fact that most of our graduate students looks clueless after their graduation on what they want to do. Some main points of observation are:

- No system that provides career guidelines
- Students have no idea about career paths
- Students who want career guidelines often do not get the suggestion they need
- Existing institutes provide only for foreign higher education.

7.1.3 Questionnaires

It is one of the most effective ways to collect information and ask questions to users and other actors using questionnaires. It might be MCQ or short questions set for the user. So, questions are in below:

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Name		age	
Gender		Class	
do you know what you want to be?			
do you have any idea of what major will suit your interest?			
do you know what you have to do to reach the goal?			

7.2 Rich Picture

A top-down or bird's-eye perspective of the actions of a system's users is an example of a rich image. Communication and business procedures are also shown to be problematic, as well as conflicts between them. As an example, consider the following: -

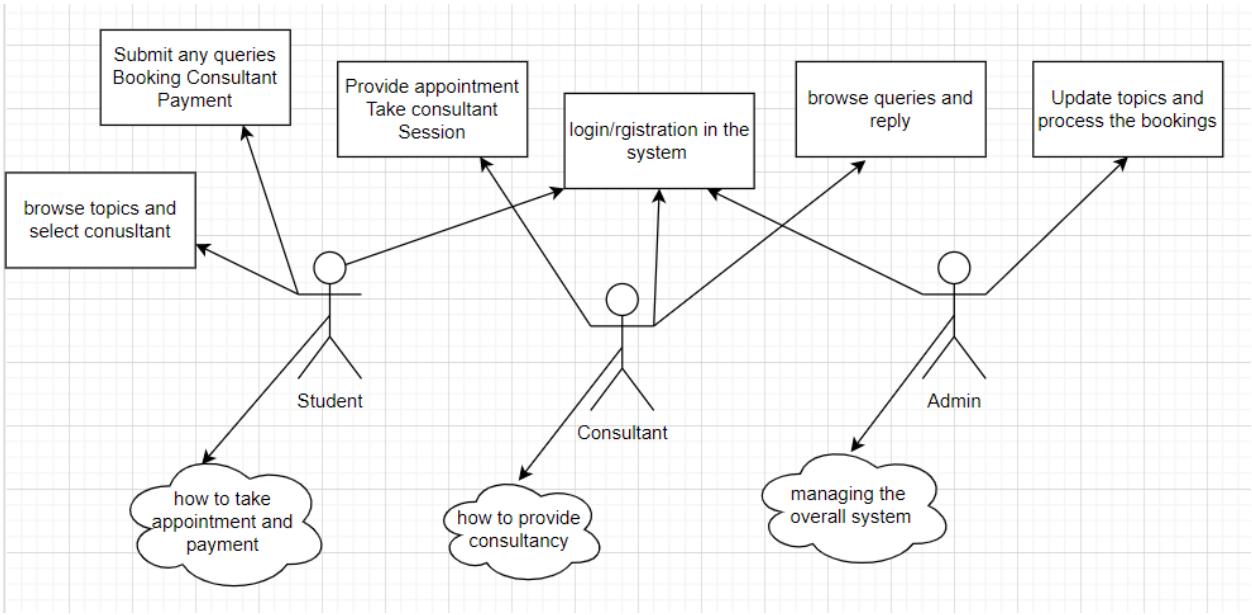

Figure 8: Rich Picture of the CPISS

The legends of rich picture

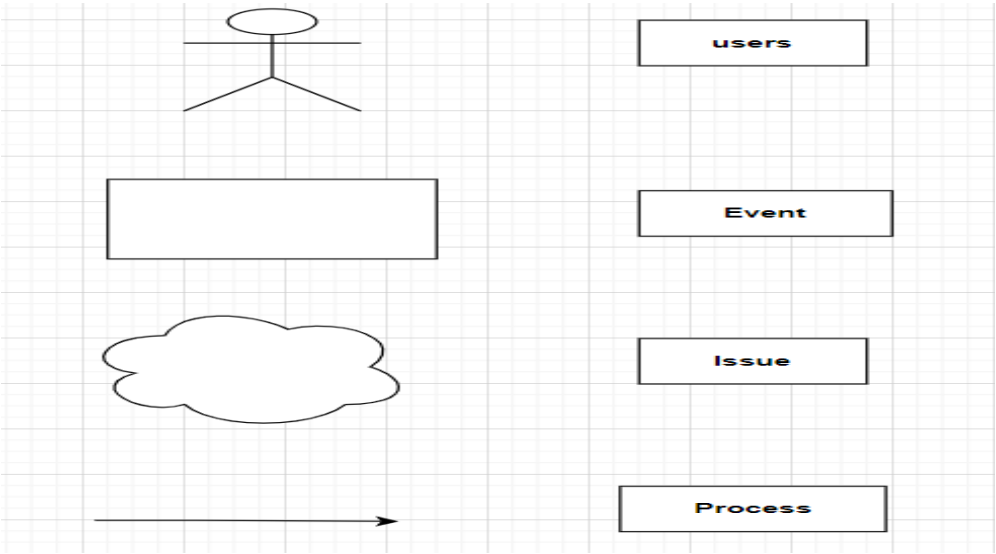

Figure 9: CPISS Legends

Key actors

Three key actors in CPISS. They are:

- Student
- Consultant
- Admin

Short description of rich picture: Students as general users can visit the system without logging in or registering, as shown in the detailed image, but in order to utilize the service, they must log in. After signing in, individuals are able to use the system's services and interact with other users. Consultants may book appointments, arrange appointments, and administrators can manage all user segments and all other system segments.

7.3 Problem Area Identification

As a development of the information group, some problems are identified in the problem marker stage. According to those identified issues, the rich picture depicts the entire process of the CPISS system. After studying this, some specific issues are discovered; they are:

- ✓ No existing system to provide the support
- ✓ No career guideline system for students
- ✓ Lack of information regarding career path
- ✓ Lack of support

7.4 Possible Solutions

Proposed solution for the above problems are:

- ✓ Build a new system
- ✓ Provide career guideline through the system
- ✓ Provide latest information
- ✓ Provide expert opinion

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7.5 Overall Requirement List

The complete list of requirements is stated below:

Functional requirements:

- Career guideline system
- User manipulation system for admin
- Expert appointment system
- Chat system
- Career information
- Latest news
- information system for all existing career paths
- Payment system
- notification/email system

Non-functional requirements

- Accurate data protection and privacy
- Provide data and resources are backed up.
- User-friendly UI/UX design.
- To restrict access, implement authentication and authorization.
- The implementation of accessibility problems as defined by law is needed.
- Confirmation and verification

7.6 Technology to be Implemented

There are many possible technologies for designing and enforcing the system. Selecting the right technology is very meaningful. The options are:

The Technology of Client-Server Application

An app must be installed on the client's device for the data to be accessed, and the Server must store the data on a remote server. The client application requests data from the remote Server, and the server replies. (toastytech.com, 2019)

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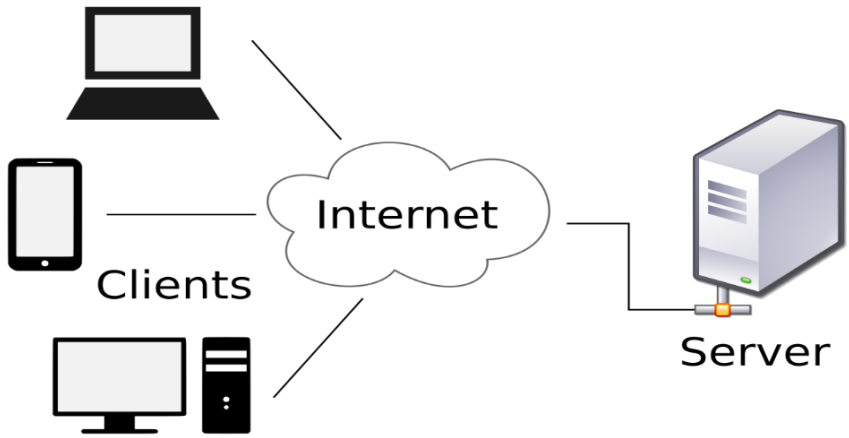

)

Figure 10: Client Server Application Model *[2]*

The essential features of client-server applications are listed as follows:

- User must install apps in own hand
- the Maintenance of server and client applications.
- Expensive since users must purchase the application.
- Not mobile and must be accessible.

Web Application

Web apps are hosted on a remote server, so users won't have to install anything. It can be accessed through the internet on any device with a browser. The features of web applications are as follows:

- No installation is required.
- It is accessed with an internet connection and a simple internet browser.
- Moderately found at low cost.
- Available from anywhere at any time.

7.7 Recommendation and Justification

The proposed system has to be compatible and accessible to all users. Also, it should be accessible from any device with a simple web browser with an internet connection. It also should be able to accommodate a huge number of users at the same time. Web applications are therefore the most logically accurate technology for the development of the proposed system.

Chapter 8 – Exploration

8.1 Activity Diagram

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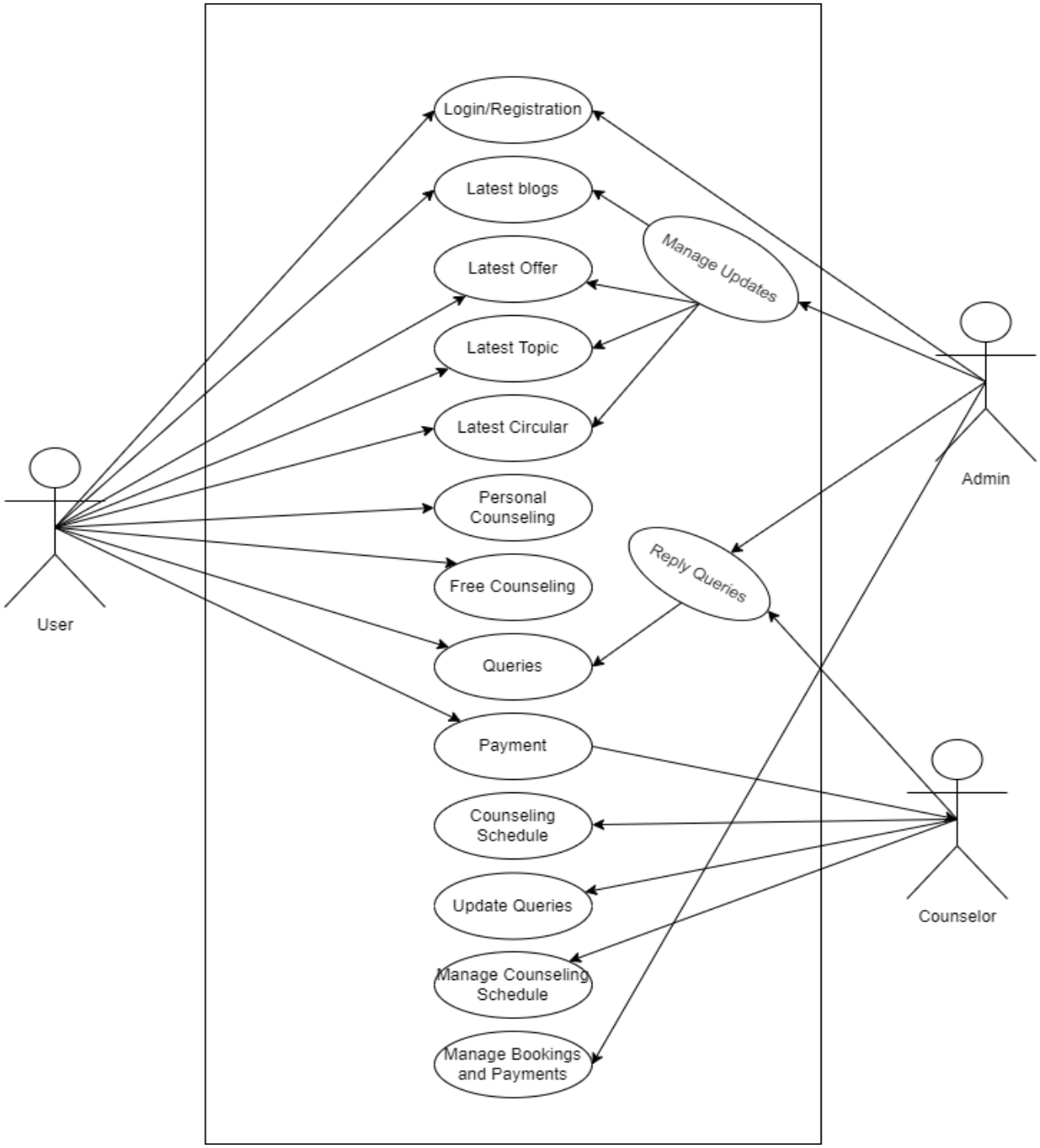

Figure 11Activity Diagram

8.2 Use case Diagram

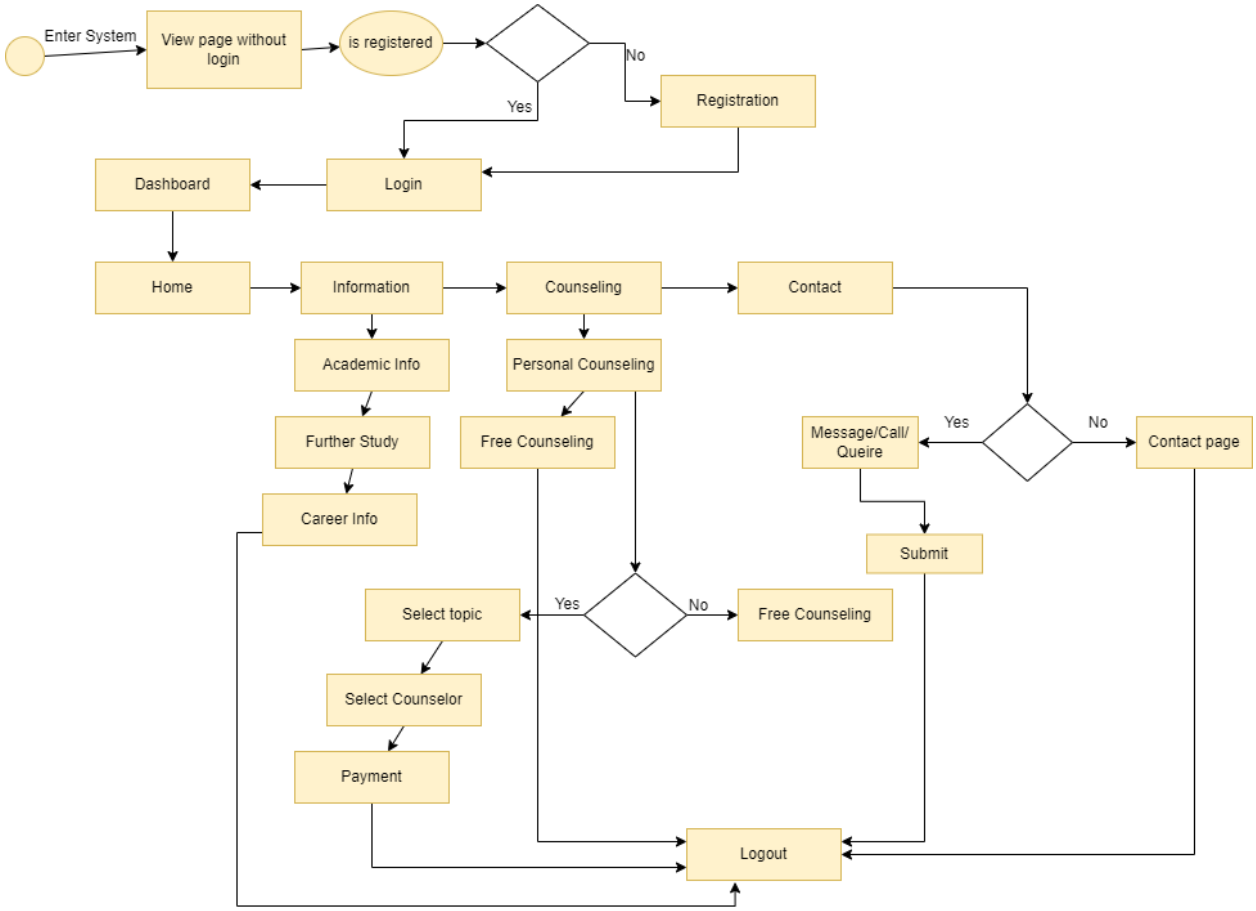

Figure 12:General User Activity Diagram

8.3 Full System Use Case

The following is a use case diagram for the proposed system:

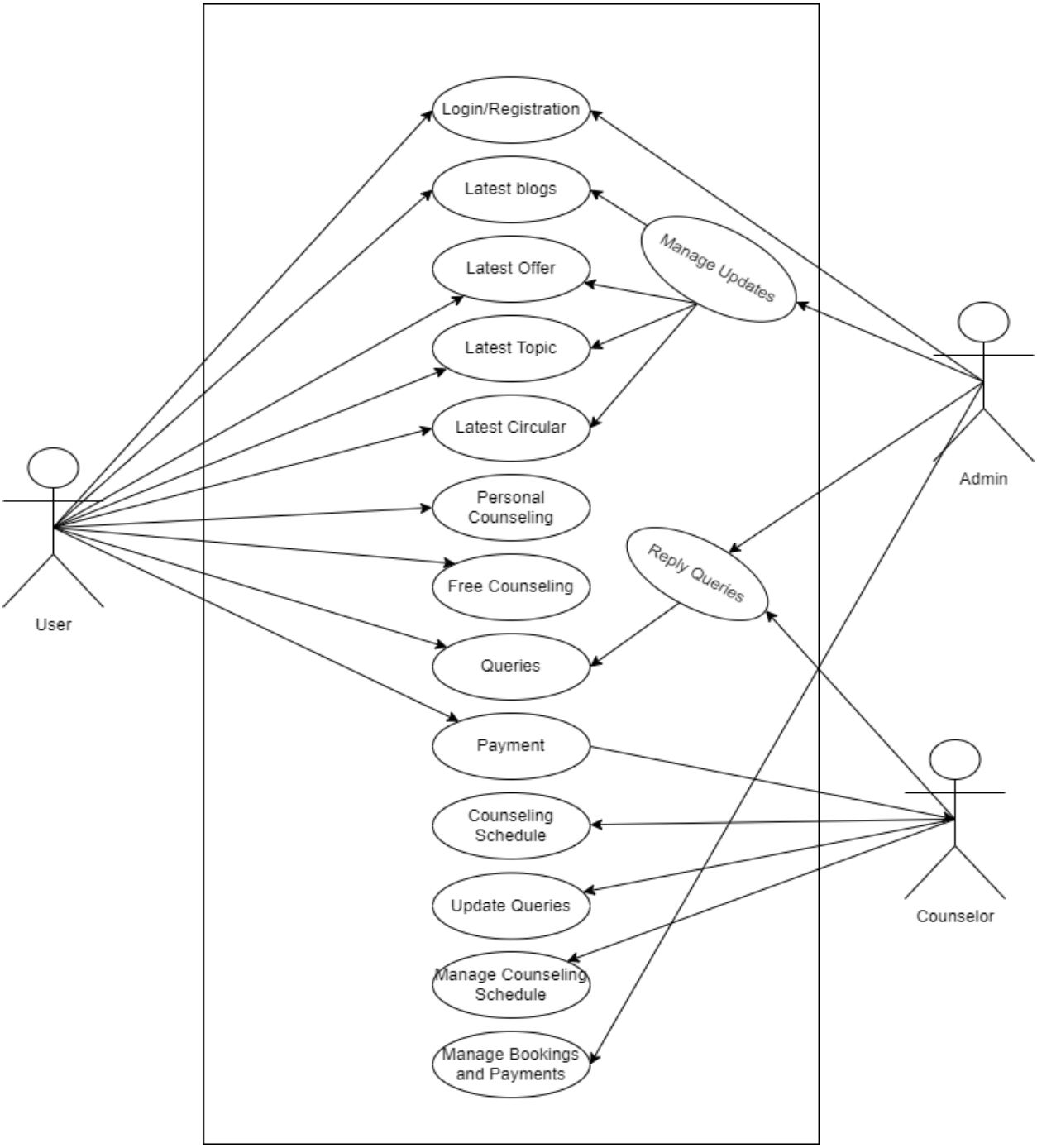

Figure 13:Use Case of the Proposed System

8.4 Full System Activity Diagram

There are a variety of users in the planned CPISS system, each with their unique workflow. The activity diagram CPISS for various work processes are shown below.

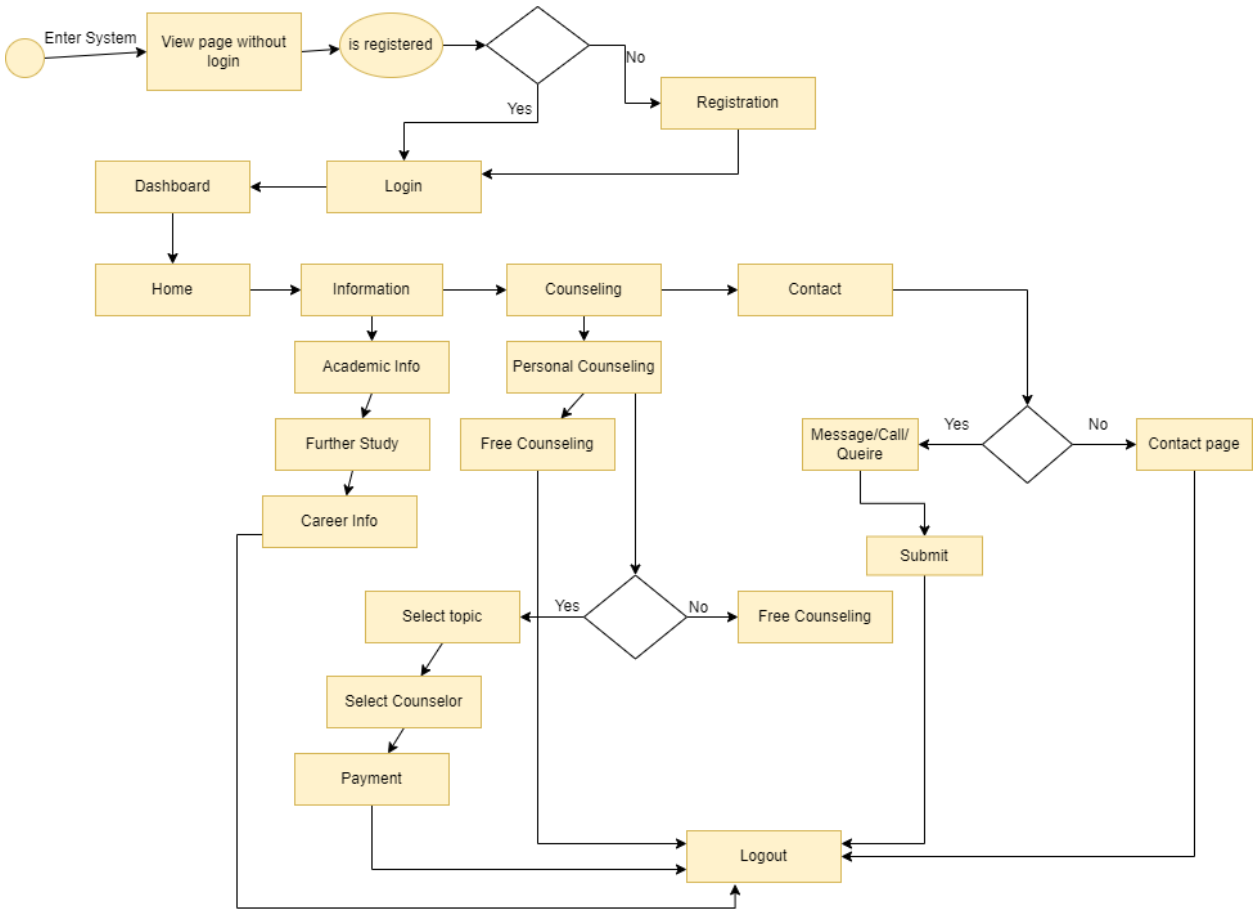

Figure 14:Activity Diagram

8.5Admin Activity Diagram

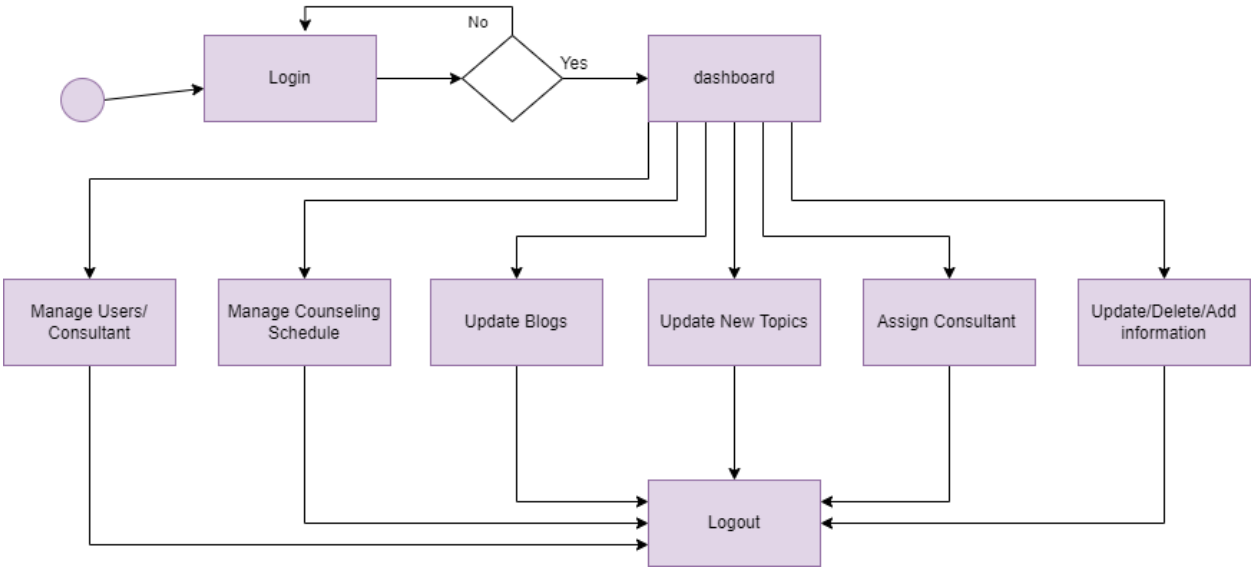

Figure 15:Admin Activity Diagram

8.5 Consultant activity Diagram

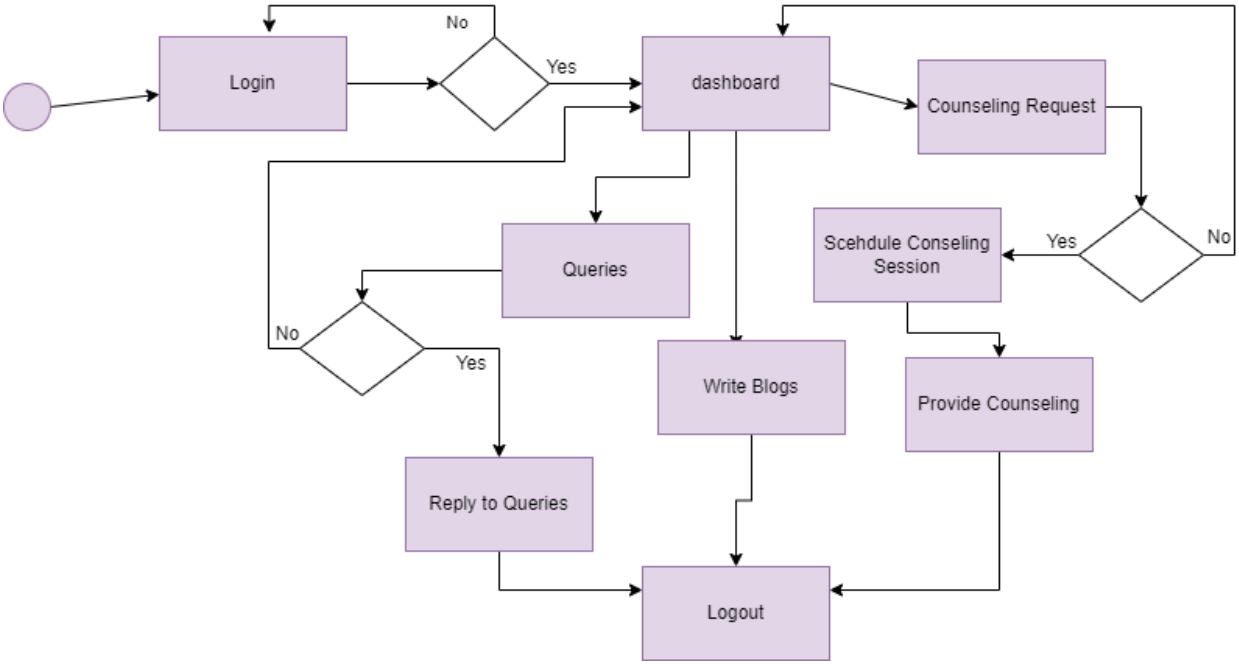

Figure 20: Consultant Activity Diagram

8.5 Catalogue of Requirements

A Prerequisite catalog is a list incorporating all the identified requirements of a project. I will add the appointed necessities to the requirement catalog following the standard format.

Registration and login requirement catalogue

Source:	**Sign off:**	**Priority**	**Requirement ID:**
Admin	All User	Must	M-001
Functional requirement			
Registration and login for users All types of the system users need to get registered and then login into the system. No one can perform an action without proper authentication.			
Non-functional Requirement			
Description	**Target Value**	**Acceptance Value**	**Comment**
Login/registration per day	100000	90000	

Table 13:Requirement Catalogue for login/registration

Personal counseling booking catalog:

Source:	**Sign off:**	**Priority**	**Requirement ID:**
users	student user	Must	M-002
Functional requirement			
Appointment booking students have to be able to book personal counseling session with experts			
Non-functional Requirement			
Description	**Target Value**	**Acceptance Value**	**Comment**
appointment booking	10000	9000	

Table 14:Requirement Catalogue for counseling booking

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8.6 Prioritized Requirements List (PRL)

To create a priority list of recognized requirements, I used the MoSCoW prioritizing approach. The CPISS priority requirements are shown below.

