DIU STUDENT HELP PORTAL

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This Project Report is Presented to Fulfill the Requirements for the Bachelor of Science Degree in Computer Science and Engineering.

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APPROVAL

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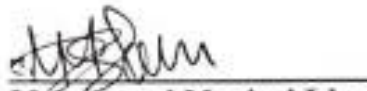
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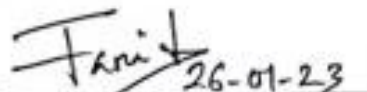Daffodil International University

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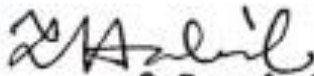Daffodil International University

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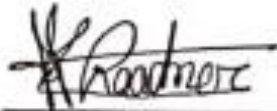United International University

DECLARATION

We hereby declare that this project **"DIU STUDENT HELP PORTAL"** has been done by us under the supervision of **Dr.Md.Tarek Habib, Associate Professor, Department of CSE,** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted anywhere else for any degree or diploma.

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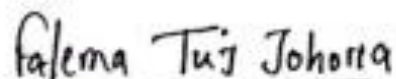Daffodil International University

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ABSTRACT

Students struggle a lot in their university life and they face various problems due to lack of faculty information, proper guidance, prefect system, losing project, finding supervisor, skill development course information, cv create etc in their different semester which we have already faced. So as a solution to their problems we wanted to do a project where students can find solutions to all their problems together. Our "Diu Student Help Portal" initiative is primarily focused on providing solutions to issues that students have while attending university. Our main objective is to simplify the university experience for students. Without these, we would want to create a system that automatically creates resumes to assist students in finding information about all faculties. The projects from all of their classes can stay together. Students can locate their courses for skill improvement. We'll create a system for student prefects that makes it easier for students to identify personal prefects for their classes. All notices will be distributed to students through the notice board. All pupils will find this approach to be very useful because it is more adaptable and simple to utilize. once they graduate, whenever they want. When seeking employment after graduation, individuals might display all of their completed projects as examples of their prior work. Students may readily seek support from a teacher when they need assistance with a task or further aid with a problem, and they can address that issue quickly. All of the students may benefit from this initiative, which will increase their academic flexibility. Our project 'Diu Student Help Portal' is a web-based application, we use html, css, javascript, and bootstrap use for front-end development on our project, and raw php for back-end development to make our website dynamic.

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CHAPTER 1
INTRODUCTION

1.1 Introduction

First of all, we have to know "What is Diu Student Help Portal"? Basically diu student help portal is a web portal that helps diu students to make their university life easier, more flexible & comfortable. Why is this necessary for students? Students require this since they encounter a variety of issues during their time in college but are unable to discuss or find solutions for them, such as learning how to create a professional resume. They complete their assignment but lost it after the semester ended, thus they are unable to display it at placement. Sometimes student prefects are needed to assist with a specific course or to resolve a difficulty in their project work. Students frequently experience difficulties obtaining information about courses and faculties, and they are unaware of the university-level skill development courses available to them. This approach will assist the student in learning about university courses to develop their skills. Our, students may keep all of their work in one location for use during their placement period. They will be able to create a polished resume. Prefects can assist them in resolving these problems. Our major goal is to find ways to make college life for students more convenient, flexible, and comfortable. Therefore, those problems can be resolved by this project.

1.2 Motivation for work

In our university life, Students face a variety of challenges during their academic careers, which encourages us to work on these projects. Without these, some students are unable to create their own resumes, students are unaware of university skill development courses that can help them develop a specific skill for their careers, and occasionally students encounter difficulties in obtaining course information and faculty information. In their final year, students face challenges when applying for internships or placements because they failed to save their university projects, which

prevents them from presenting those projects at the appropriate time and prevents them from receiving the placements. They thus experience considerable suffering. These elements all played a vital role to motivate us to complete this project.

1.3 Objectives

Our major objective is to resolve every problem and make University life for students more convenient, flexible, and comfortable. We are working on a solution that will assist students in finding employment, developing certain skills, and receiving assistance from prefects to deal with a variety of issues. After doing this task, After completing this project-

➢ Get an automated cv creation system.

➢ Develop a student prefect system.

➢ Students will be able to keep all the projects together.

➢ Help students to find all faculties information.

➢ Students can find their skill development courses.

We are working to create a system that will effectively assist all university students, making their transition to college life and job placement simpler.

1.4 Expected Outcomes

After completing this project we will develop a Proper Web Application for help Diu students. Which makes student's university life easier, flexible, and comfortable. As a result –

➢ A Proper Student Prefect System.

➢ Get an automated cv create system.

➢ Get all Courses details.

➢ Easily find skill development courses.

➢ Students can save their Projects in one place.

➢ Get all faculties information.

 When they got all these facilities their university journey will be much smoother.

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1.5 Business Policy

After this project is complete, we must figure out how to do business using this web application. We are unable to use the subscription model in our business since we want to assist students. We can sell the project to the university and request maintenance rights from them. As a result, they must pay us to alter or maintain the website. Without these, we may work with Diu Skill Development Institute to sell their courses on our website and collect sales commissions. Therefore, we may put that money toward research and development to improve the usability of our "Diu student Help Portal" System.

1.6 How the System will work ?

In our system, There are two categories of users in our system: administrators and students. But none of them can have access to it without an email from diu. The registration process is the first step before students may log in. The same login page may be used by both administrators and students. When a student logs in, they are sent to the student dashboard where they may customize their profile and access all the features. Students may obtain skill development classes, apply to be student prefects, and produce automated cvs. All projects may be saved here. When an admin logs in, they are sent to the admin dashboard where they may perform all of the admin-specific duties. They have access to the users. They have access to user information, faculty information, and skill development course additions. co-admins may be added by the admin. Students can access prefect functions once the admin has approved their requests by visiting their profiles. Our "Diu student Help Portal" system will function in this manner.

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1.7 Overview of Project Report

Our project report contents are divided into several chapters. Let's have a look at the chapters:

Chapter 1: In our first chapter we discuss the background information of our projects..

Chapter 2: We go into the history, analysis, and sustainability of our application, Here we also discuss our project's planning and schedules as well as why we chose it.

Chapter 3: Here we discuss our project's requirement specification.

Chapter 4: This chapter is basically focused on our website functionality design & how we construct our database.

Chapter 5: The topic of the chapter is to implement our database.

Chapter 6: This chapter focuses on front-end design & error-testing, testing results & reports.

Chapter 7: Here we show the outcome of our projects.

Chapter 8: In this chapter, we see the impact on students, the university environment, and the sustainability of our project.

Chapter 9: Lastly there is a conclusion.

CHAPTER 2
BACKGROUND

2.1 Introduction

This second chapter discusses how the system design will be applied in real life. Without them, we also discuss the preparatory work that must be done before the project can begin. Here, we also outline the objective of our project and how to deal with issues when they arise. We employ a variety of tools, including html, css, bootstrap, php, mysql, and others, to effectively accomplish our online project. The hardest aspect of our project was implementing a user-friendly design, making sure all the functionality worked without errors, and getting the data from the mysql database. Additionally, it is quite challenging to retrieve data from the appropriate data database and then re-enter the data into the same table. At times when we are implementing projects, we deal with a lot of unforeseen mistakes. When attempting to create a dynamic website, we frequently run into problems with backend development. These topics are all covered in this article, along with solutions to any problems. So that we may effectively finish our assignment without experiencing any problems.

2.2 Related Works

It is required that we do a system feasibility analysis prior to beginning a project. It is a comprehensive assessment that considers all of the significant elements that have a bearing on whether a project will be successful. We do a case study on Diu's current systems, such as the blc, student portal, One card, and PMIS, before beginning your project. We can see that blc is mostly an online learning environment where students from diu may take lessons about pandemic situations or other emergencies. Here, users may enroll in, take quizzes, see lecture slides and lecture videos, and access all the learning materials for the courses they have registered for. They can then control the actions relating to their account's results via the student portal. They may view their semester costs, enrolled courses, and semester outcomes here. Students may also get certificates and transcripts. However, Diu one card is one sort of payment gateway that has been integrated with ssl commerce. It enables students to pay their tuition online and