Must Have requirements-

SL	Requirement	Priority
1.	All users (User, admin, and Counselor) must register and log in.	Must Have
2.	Manage Complain Box & Solution of that particular complain	Must Have
3.	Manage Answer Via Email	Must Have
4.	Manage previous problem and solution.	Must Have
5.	Manage warehouse and recent price by admin	Must Have
6.	Report of sell and buy product	Must Have
7.	Store All reports	Must Have

Should Have Requirements-

SL	Requirement	Priority
1.	Admin manipulation	Should Have
2.	Facebook, Twitter	Should Have

Could Have Requirements-

SL	Requirement	Priority
1.	Manage All latest news by admin	Could Have
2.	Manage Input	Could Have

8.7 Prototype of the system

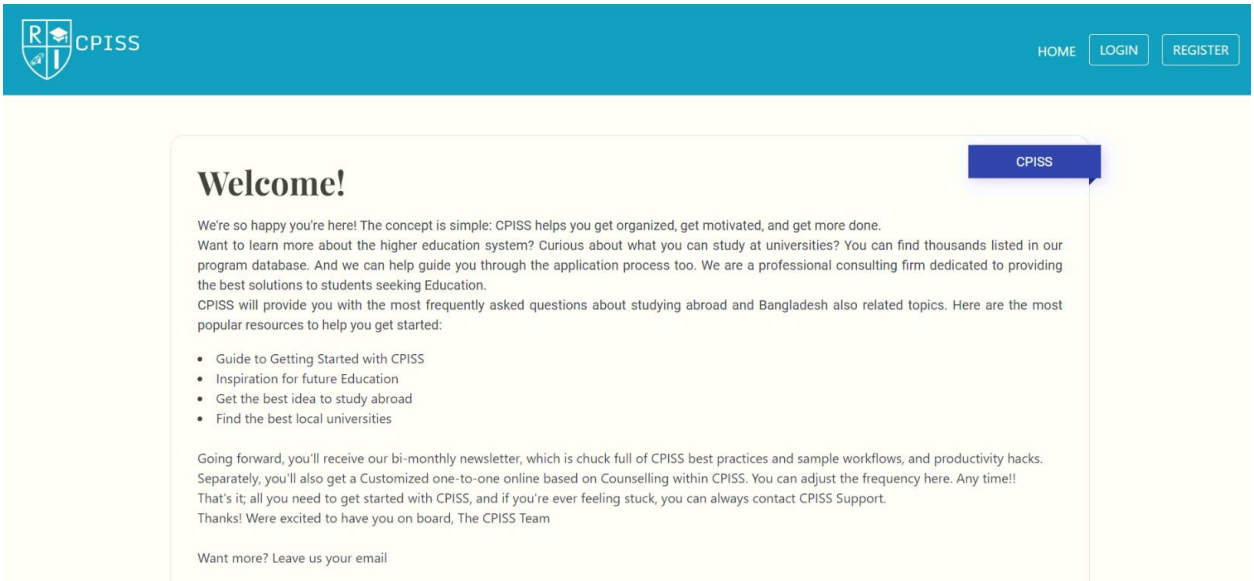


Figure 21: Contact Box Prototype

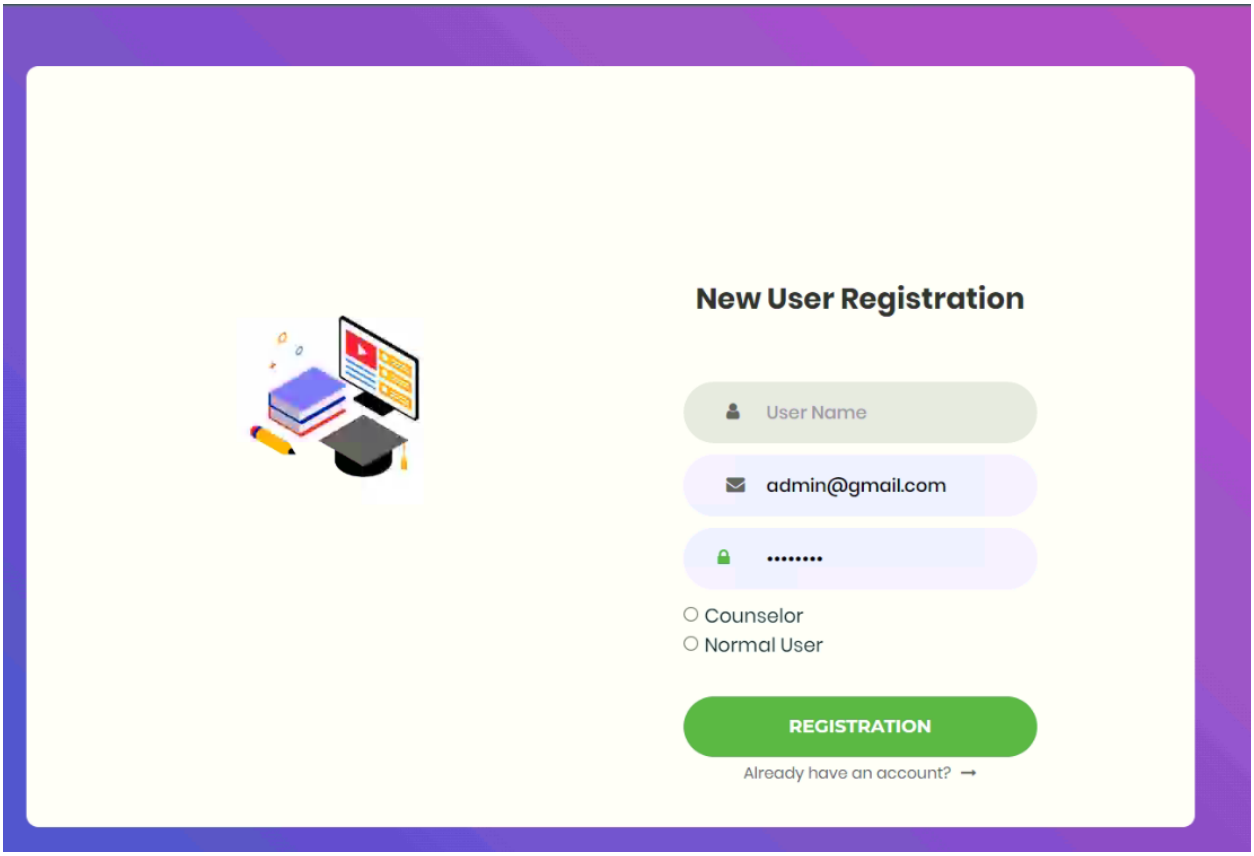


Figure 22: Registration Prototype

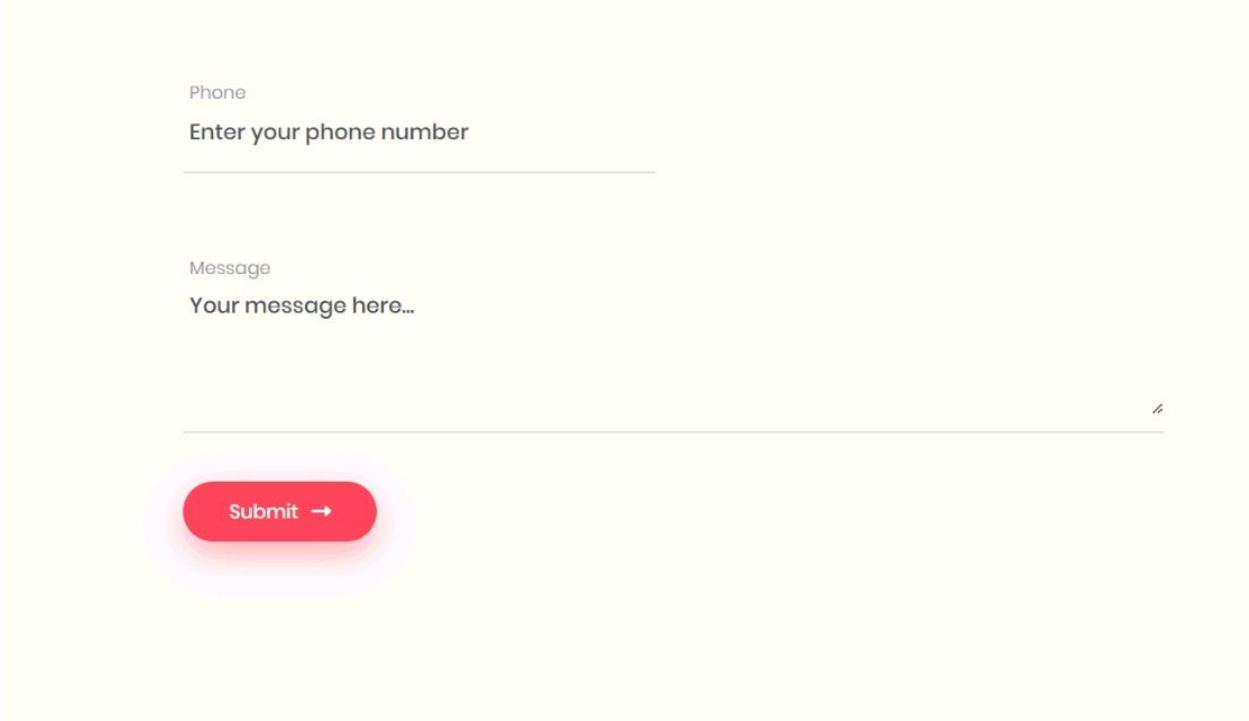


Figure 23: Contact Page Prototype

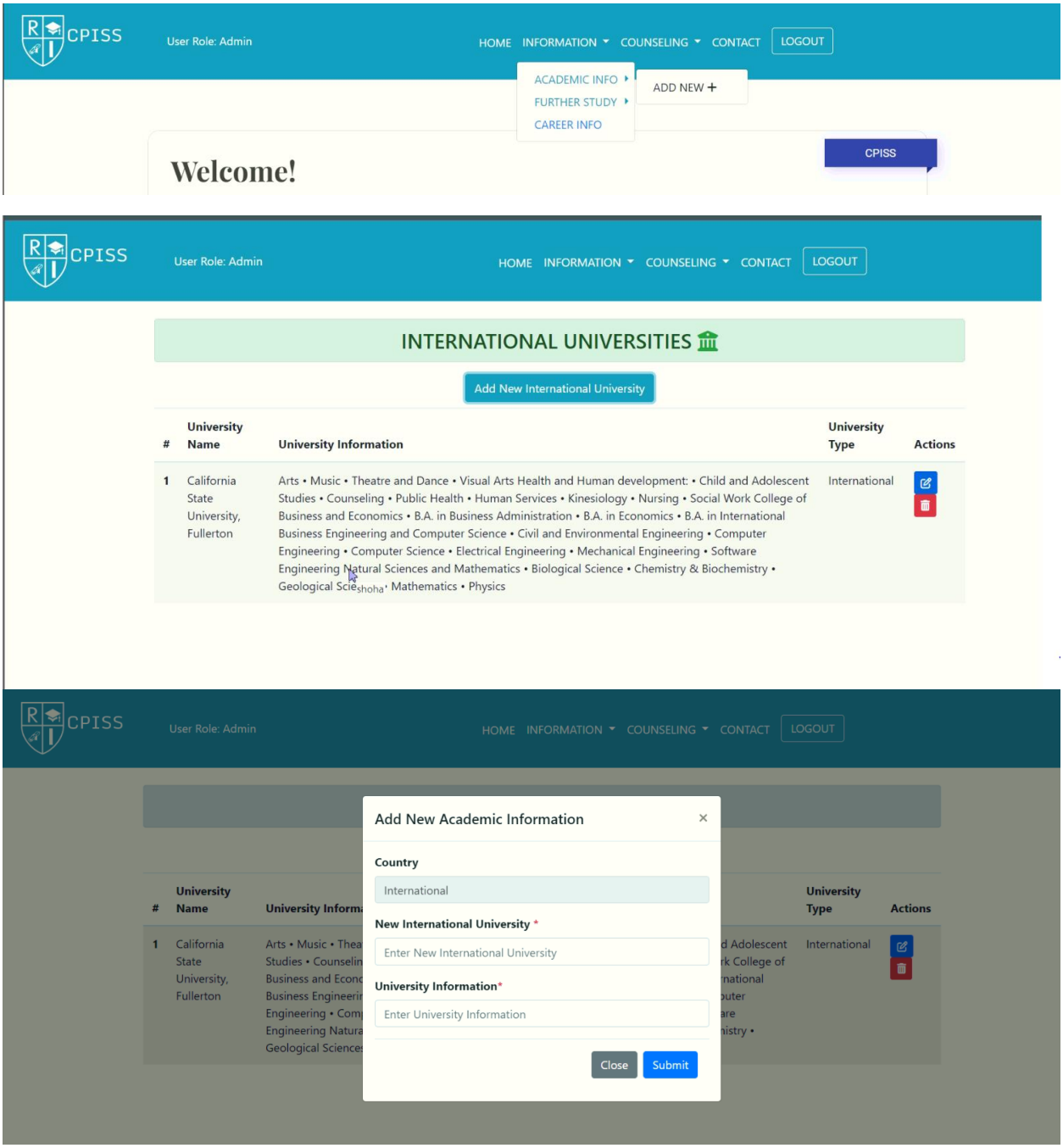


Figure 16:Admin Prototype

Chapter 9 – Engineering

9.1 New System Modules:

There are many system modules. Some of them are listed below:

Login Module

SL	User Action	SL	System Action
1	Admin click on the login link	1	User will be shown a login form.
2	Admin will provide login credentials	2	The system validates the given data.
3	Admin click on login button	3	The system authenticates the admin. And if authenticated then redirected to admin dashboard otherwise send back to login page with error message.

Table 15:Module for logging in

User's appointment booking module:

SL	User Action	SL	System Action
1	User login, go to home, browse topics	1	the system performs the actions and shows topics interested by user
2	selects expert based on topic, click on book appointment	2	the system will check experts schedule and book an appointment on available slot
3	user click payment	3	system will display payment received and appointment schedule.