works to create a campus-wide cashless payment infrastructure. Finally, pmis supports students in their final defense. Students in their last year get instructions for their title defense, pre-defense, and final defense. Resources for their final defense project materials can also obtained here. But because our system genuinely works to make students' academic lives simpler, it will be completely distinct from all other systems currently in use. Students can create an automatic resume on our website. Knowing about industry- or job-focused university courses that build students' skills is beneficial. It encourages students to participate in gcpc, cpc, or skill-based training courses that expose them to a variety of skill development activities. They can also receive prefect assistance with any particular issues relating to a certain subject. Prefects will try to find best solutions to their issues. They may save all of their projects in one location and utilize those as examples of previous work. These characteristics will set our university initiative apart from the current diu systems. To successfully complete our project we are aware of every potential reason why our project can fail in the future. Additionally, it assists in the assessment of our project's risk management, risk tolerance and appetite. Our project will fail if our total risk tolerance level is large, therefore we must take steps to use it and reduce it to a minimum level. We must predefine all of the features for each user as our website has two different sorts of users. then, our project. As a result, the project's functions will be well-organized. Since students will be the site's primary audience. We must make sure that our user interface is clear and easy to use. We must make sure that our project outputs will match our project aim. That's the key component of successfully completing the project without any difficulties.

2.3 Goals of the Proposed System

In this part, we'll talk about the Goals of our project :

Goal 1: Solve the problems they are having in university life.
  - ➢ Build a proper prefect system that helps students on a particular problem or on a particular project.
  - ➢ Students can keep their all university projects in one place to show them the time of placement as their past work
  - ➢ Help students to find all faculties information.
  - ➢ Make a system that helps those students who are interested in research, Give proper information about supervisors who can help them with research.
  - ➢ Give proper guidelines for university courses and give them past mid and final questions for their practice

Goal 2:   Give proper information about skill development
  - ➢ Develop a proper system that helps students to know about cpc And gcpc skill development courses.
  - ➢ Encourage students to do skill jobs skill development courses which assist them in their job placements
  - ➢ Introduce them to various kinds of skill development activities

Goal 3:   Automated cv creating system
  - ➢ Make an automated cv creating system that helps the student to make various types of cvs like: Modern cv or Classic cv.

Goal 4: Improve interaction

  - ➢ It will help the student to improve their communication with faculty members
  - ➢ Improve their communication with alumni and prefect which helps them on their placements.

2.4 Difficulties of Implement the System

There are many different sorts of technical challenges we run across when designing a project. These obstacles could result in project delays or failure. Gathering information about faculties may be challenging. Without such, it would be challenging to create the prefect's features since many of them operate here quickly at the same time. For example, when students seek a prefect, the prefect receives a mail notice and may examine the student's profile while viewing the prefect's profile. Students will receive a message when they automatically approve the request. These features may create challenges for the project. Making the entire thing dynamic will be the hardest element of the endeavor. We must deal with the mysql database because of this. Where we fetch data from the database table after that if the user wants to update or make any change to the data it will resend the data to the database. The project's most difficult component will thus be this. Without it, there are several features in our project that have a wide range of potential errors. Therefore, if we want to finish our project effectively, we must ensure that we can address problems as they arise in a timely manner. Finding project risk scenarios and risk tolerance are therefore necessary. In order to mitigate project vulnerabilities, we must also ensure that our project risk tolerance is enough. Our overall risk rating should be at a minimal level so that our project will survive all kinds of risk scenarios. All of these things can ruin our whole project, So we need to take precautions that we can complete our project without any failure.

2.5 Project Planning and Scheduling

The most challenging part of project implementation is planning and scheduling. These two project management concepts are like two sides of the same coin. To manage a project, we need to plan and create timetables. The process of selecting efficient implementation models, procedures, and policies is known as project planning[1]. In order to execute a project on time, resources, tasks, and due dates are organized according to a schedule known as project scheduling[1]. The primary benefit of project scheduling is that it enables the project manager to keep an eye on activities, resources, and progress in real-time. Project planning, on the other hand, is based on resource management, risk management, a communication strategy, a project budget, a timetable,

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and the project's guiding documents[1]. A project manager completes each of these tasks. The project manager plans a robust & sustainable process to successfully complete the project.