Table 16: User's appointment booking module

9.2 Use Case Diagram

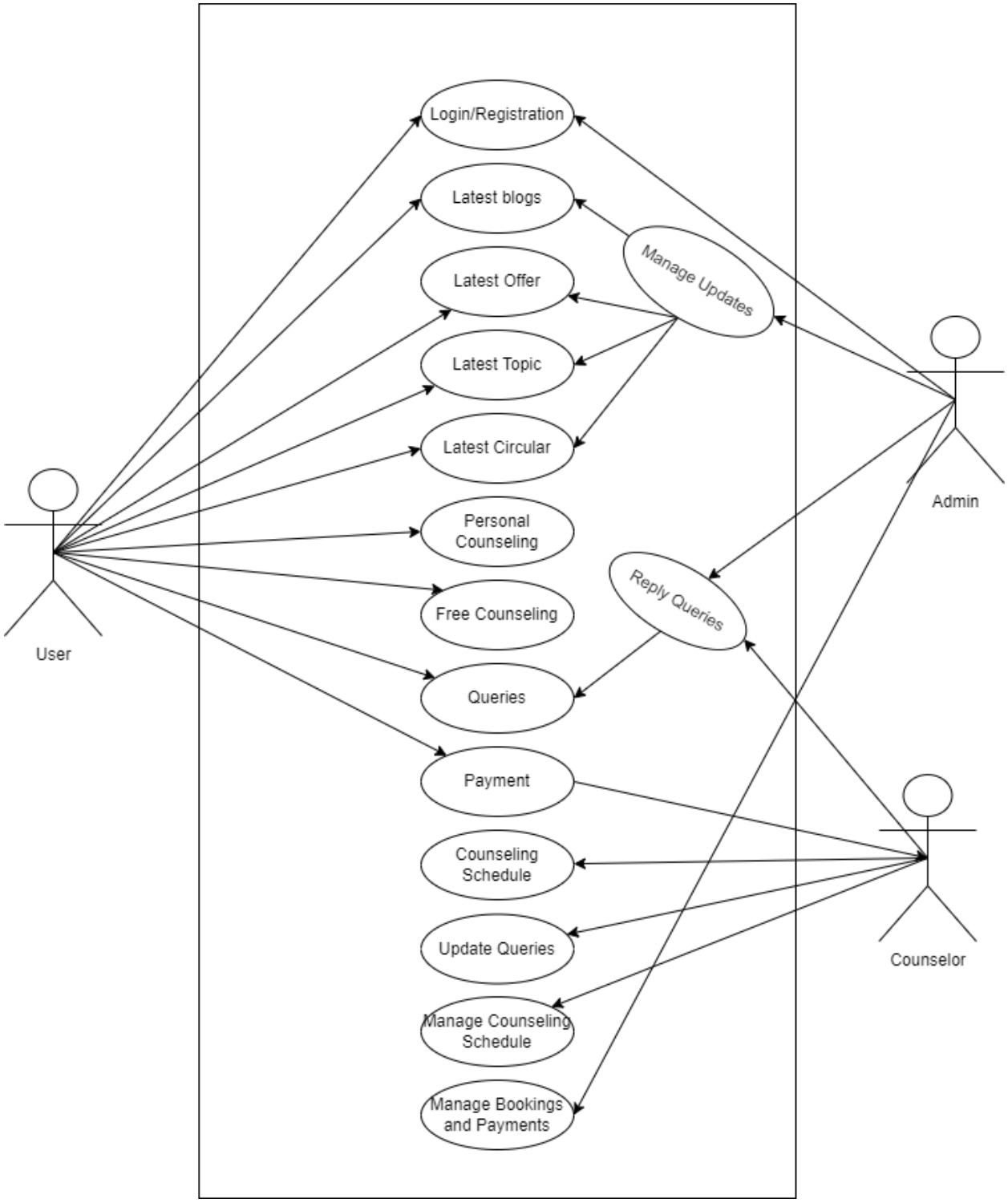


Figure 25: CPISS Use Case

9.3 Entity Relationship Diagram

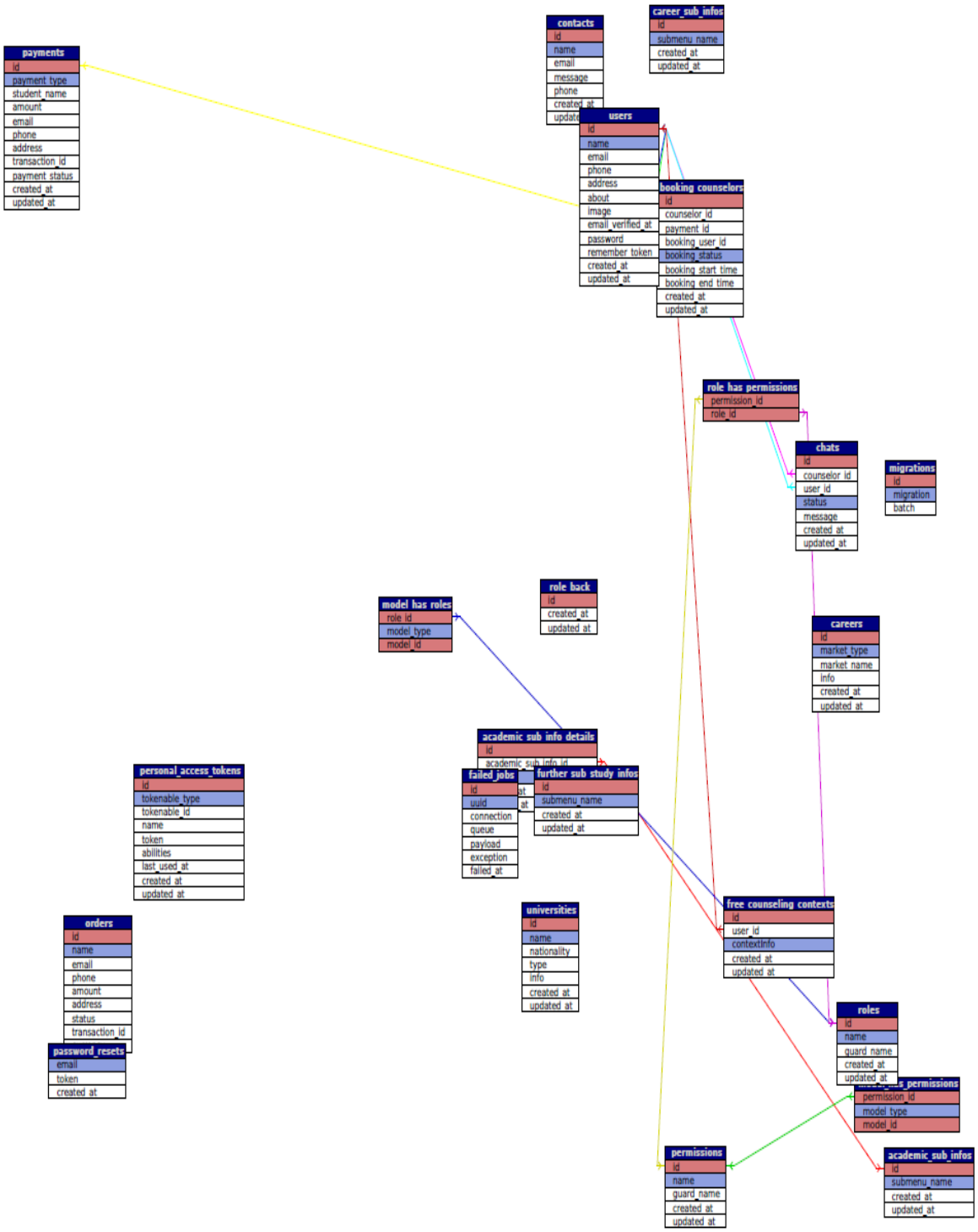


Figure 26: CPISS ERD

9.4 Deployment Diagram of CPISS

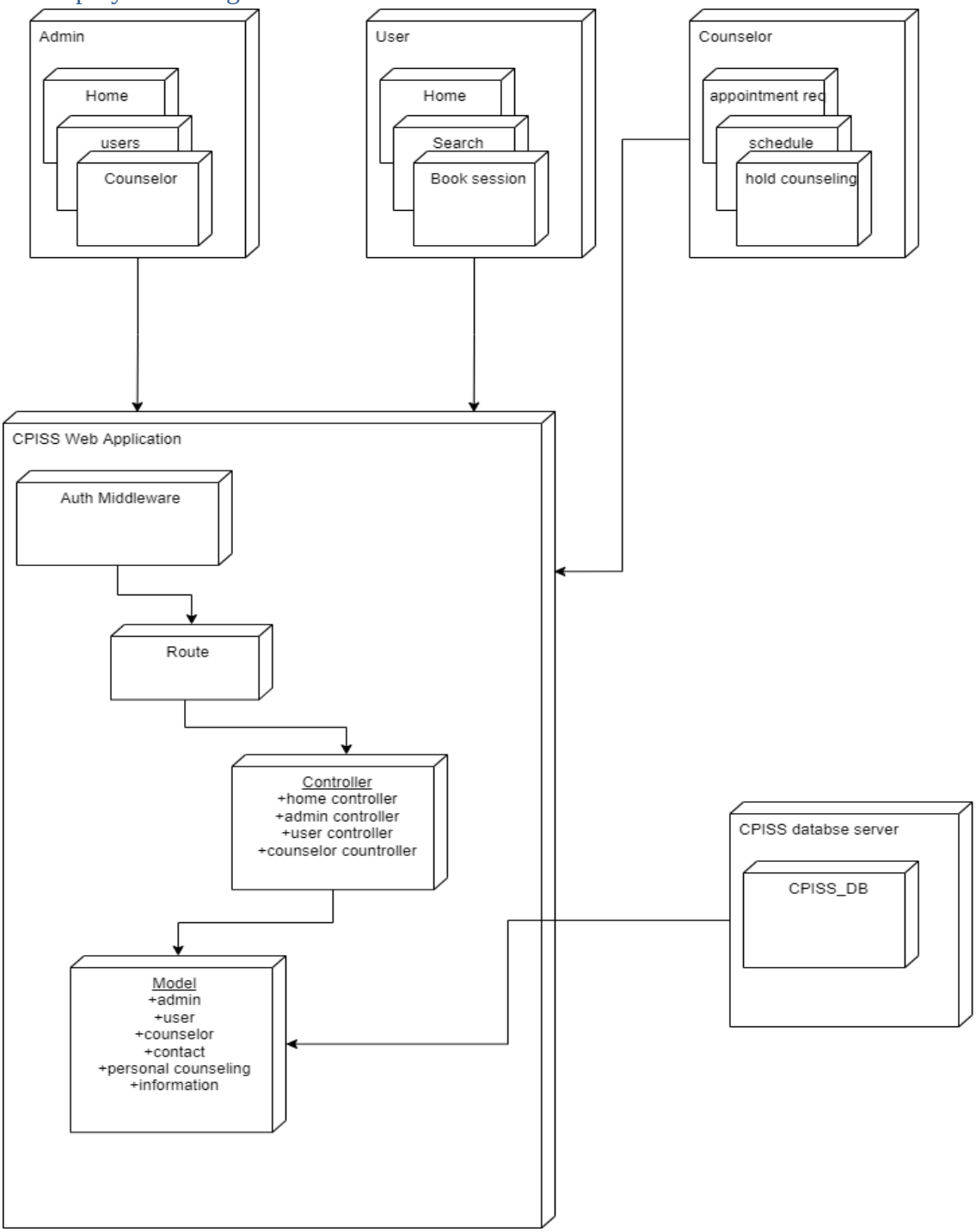


Figure 27: Deployment Diagram of CPISS

9.8 System Interface Design

Home page Interface Design

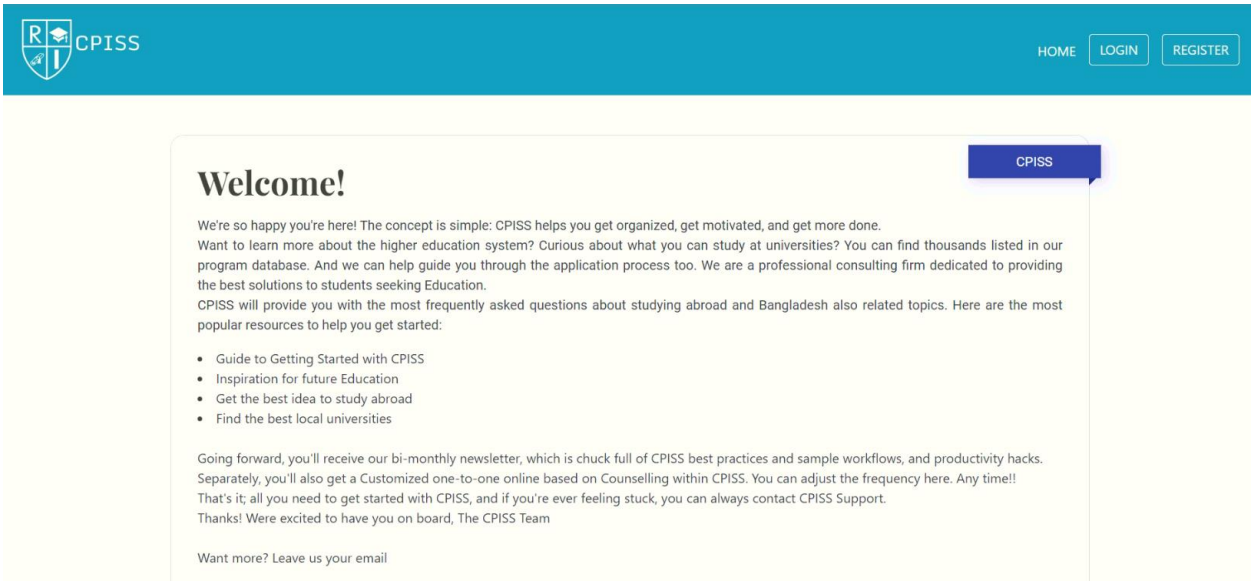


Figure 28: Interface design home page

Complain/Comment Box Page interface

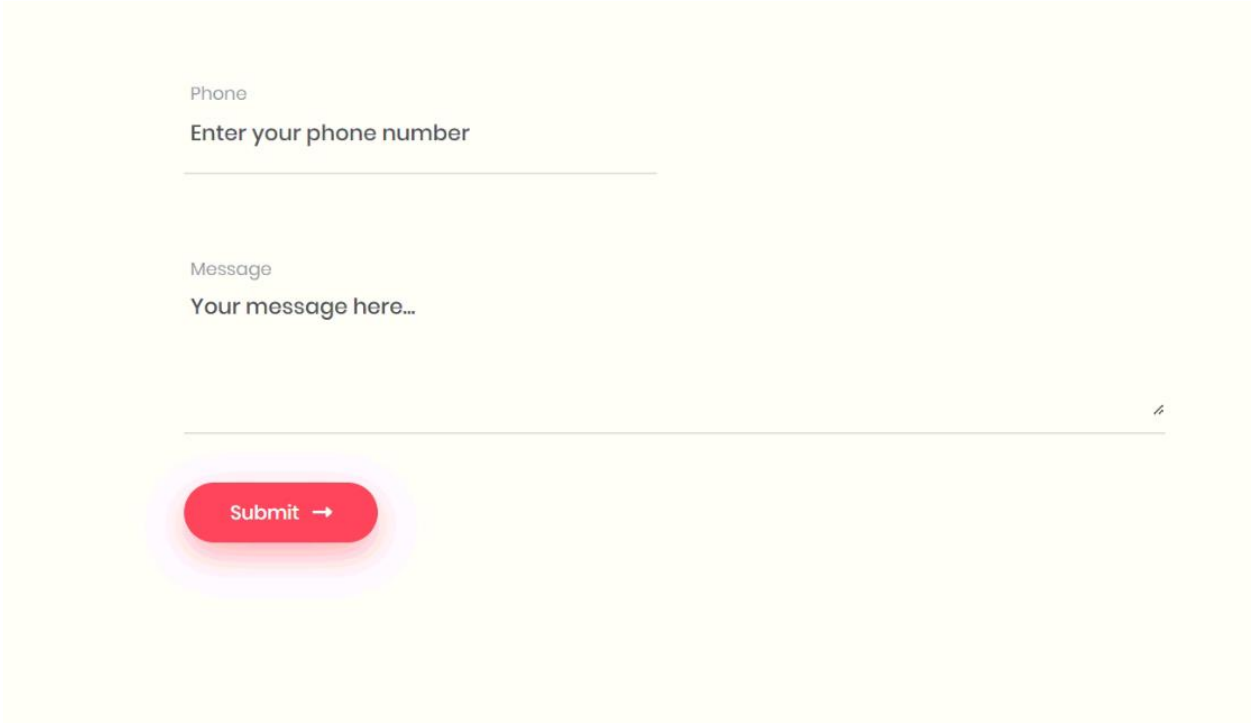


Figure 29: Contact Page interface

Contact Box Answer or feedback Page interface

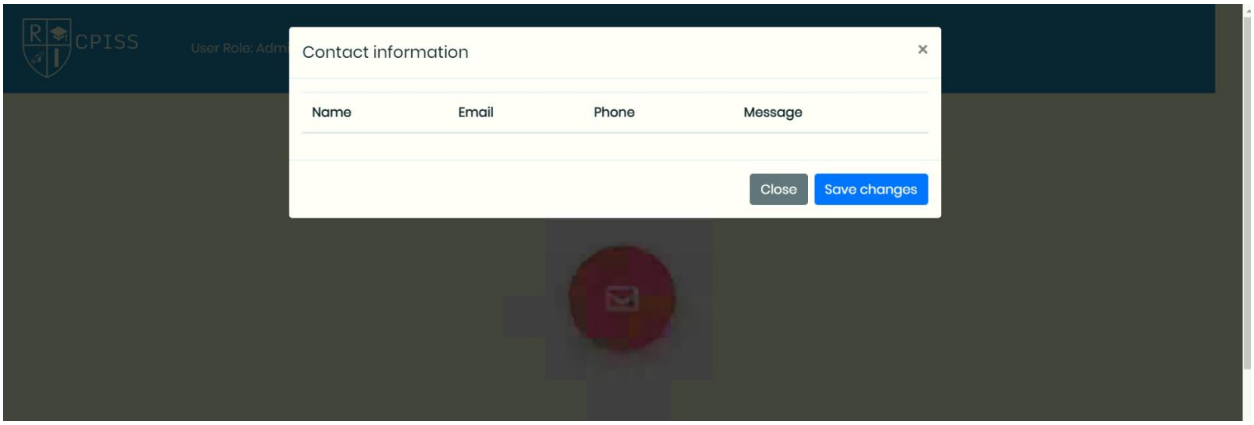
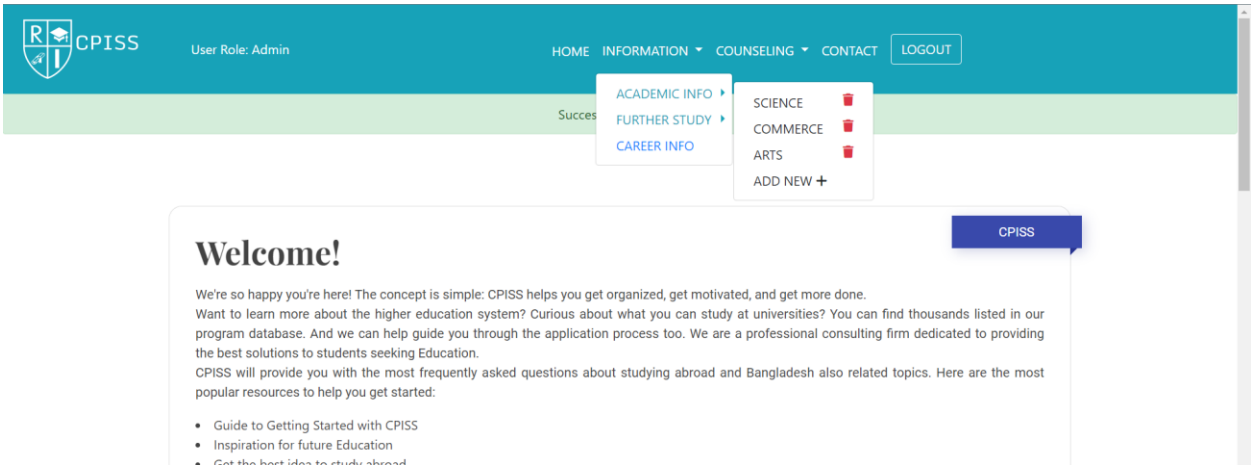


Figure 30: Contact Box Answer or feedback Page interface

Information Page Interface



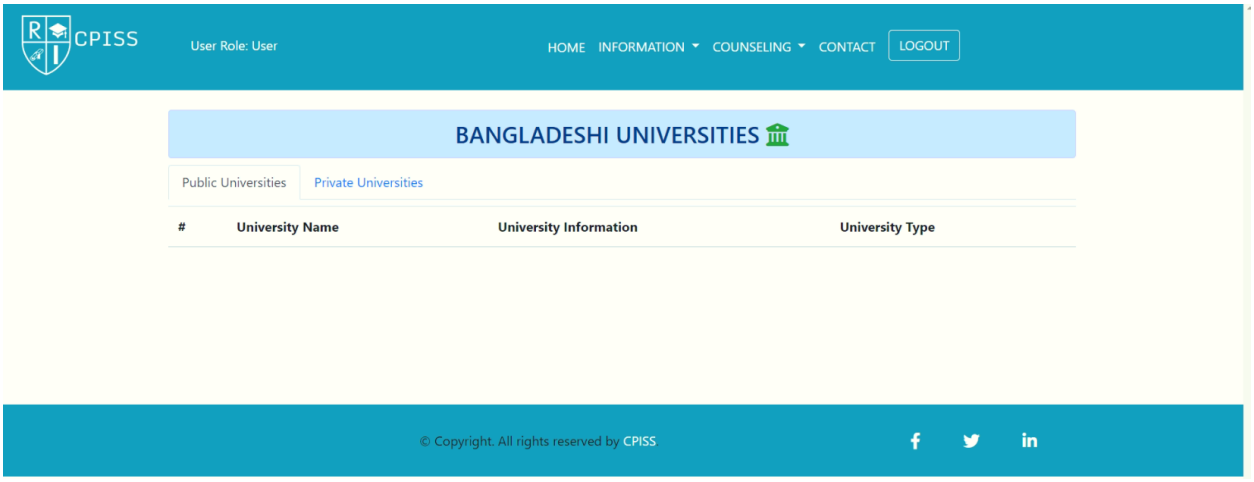
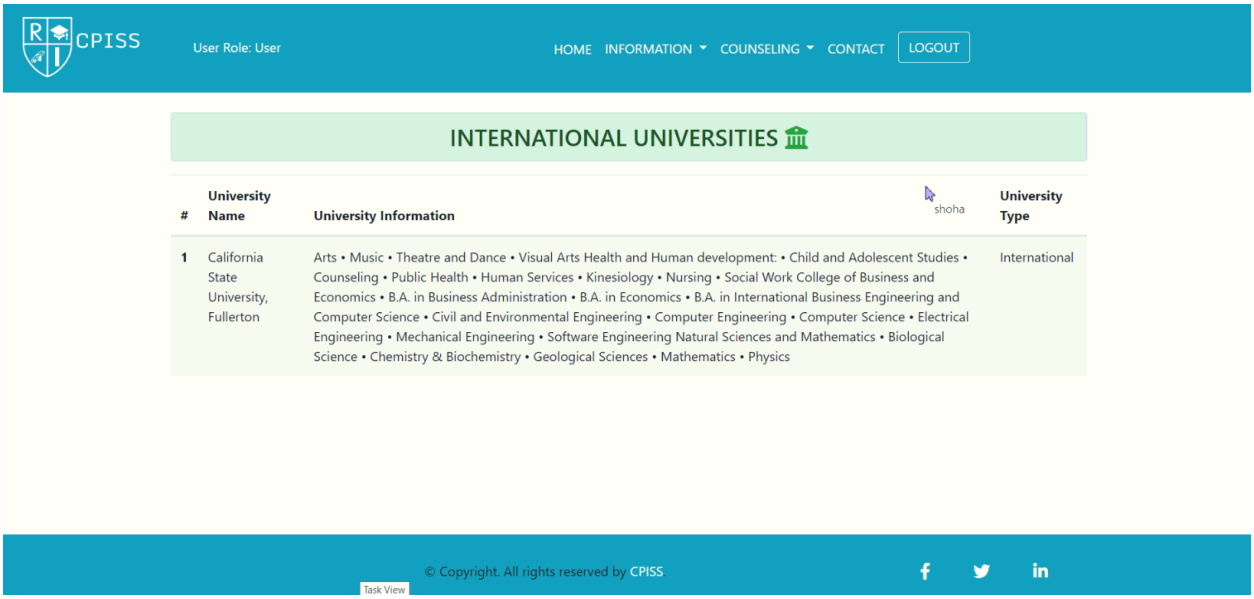


Figure 31: Information Page Interface



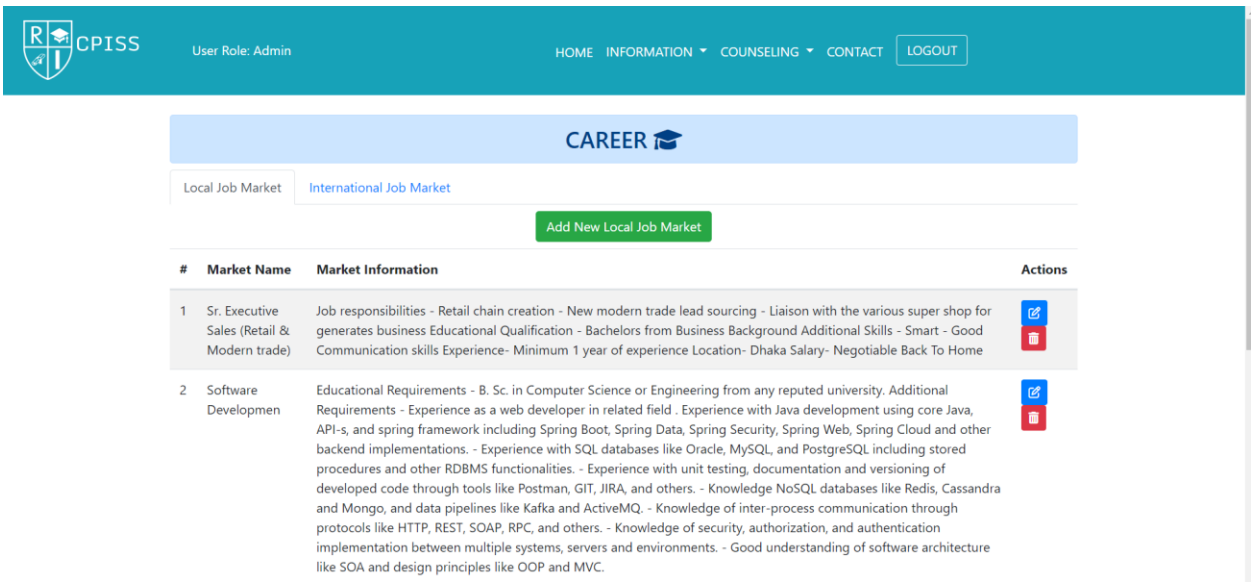
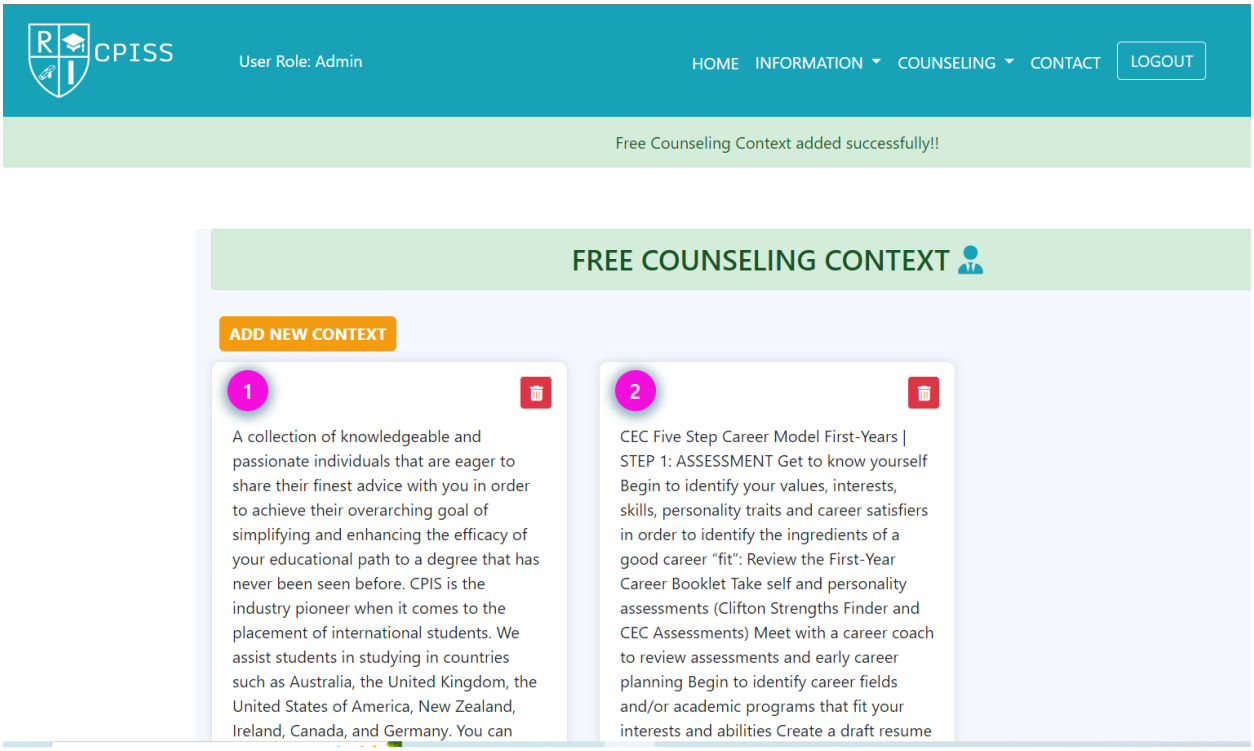


Figure 32: Information Page Interface

Counseling Page Interface



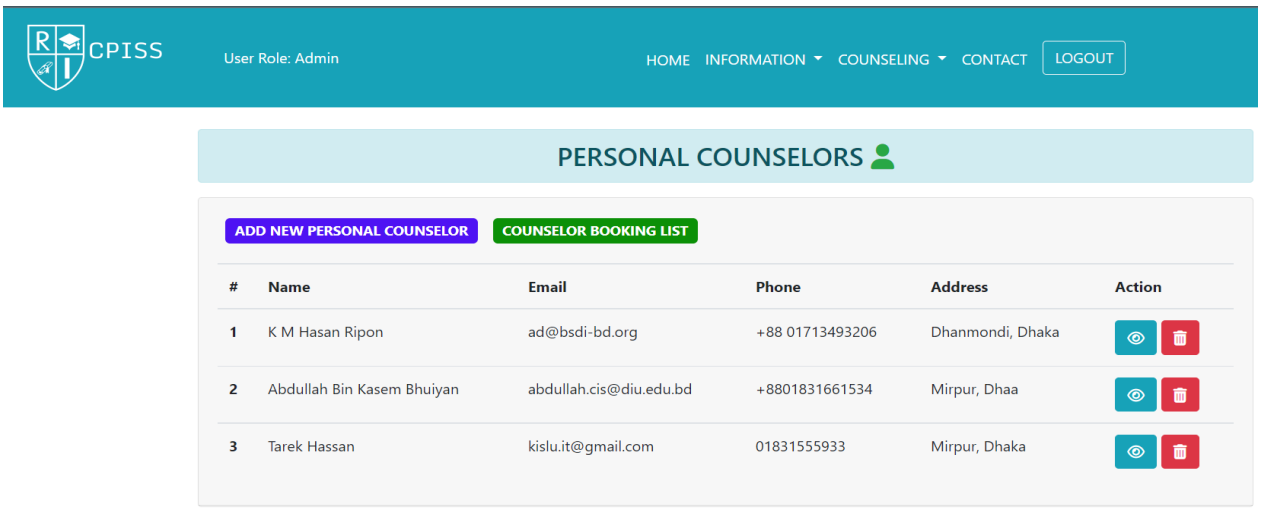


Figure 33: Information Page Interface

Counselor Information Interface

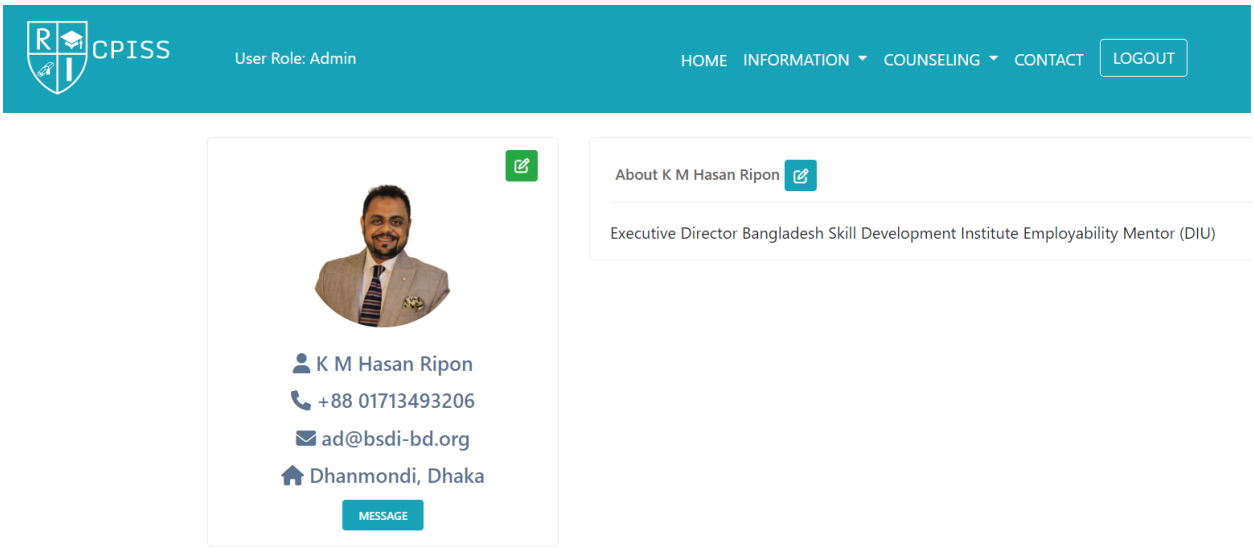


Figure 34: Information Page Interface

Counselor Booking Interface

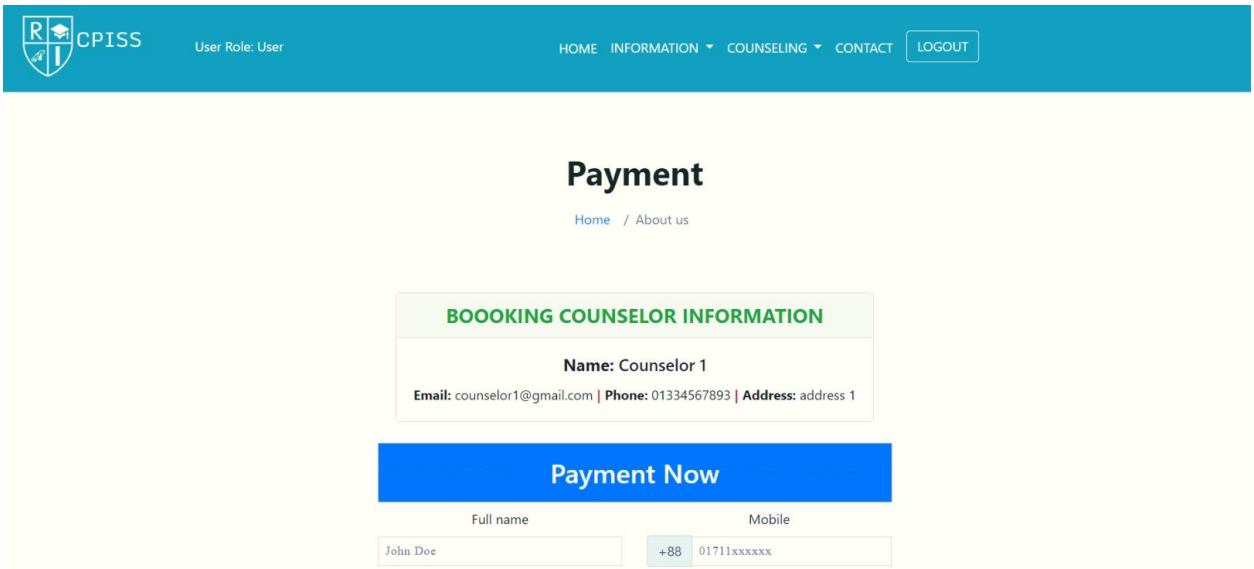


Figure 35: Information Page Interface

Chapter 10 – Deployment

10.1 Core Module Sample:

As a front-end developer, I used HTML5, CSS, Bootstrap, JavaScript, and jQuery, and as a back-end developer, I used MySQL as the database administration system, and PHP Laravel for back-end development. The following relevant part coding samples are provided here-

resources > views > layouts > others > home > card.blade.php

```
<div class="section_our_solution mt-5">
    <div class="row">
        <div class="col-lg-12 col-md-12 col-sm-12">
            <div class="our_solution_category">
                <div class="solution_cards_box">
                    <div class="solution_card">
                        <div class="hover_color_bubble"></div>
                        <div class="so_top_icon">
                            <img src="{{asset('img/icon/admin.png')}}" />
                        </div>
                        <div class="solu_title">
                            <h3>Admin</h3>
                        </div>
                        <div class="solu_description">
                            <p>
                                The website has only one admin access.
                                An admin is allowed to do all the work on the website.
                            </p>
                        </div>
                    </div>
                    <div class="solution_card">
                        <div class="hover_color_bubble"></div>
                        <div class="so_top_icon">
                            <img src="{{asset('img/icon/counselor.gif')}}" />
                        </div>
                        <div class="solu_title">
                            <h3>Counselors</h3>
                        </div>
                        <div class="solu_description">
                            <p>
                                About Counselor
                            </p>
                            <button type="button" class="read_more_btn">{{$counselors->count()}}</button>
                        </div>
                    </div>
                </div>
                <!--  -->
                <div class="solution_cards_box sol_card_top_3">
```

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loginHeader.blade.php

resources > views > layouts > others > loginHeader.blade.php

```
<nav class="navbar navbar-expand-lg navbar-light text-white h-25" style=" background-color: #17A2B8">
    <a class="navbar-brand" href="#">
        <img src="{{asset('img/logo.png')}}" width="80%" height="40%" class="d-inline-block align-top" alt="">
    </a>
    <div>User Role: <span class="text-capitalize">
            @if(Session::get('user')->getRoleNames()[0] == 'normal_user')
            User
            @else
            {{Session::get('user')->getRoleNames()[0]}}
            @endif
        </span>
    </div>
    <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarTogglerDemo01"
        aria-controls="navbarTogglerDemo01" aria-expanded="false" aria-label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse text-uppercase" id="navbarTogglerDemo01">
        <ul class="navbar-nav ml-auto">
            <li class="nav-item">
                <a class="nav-link text-white mt-1" href="{{route('dashboard.index')}}">Home</a>
            </li>
        </ul>
        <ul class="navbar-nav mr-auto mt-2 mt-lg-0">
            <li class="nav-item dropdown">
                <a class="nav-link dropdown-toggle text-white mt-2" href="#" id="navbarDropdownMenuLink"
                    data-toggle="dropdown" aria-haspopup="true" aria-expanded="false">
                    Information
                </a>
                <ul class="dropdown-menu" aria-labelledby="navbarDropdownMenuLink">
                    <li class="dropdown-submenu"><a class="dropdown-item dropdown-toggle text-info btn">Academic
                            Info</a>
                        <ul class="dropdown-menu">
                            @if($academicInfos)
                            @foreach ($academicInfos as $academicSubInfo)
                            <li class="d-flex">
                                <a class="dropdown-item"
                                    href="{{route('academicSubmenu.index',$academicSubInfo->id)}}">{{$academicSubInfo->submenu_name}}</a>
                                <a href="{{route('academicSubmenu.delete',$academicSubInfo->id)}}">
```

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Figure 36: Home

resources > views > auth > login.blade.php

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

<head>
    <title>User Login</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="icon" type="image/png" href="{{ asset('login/images/icons/favicon.ico') }}" />
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/bootstrap/css/bootstrap.min.css') }}">
    <link rel="stylesheet" type="text/css"
        href="{{ asset('login/fonts/font-awesome-4.7.0/css/font-awesome.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/fonts/Linearicons-Free-v1.0.0/icon-font.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/animate/animate.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/css-hamburgers/hamburgers.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/select2/select2.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/css/util.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/css/main.css') }}">
</head>

<body>

    <div class="limiter">
        @if (Session::has('message'))
        <div class="text-center alert alert-{{ Session::get('class') }}">
            {{ Session::get('message') }}
        </div>
        @endif
        <div class="container-login100">
            <div class="wrap-login100">
                <div class="login100-pic js-tilt" data-tilt>
                    <img src="{{asset('images/login.gif')}}" alt="IMG">
                </div>

                <form class="login100-form validate-form" method="POST" action="{{route('user.login.submit')}}">
                    @csrf
                    <span class="login100-form-title">
                        User Login
                    </span>
```

Ln 1, Col 1 Spaces: 4 UTF-8 LF PHP Go Live

resources > views > auth > register.blade.php

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

<head>
    <title>New User Account</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!--===============================================================================================-->
    {{-- asset --}}
    <link rel="icon" type="image/png" href="{{ asset('login/images/icons/favicon.ico') }}" />
    <!--===============================================================================================-->
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/bootstrap/css/bootstrap.min.css') }}">
    <!--===============================================================================================-->
    <link rel="stylesheet" type="text/css"
        href="{{ asset('login/fonts/font-awesome-4.7.0/css/font-awesome.min.css') }}">
    <!--===============================================================================================-->
    <link rel="stylesheet" type="text/css" href="{{ asset('login/fonts/Linearicons-Free-v1.0.0/icon-font.min.css') }}">
    <!--===============================================================================================-->
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/animate/animate.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/css-hamburgers/hamburgers.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/vendor/select2/select2.min.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/css/util.css') }}">
    <link rel="stylesheet" type="text/css" href="{{ asset('login/css/main.css') }}">
    <!--===============================================================================================-->
</head>

<body>

    <div class="limiter">
        @if (Session::has('message'))
        <div class="text-center alert alert-{{ Session::get('class') }}">
            {{ Session::get('message') }}
        </div>
        @endif
        <div class="container-login100">
            <div class="wrap-login100">
                <div class="login100-pic js-tilt" data-tilt>
                    <img src="{{asset('images/reg.gif')}}" width="150%" alt="IMG">
```

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Figure 37: Login/Registration

resources > views > academicInfo > createNewDetailsModel.blade.php

```
<div class="modal fade" id="addDetailsContextModal" tabindex="-1" role="dialog"
    aria-labelledby="addDetailsContextModalTitle" aria-hidden="true">
    <div class="modal-dialog modal-dialog-centered" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title" id="addDetailsContextModalTitle">Add New Context Information</h5>
                <button type="button" class="close" data-dismiss="modal" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
            <form action="{{route('academicSubmenu.detailsStore')}}" method="POST">
                @csrf
                <div class="modal-body">
                    <div class="form-group d-none">
                        <input name="academicInfoID" value={{$academicInfo->id}}>
                    </div>
                    <div class="form-group">
                        <label for="academicInfoDetails">{{$academicInfo->submenu_name}} Add New</label>
                        <input type="text" class="form-control" id="academicInfoDetails" name="academicInfoDetails"
                            placeholder="Enter Context Information">
                    </div>
                </div>
                <div class="modal-footer">
                    <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
                    <button type="submit" class="btn btn-primary">Save changes</button>
                </div>
            </form>
        </div>
    </div>
</div>
```

Ln 1, Col 1 Spaces: 4 UTF-8 LF PHP Go Live

resources > views > academicInfo > details.blade.php

```
    .card-header {
        display: flex;
        -ms-flex-align: start;
        align-items: flex-start;
        -ms-flex-pack: justify;
        justify-content: space-between;
    }
</style>
@endsection
@section('content')
<div class="container bodyOfContext">
    <div class="alert alert-success text-center h3 text-uppercase" role="alert">
        {{$academicInfo->submenu_name}} <i class="fa fa-question-circle text-info" aria-hidden="true"></i>
    </div>

    <button type="button" class="addNewContextBtn" data-toggle="modal" data-target="#addDetailsContextModal">
        Add New Info
    </button>
    <div class="row">
        @foreach ($academicSubInfos as $academicSubInfo)
        <div class="col-lg-4">
            <div class="card card-margin">
                <div class="card-header no-border">
                    <h5 class="card-title">
                        <div class="circle mt-2">
                            <span class="circle__content" id="badge-color-2">{{$loop->index+1}}</span>
                        </div>
                    </h5>
                    <a href="{{route('academicSubmenu.detailsDelete',$academicSubInfo->id)}}">
                    @if(Session::get('user')->getRoleNames()[0] == 'admin')
                    <span class="btn btn-sm btn-danger">
                            <i class=" fa fa-trash"></i>
                        </span>
                    @endif

                    </a>
```

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Figure 38: Information

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resources > views > counseling > personalCounselor > bookingListIndex.blade.php

```php
</style>
@endsection
@section('content')
<div class="container">
    <div class="row justify-content-center">
        <div class="alert alert-info m-auto text-center h3 text-uppercase" role="alert">
            Personal Counselor Booking List <i class="fa fa-user text-success" aria-hidden="true"></i>
        </div>
        {{-- card --}}
        <div class="col-md-12">
            <div class="card">
                <div class="card-body">
                    <table class="table table">
                        <thead>
                            <tr>
                                <th scope="col">#</th>
                                <th scope="col">Counselor Name</th>
                                <th scope="col">Booking User name</th>
                                <th scope="col">Booking Date/Time</th>
                                <th scope="col">Payment</th>
                                <th scope="col">Payment <br> Transaction ID</th>
                                <th scope="col">Booking Status</th>
                                <th scope="col">Action</th>
                            </tr>
                        </thead>
                        <tbody>
                            @foreach ($bookingCounselors as $bookingCounselor)
                            @if(Session::get('user')->getRoleNames()[0] == 'admin')
                            @include('counseling.personalCounselor.roleBasedViewList.forAdmin')
                            @elseif (Session::get('user')->getRoleNames()[0] == 'counselor')
                            @include('counseling.personalCounselor.roleBasedViewList.forCounselor')
                            @else
                            @include('counseling.personalCounselor.roleBasedViewList.forNormalUser')
                            @endif
                            @endforeach
                        </tbody>
                    </table>
```

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resources > views > counseling > personalCounselor > createNewPersonalCounselorModel.blade.php

```php
<div class="modal fade" id="addNewPersonalCounselor" tabindex="-1" role="dialog"
    aria-labelledby="addNewPersonalCounselorTitle" aria-hidden="true">
    <div class="modal-dialog modal-dialog-centered" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title" id="addNewPersonalCounselorTitle">Add New Personal Counselor</h5>
                <button type="button" class="close" data-dismiss="modal" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
            <form action="{{ route('personal_counselor.store') }}" method="POST">
                @csrf
                <div class="modal-body">
                    <div class="form-group">
                        <label for="name">Name <span class="text-danger">*</span></label>
                        <input type="text" class="form-control" id="name" name="name" placeholder="Enter Counselor Name"
                            required>
                    </div>
                    <div class="form-group">
                        <label for="email">Email <span class="text-danger">*</span></label>
                        <input type="text" class="form-control" id="email" name="email"
                            placeholder="Enter Counselor Email" required>
                    </div>
                    <div class="form-group">
                        <label for="phone">Phone <span class="text-danger">*</span></label>
                        <input type="text" class="form-control" id="phone" name="phone"
                            placeholder="Enter Counselor Phone" required>
                    </div>
                    <div class="form-group">
                        <label for="address">Address <span class="text-danger">*</span></label>
                        <textarea class="form-control" id="address" name="address" rows="3"
                            placeholder="Enter Counselor Address" required></textarea>
                    </div>
                    <div class="form-group">
                        <label for="password">Password <span class="text-danger">*</span></label>
                        <input type="password" class="form-control" id="password" name="password"
                            placeholder="Enter Counselor Password" required>
                    </div>
```

Ln 1, Col 1 Spaces: 4 UTF-8 LF PHP Go Live

```
resources > views > exampleHosted.blade.php
<!doctype html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="SSLCommerz">
    <title>Example - Hosted Checkout | SSLCommerz</title>

    <!-- Bootstrap core CSS -->
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
          integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">

    <style>
        .bd-placeholder-img {
            font-size: 1.125rem;
            text-anchor: middle;
            -webkit-user-select: none;
            -moz-user-select: none;
            -ms-user-select: none;
            user-select: none;
        }

        @media (min-width: 768px) {
            .bd-placeholder-img-lg {
                font-size: 3.5rem;
            }
        }
    </style>
</head>
<body class="bg-light">
<div class="container">
    <div class="py-5 text-center">
        <h2>Hosted Payment - SSLCommerz</h2>
        <p class="lead">Below is an example form built entirely with Bootstrap's form controls. We have provided this sample form for understanding Hosted Checkout Paymen
    </div>

    <div class="row">
```

Figure 39: Counseling

```
resources > views > admin > contact > contactInfo.blade.php
<!-- Modal -->
<div class="modal fade" id="contactInfoModal" tabindex="-1" role="dialog" aria-labelledby="contactInfoModalLabel"
    aria-hidden="true">
    <div class="modal-dialog modal-lg" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title" id="contactInfoModalLabel">Contact information</h5>
                <button type="button" class="close" data-dismiss="modal" aria-label="Close">
                    <span aria-hidden="true">&times;</span>
                </button>
            </div>
            <div class="modal-body">
                <table class="table table-striped">
                    <thead>
                        <tr>
                            <th scope="col">Name</th>
                            <th scope="col">Email</th>
                            <th scope="col">Phone</th>
                            <th scope="col">Message</th>
                        </tr>
                    </thead>
                    <tbody>
                        @foreach ($contacts as $contact )
                        <tr>
                            <td>{{ $contact->name}}</td>
                            <td>{{ $contact->email}}</td>
                            <td>{{ $contact->phone}}</td>
                            <td width="70%">{{ $contact->message}}</td>
                        </tr>
                        @endforeach
                    </tbody>
                </table>
            </div>
            <div class="modal-footer">
                <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
                <button type="button" class="btn btn-primary">Save changes</button>
            </div>
        </div>
```

Figure 40: Contact

10.2 Possible Problem Breakdown

By following DSDM methodology to develop the proposed system easily and efficiently the project was broken down into small tasks. The possible breakdown that was made during development of the project are as follows:

- ✓ Design of the database and analysis,
- ✓ administration panel,
- ✓ user dashboards,
- ✓ counselor dashboards,
- ✓ payment system

Analysis and Database Design

- Recognize and conclude the requirements
- Collect facts to work with
- Standardize the knowledge acquired
- Create an ERD and data warehouse
- Crafting the database schema
- Comply with the data dictionary's information

Admin Panel Development

- Planning the number of all required pages.
- For later usage, Create an admin manipulation system
- Invent a schedule manipulation system
- Mold user and counselor approval options.

.

User Dashboard Management

- Front-end design
- Registration and login system
- Appointment booking system

Counselor Dashboard Management

- Front-end design
- Registration and login system
- Appointment acceptance system
- Hold counseling session

Payment System

- Front-end design
- Online payment gateway
- Auto confirmation system

10.3 Prioritization while Developing the Solution

To In order to determine the capabilities of the system, we have previously ranked the criteria list in descending order of importance. It is now time to prioritize the jobs that need to be completed during the development phase. This is very crucial since, during random development, certain essential capabilities may be missed that need to be developed. The following is a list of the tasks for the development that have been prioritized:

- Analyze the database and design accordingly
- Development of new and clean database
- Ensuring login panel as well as registration panel for respective users.
- Implementing of any user panel
- Counselor panel implementation
- Payment System
- Development of the panel of Admin

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Chapter 11 – Testing

11.1 Test Plan Acceptance

The creation of a good software product must always include testing as one of its steps. During the phase of analysis, you should establish a testing strategy that can be used later to validate the functionality of the modules that have been produced. This setup requires consent not just from the user but also from the developer. The testing strategy for the project will make certain that the user's testing requirements and acceptance standards are satisfied. Testing may be broken down into two categories: functional testing and non-functional testing.

Functional Testing

Functional testing is divided into three types these are-

Unit Testing

- Form field verification for the input fields
- User authorization filtering
- Issue filtering
- Approved and organized counseling session

Module Testing

- Presenting the registration and login form without data
- Registration with null data.
- Proposing a form with proper data.

Integration Testing

- Login system with the valid certifications
- Successful counseling booking
- Fulfilling counseling sessions.

Non-functional testing

There are four types of non-functional testing that are going to be done in this project

Acceptance Testing

- Injunction response show
- Individual report updating.

Security Testing

- Role-wise dashboard and page admission
- Login tries with the invalid certification

Accessibility Testing

- User goodwill testing
- Color and contrast testing by a visually impaired user.

Usability Testing

- Admin panel testing
- Testing with the trainees

11.2 Test Case

Perform the tests, and the Tester must prepare some test cases after finalizing the approval plan.

Unit test- test case:

Unit test – test case:

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Test Case Name	Unit Test		
Test Class			
Test Description			
Data Source	Test Steps	Expected Result	Actual Result

Module Test – test case:

Test Case Name	Module Test		
Test Class			
Test Description			
Data Source	Test Steps	Expected Result	Actual Result

Integration Testing – test case:

Test Case Name	Integration Test		
Test Class			
Test Description			
Data Source	Test Steps	Expected Result	Actual Result

11.3 Unit Testing

Unit Test one

Test Case

Test Case Name	Unit Test		
Test Class	User Register Controller		
Test Description	User name validation for user registration		
Data Source	Test steps	Expected Result	Actual Result
User Entry	Filling all required fields except the donor name field. Submit the form	An error message should return that donor name must not be empty.	A message is showing that donor name is required for getting registered.

Figure 17:unit test one test case

User Registration

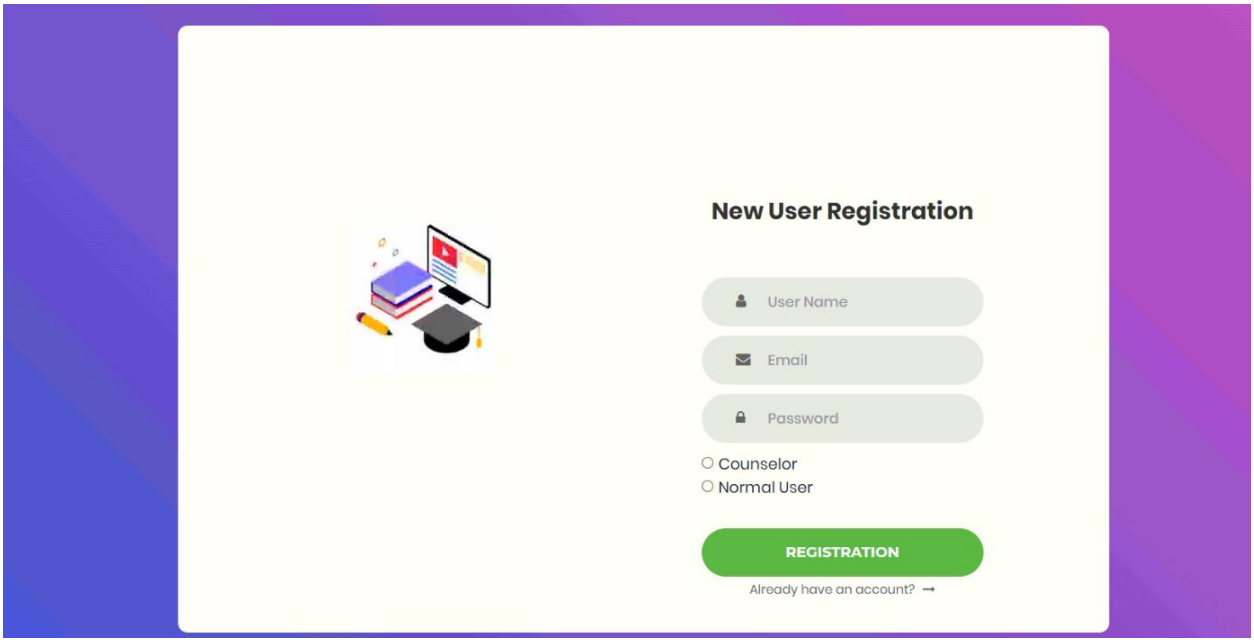


Figure 41: Unit test one result

Unit Test two

Test Case

Test Case Name	Unit Test		
Test Class	admin Controller		
Test Description	appointment		
Data Source	Test steps	Expected Result	Actual Result
User Entry	login as admin check the dashboard	Site stats should be displayed	The result is as expected showing all the details

Admin dashboard

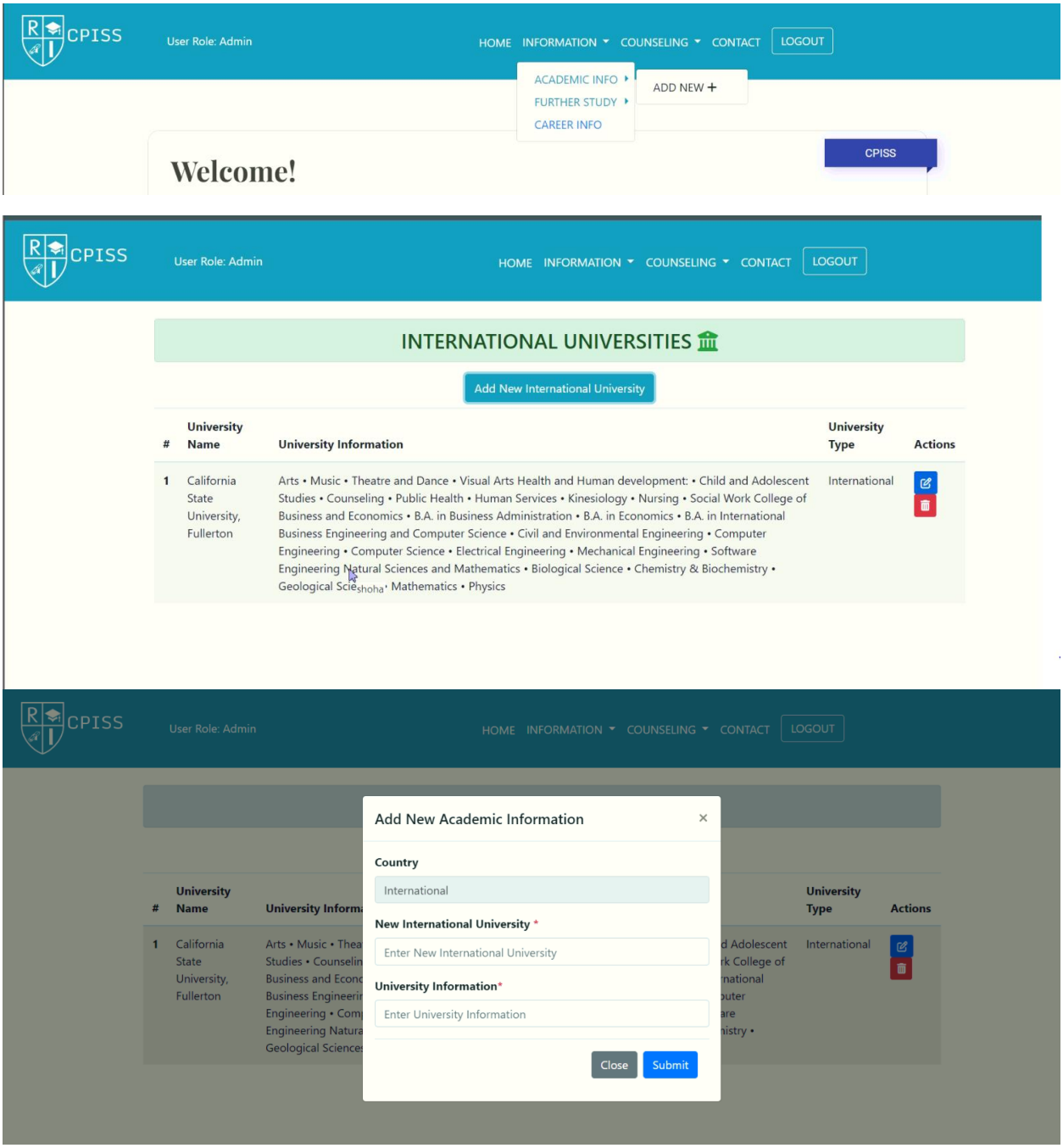


Figure 42: Unit Test two

11.4 Module Testing

Module Test one

Test Case

Test Case Name	Unit Test		
Test Class	User Register Controller		
Test Description	User name validation for user registration		
Data Source	Test steps	Expected Result	Actual Result
User Entry	Filling all required fields except the donor name field. Submit the form	An error message should return that donor name must not be empty.	A message is showing that donor name is required for getting registered.

User registration.

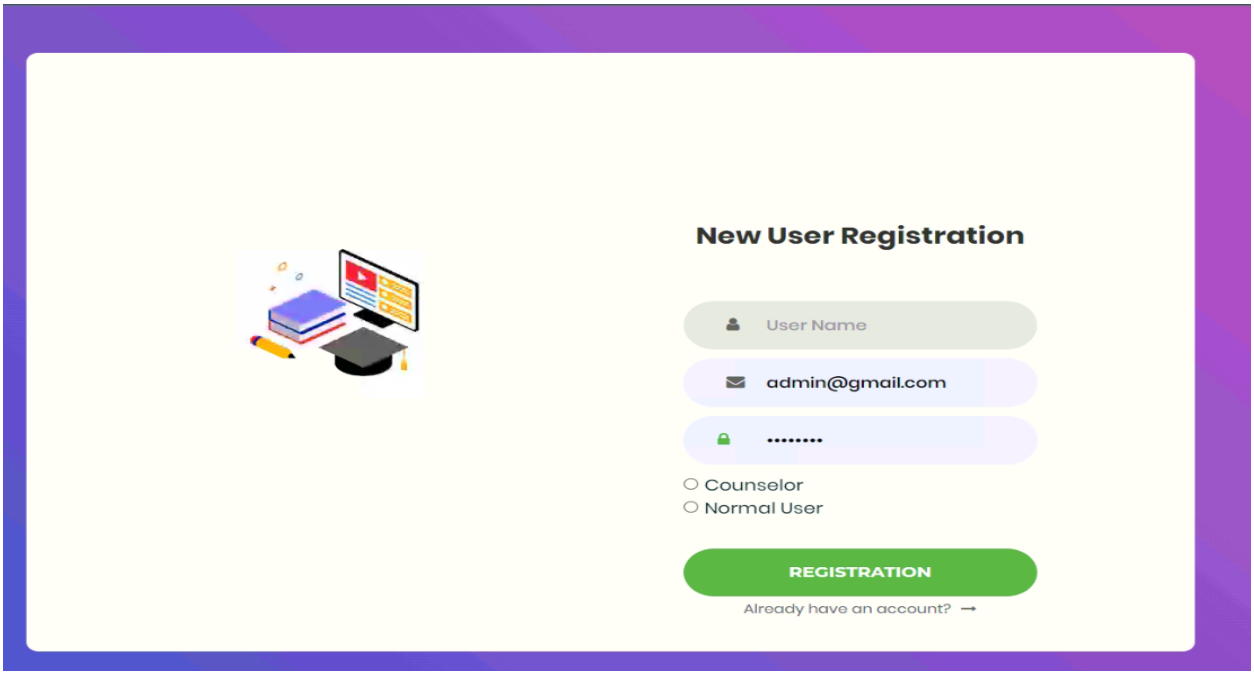


Figure 43: Module Test one

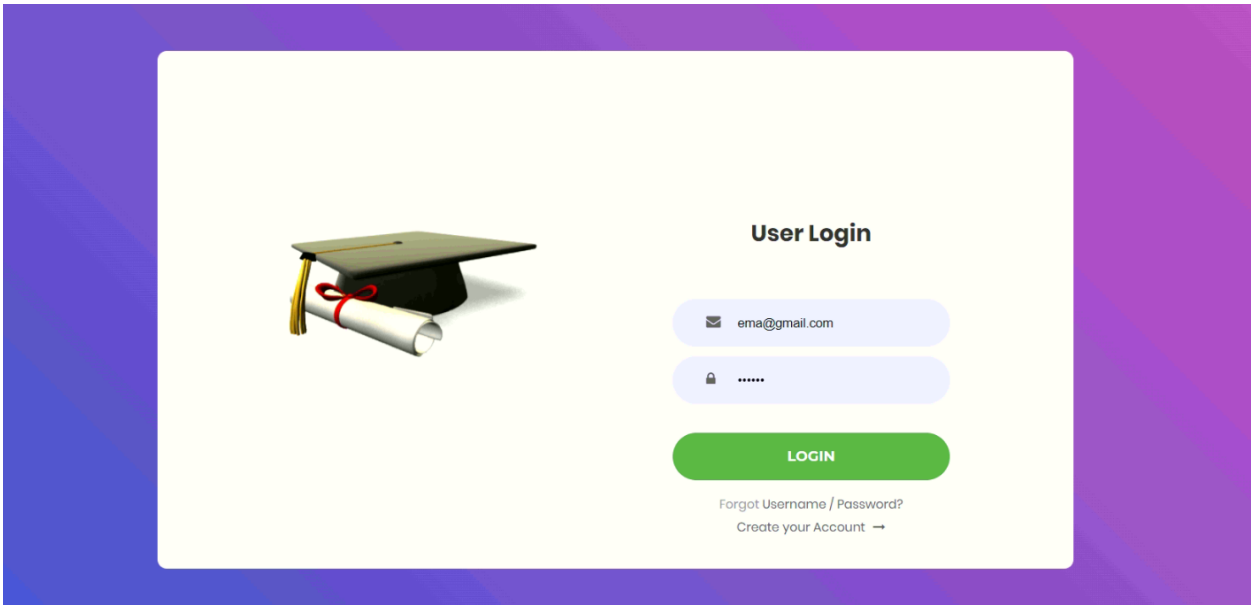
11.5 Integration Testing

Integration Test

Test Case

Test Case Name	Unit Test		
Test Class	1. Auth\Login Controller 2. Redirect If Authenticated Middleware		
Test Description	Successful login attempt and dashboard redirect.		
Data Source	Test steps	Expected Result	Actual Result
User Entry	1. go to login page 2. provide valid credentials 3. press on login	The user should be authenticated and login should successful and redirected to the user home.	It shows that email address is invalid.

Login system integration test



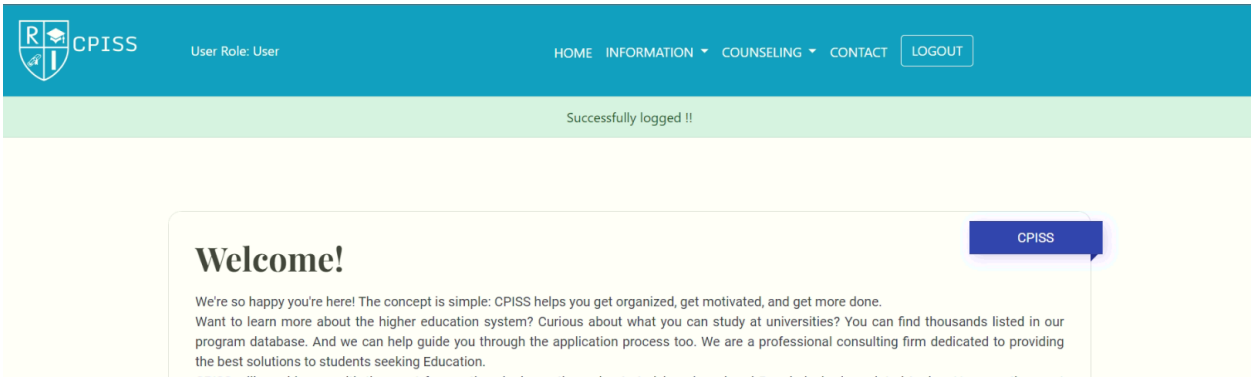


Figure 44: Integration Test

11.6 Acceptance Testing

Acceptance Test

Test Case

Test Case Name	**Acceptance test**		
Test Class	User login controller Admin dashboard		
Test Description	Successful login attempt and dashboard redirect.		
Data Source	Test steps	Expected Result	Actual Result
User Entry	1. Login as user/admin 2. provide valid credentials 3. press on login	Success message should show and redirect to home and dashboard	The result is as expected

11.7 Security Testing

Security Test

Test Case

Test Case Name	Security Test		
Test Class	Auth\Login Controller		
Test Description	Invalid login attempt security testing.		
Data Source	Test Steps	Expected Result	Actual Result
Blood Seeker	1. go to the login page 2. provide invalid credential and try to login.	Should not logged in and a message should show.	The result is as expected.

User security testing

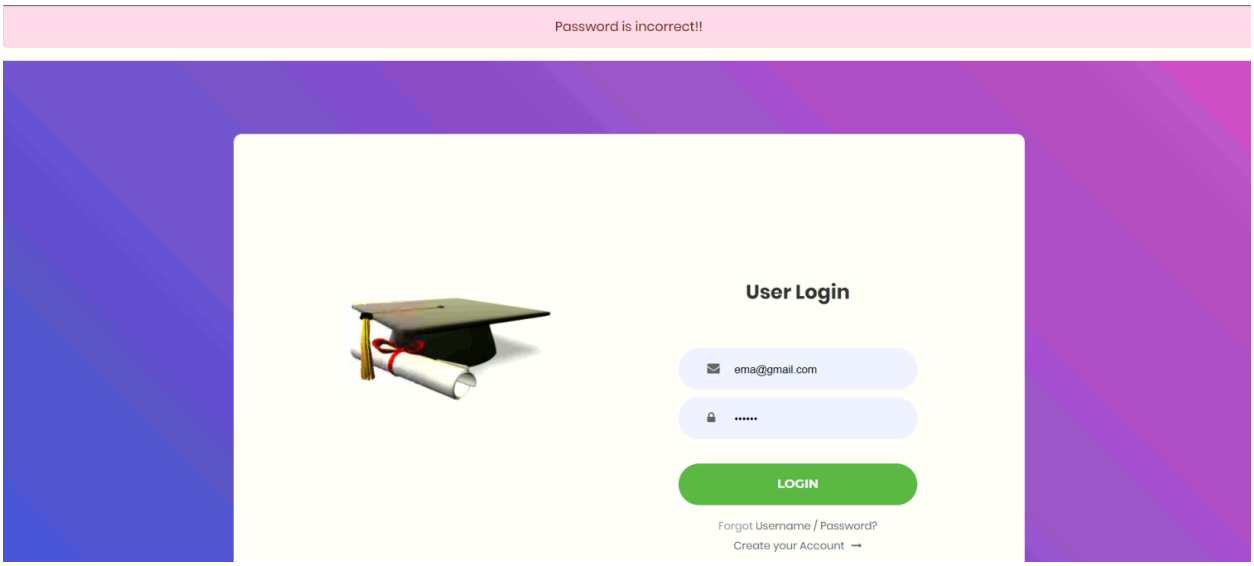


Figure 18: Security Testing

11.8 Accessibility Testing

Accessibility Test 1

Test Case

Test Case Name	Accessibility Test		
Test Class	Seeker Controller		
Test Description	Color & Contrast test by color blind seeker		
Data Source	Test Steps	Expected Result	Actual Result
Blood Seeker	A color-blind seeker used the system.	No problem occurs during the use.	The seeker dis not face any difficulties.

Table 17:Accessibility Testing

Accessibility Test 2

Test case

Test Case Name	Accessibility Test		
Test Class	Admin Controller		
Test Description	User friendliness testing		
Data Source	Test Steps	Expected Result	Actual Result
Admin	Giving a admin to use the system.	The system is user-friendly.	The result is expected.

Table 18:Accessibility Testing

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Chapter 12 – Implementation

12.1 Training

It is an essential step to train the user so they are familiar with the system. Once the system is fully functional the developer should ensure the users are enough skilled to be able to use basic functionalities. A description chart is given below of the training procedure:

SL	User	Training Scope	Time period	Comment
1	Users	Registering as user and adding interested topics and career path	2 hour	The users are learning the strategies consequently.
2	admin	Add a database for the user that is inquisitive in a specific career path	1 hour	Admin quickly comprehends the operations.

Table 19:User training

12.2 Implementation Scheme

Big Bang

The old system is powered down, and the new one is brought online simultaneously as part of the Big Bang methodology. This method is noticeably quicker than the others because it begins utilizing the improved platform as soon as the examination is over. The data transfer from the previous system may result in the loss of data and an unstable system. The method may lose data, and the new system may crash. It is carried out at a single location using the human resources available.

12.3 Scaling

As this was an academic study, no preparations were made to take application scalability into account.

12.4 Load Balancing

When a system is optimized in relation to the user's job completion on the system, this process is referred to as load balancing. The number of users hit is an indication of how effectively the system has been maintained and how many people are utilizing the system at the same time. Both terms, load balance and load equalization, refer to this concept. It distributes the workload over several servers in order to maintain the system's high rate of productivity. To handle the load balancing, a plan has to be created and implemented.

Chapter 13 – Critical Appraisal and Evaluation

13.1 Objectives could be met

The stated objectives are listed below.

- ✓ Enrollment system for users
- ✓ User and counselor management
- ✓ Scheduling management
- ✓ Online payment system

Objective-1

Achievement rate and others

All of the different user types were able to successfully register and log onto the system when it was built. Everyone who uses the system has access to the registration procedure, and after that

is complete, they may log in. Once the user has successfully logged in, they will be sent to their intended dashboard and will only be able to see pages that they are authorized to view. The project makes use of the Laravel official authentication system as a means of authenticating and authorizing users with access to the system. There is a hundred percent chance of success.

Objective-2

Achievement rate and others:

The user and counselor management system has been completely put into place, and it is operating normally. The user can look for the counselor by submitting a request to the system, and the system will inform those who are knowledgeable in the subject matter. Experts have the ability to manage their profiles and are alerted via email whenever a new counseling request is made. The request can be granted by him or her.

Objective-3

Achievement rate and others:

The scheduling management has been successfully completed. A user's and counselor's schedule can be managed according to their availability.

Objective-4

Achievement rate and others:

The payment system is implemented in the system. Users can use inline gateway to implement the system.

13.2 Objective that totally don't meet of touched

An objective that could not be touched totally is video conferencing on the system.

The reasons why it could not be touch

The most important factors in getting to start the target are the amount of time and the load on the server. Due to the fact that I am only an intermediate developer, adding the functionality would not have been easy.

What could have been done

In order to get in touch with the highlights, you will need to rearrange the time box, and this will give you more time to complete the component. Additionally, it needs to get experience in the building of the video conferencing module.

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Chapter 14 Lessons Learned

14.1 Pre-Project-Review-closing

In order to successfully construct a web-based application using CPISS, it is imperative that a set structure be adhered to at all times. The framework that had been specified included the filing of project proposals, the defense of project titles, development, and documentation.

14.2 What I have Learnt

I made it a point to familiarize myself with the many important components that go into constructing a building. It was necessary for me to work out how to deal with a structure in its many components, such as its structure, organization, and database regions. In addition, I have increased my project planning skills as well as my testing skills using black box, unit and acceptance, usability, and accessibility, all of which will be beneficial to me in my future professional endeavors. And it helps me become a better programmer by expanding my abilities and knowledge in areas like as designing application programming interfaces (APIs) that have appropriate authentication and security methods, as well as multi-level authentication and authorization. I have become proficient in the PHP Laravel framework. My participation in the endeavor in a way compelled me to educate myself on a great deal of fundamental knowledge that is essential to making improvements in one's life.

14.3 The problems I have faced

Throughout the course of the project's lifespan, I had to overcome a number of obstacles and difficulties. Because I adhered to the Agile DSDM approach, which encourages iterative development, I was forced to confront and solve issues in an iterative fashion. Such as an issue that arose in one time box that allowed for the resolution of another problem that arose in a different time box and task. Maintaining the schedule with both the users and the specialists was one of the primary challenges. Building multi-level authentication and API development in Laravel were both challenging tasks for me. Last but not least, the most challenging obstacle was sticking to the allotted timeframes.

14.4 What Solution Occurred

Whenever I have been confronted with a challenge, I have always endeavored to discover a way to overcome it. I relied on my superiors and also educated myself independently using a variety of web resources in order to find solutions to the challenges. I put forth a lot of effort to go through the challenges that I was up against.

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Chapter 15 – Conclusion

15.1 Summary of the Project

The vast majority of students in Bangladesh do not have a plan for their professional lives, and even when they do, it is often much too late to place any significant emphasis on it. Therefore, the CPISS project will assist kids who are interested in establishing their goals at an earlier age. It will guarantee that these children have the appropriate resources and guidance to establish their objectives in accordance with their passions and aspirations. The pupils will have an easier time accomplishing their objective with the elements that are included in the project. In order to create the project, the HTML, CSS, JavaScript, and jQuery markup languages, as well as the Laravel framework, were utilized. The papers contain each and every diagram and chart that is relevant to the topic at hand.

15.2 Goal of the project

The purpose of the project was to provide young people access to an information system that would assist them in making decisions about their future careers based on the paths they are most interested in pursuing. The primary objectives are as follows: 1. minimize the deficiencies of career guides within the educational system.

- ✓ See to it that the pupils have a well-thought-out strategy and an awareness of their future profession.
- ✓ Keep an eye on how far they've come.
- ✓ Encouraging students to select a profession that is a good fit for them and pushing them to do so

15.3 Success of the Project

Since the targets and objectives for the project's development have been achieved, the overall goal of the project's development has been accomplished. Users are able to submit problem requests, and counselors will use the system to identify the viable solutions and communicate those findings back to the users. The counselors in the system are able to investigate the history of the issue and decide whether or not the situation qualifies for assistance. The fact that the software meets all of the project's fundamental requirements contributes to its overall successful completion.

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15.4 What I have done in the documentation

From the very beginning of the project to the very conclusion of the documentation, I have detailed in the documentation all of the steps that must be taken in order to develop the project. performed time boxing, a large number of pictures, and other analyses, etc. In addition to this, many aims have been addressed in an appropriate manner throughout the text. This report contains all of the information that is required in order to successfully finish a project.

15.5 Value of the Project

There is no other project on the market that is comparable to this one. Accordingly, the worth of this initiative in the marketplace is contingent upon the manner in which it is going to be employed. The knowledge and expertise I have gained from producing this project in this amount of time will give me an advantage when applying for professional positions.

15.6 My Experience

Due to the fact that I had no prior experience in the development industry, I have picked up a wealth of information and experience. I have been presented with numerous difficulties, which have provided me with the opportunity to learn even more, as well as experience that will be essential to the success of my work. Gained experience in overseeing the entirety of the product creation process.

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