2.6 Methodology

Our key objective is to create a robust and sustainable procedure that increases the effectiveness and efficiency of our online application. Therefore, we must select a model that works with our project. We chose the Iterative Waterfall approach for our project since the requirements are well-defined and there won't be any significant adjustments[15]. The Iterative Waterfall model takes less time since it is well-organized. This paradigm is simple to comprehend and use allowing us to concentrate on design and development. With these models, we can do continuous testing during the development process, allowing us to address errors as they arise. That is why we are employing an iterative waterfall strategy to construct this project. The phrases of the Waterfall model is given below:

- ➢ **Requirement Gathering and analysis**
- ➢ **System Design**
- ➢ **Implementation**
- ➢ **Integration and Testing**
- ➢ **Deployment of system**
- ➢ **Maintenance**

Now let's visualize the phrases of the waterfall model in Fig 2.6[15]
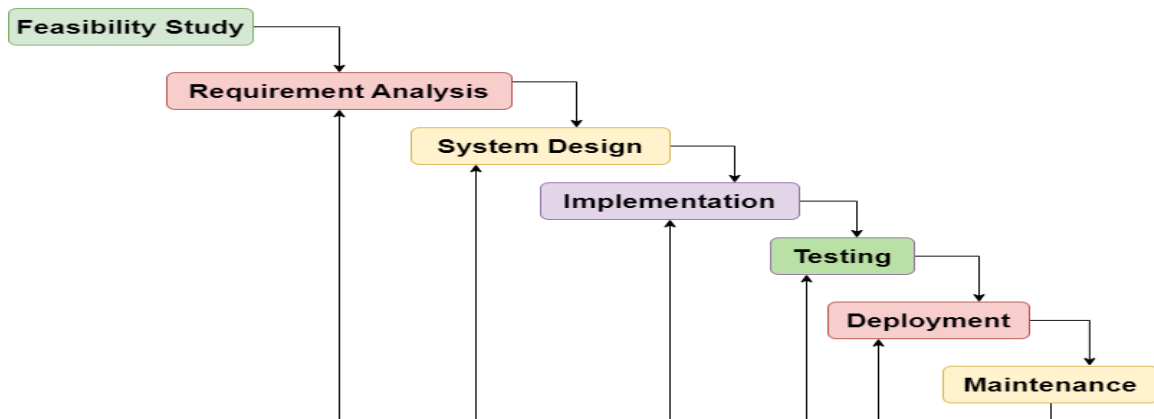
Figure 2.6: Iterative Waterfall Model

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2.7 Project Management Life Cycle

It is possible to successfully complete a project by using the project management life cycle technique. All the steps necessary to complete a project are described in this life cycle[22]. Without a project plan, we risk not accomplishing our project's objective. That's why the project management life cycle is crucial for this reason. There are five stages in the project management life cycle they are:

➢ **Project Initiation**

Here we define the goals and objectives of our project which are defined by the feasibility study[22].

➢ **Project Planning and design**

In this phase, we define the work breakdown structure and project methodology[22]. Project cost, design & quality all of these things are included there. Without these, we finalize our database design & Project front-end design also.

➢ **Project Executing**

In this phrase, we execute our actual work. The project Manager establishes efficient workflows and monitors the project implementation progress[22].

➢ **Monitoring and Controlling**

This phrase is performed during the execution stage which is performed by the project manager. Its project manager's responsibility is to ensure that project objectives and project outcomes are met. If any problem or error accrued project manager solves that issue[22].

➢ **Project Closure** This is the last phase of the project management life cycle. When our goal & objectives were met with the project outcome this phase happened. The final of this phase is to review the entire project & Complete a detailed report of every aspect[22].

Figure 2.7: Project Management Life Cycle

2.8 Project Execution Plan

After completing our feasibility test, We started our execution plan. The project execution plan gives proper documentation of a project, how the project will be executed & the time frame of each step. The following table 2.8 gives us an overview of starting to ending time frame of our project.

1	Name of the Task	Duration	Starting Date	Finishing Date
2	Planning	30 days	1/05/22	30/05/22
3	Designing	42 days	1/06/22	11/07/22
4	Coding	77 days	12/07/22	27/09/22
5	Testing	28 days	28/09/22	24/10/22
6	Delivery	21 days	25/10/22	14/11/22

Table 2.8: Project Execution Plan

2.9 Timeframe Representation

One of the most crucial aspects of developing a project is the timetable. because it specifies how much time we will spend on each activity. It assists us in determining when to begin particular duties and when to complete them[27]. The project will fail if we are unable to adhere to our time frame. Therefore, when we stick to our schedule, we may

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effectively finish our job. We utilize a grant chart, which is displayed in Table 2.9 to illustrate our timetable.

Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Planning																												
Designing																												
Coding																												
Testing																												
Delivery																												

Table 2.9: Timeframe Representation Gantt Chat

2.10 Risk Management

In order to ensure that we finish the project on time and meet our goals, risk management is the process of reducing project risk or business failure[2]. Project needs and complexity affect risk management factors. How to manage and mitigate a risk when it arises is a step in the planning process. We must perform a variety of tasks, some of which are listed here, to manage risk[2]. Those are given below-

- ➢ Identifying the existing threats.
- ➢ Assess the risk to identify the problem And find a proper solution.
- ➢ Find out the impact of each risk.
- ➢ Secure all user's information.
- ➢ Develop a preventive mechanism to reduce the risk.
- ➢ Give priority to reducing existing risks.
- ➢ A secure plan for contingency risk.

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CHAPTER 3
REQUIREMENTS SPECIFICATIONS

3.1 Requirement Analysis

When we are starting a project, we must first do a project requirement analysis. Because it plays a vital role to complete a project successfully. Without a requirement analysis, we might not be able to finish a project, which could lead to project failure[26]. Our user determines the project's eligibility requirements. We need to collect student requirements because we are developing the "Diu student Help Portal". Students will be the only user of our site. As a result, we conduct requirement analysis using the question-answering approach. Some question helps us to do a requirements analysis those questions are given below-

- ➢ If we develop an automated cv creation system, will you be benefited?
- ➢ Have you saved all your university projects to show at the time of job placements? If No then if we build this system, will you be benefited?
- ➢ Do you want an online prefect system to solve or discuss your university course's problem?
- ➢ Are you find your teacher's course details & research specialism in one place?
- ➢ Are you finding a skill development course? Is it helpful for you if you know about your university skill development course?
- ➢ If we build a website that contains an automated cv creation system, an online prefect system, finding skill development courses, get faculties course details & research specialism, and Keep university projects for placements and online notices. All these facilities in one place, is it helpful for you?
- ➢ Which type of Ui/Ux design is suitable for the " Diu student help portal"?

3.2 Hardware Requirement Specification

A well-known collection of the necessary hardware that is defined for executing an operating system is referred to as a "hard specification"[8]. The hardware compatibility list is known as hcl. This is the first stage in the development of a system. Our required hardware's are-

- ➢ Processor: Minimum Core i3 processor
- ➢ Mother Board
- ➢ Monitor 1024* 764
- ➢ Ram : 8Gb
- ➢ HDD : 1 TB
- ➢ SSD : 256GB

3.3 Software Specification

The software requirement specification is a basic layout of the software. Which contains a comprehensive explanation of how a system will work. The software's are the backbone of any operating system. Without software, it's totally impossible to run any operating system. It comes as a set that contains: windows, development tools, Api's, and frameworks[8]. Now let's see the required software which is necessary to complete the project successfully. Required software's are-

- ➢ OS: Windows-10
- ➢ Language: Html 5, CSS 3, Javascript, Jquery, PHP
- ➢ Database: MySQL
- ➢ Development Tools: Sublime Text 3 ,Visual Studio, XAMPP Local Server, Adobe Photoshop, Domain, Hosting, Email SMTP.
- ➢ Framework : Bootstrap
- ➢ Browser : Google Chrome, Mozilla.

3.4 Design Requirement

When we start a project we have to ensure that our project is user-friendly. Because user-friendly design is the first step to successfully completing a project. As we develop a web application "Diu student help portal", which helps Diu students with their academic life & job placements. So students will be our only users. That's why we need to ensure without any complexity students can use this system. When we develop this project our focus to develop such a way that every user can accept it. If our system design is complex and not user-friendly then students feel hesitant to use this application[8]. So as a result students don't want to use this website and it will be the cause of project failure. That's why we try to create a straightforward UI for our website.

Our website design criteria is given Below-

- ➢ Make a user-friendly design
- ➢ The website design must be clean, unique, and straightforward
- ➢ Try to focus the user's attention
- ➢ The website must be navigation oriented.
- ➢ Use well-planned informative architecture
- ➢ Browser consistency
- ➢ The website must be fast-loaded.

CHAPTER 4
DESIGN SPECIFICATION

4.1 Use Case Modeling

The use-case model is known as a diagram that helps us to know how people will interact with our system. The use case diagram is a set of scenarios, actors, and their relationship which is depicted in diagrams[18]. It helps us to specify the user's goal, the system's interactions with the consumer, and the system's behaviors required to achieve our goals. The use case model for our project is shown in Figure 4.1
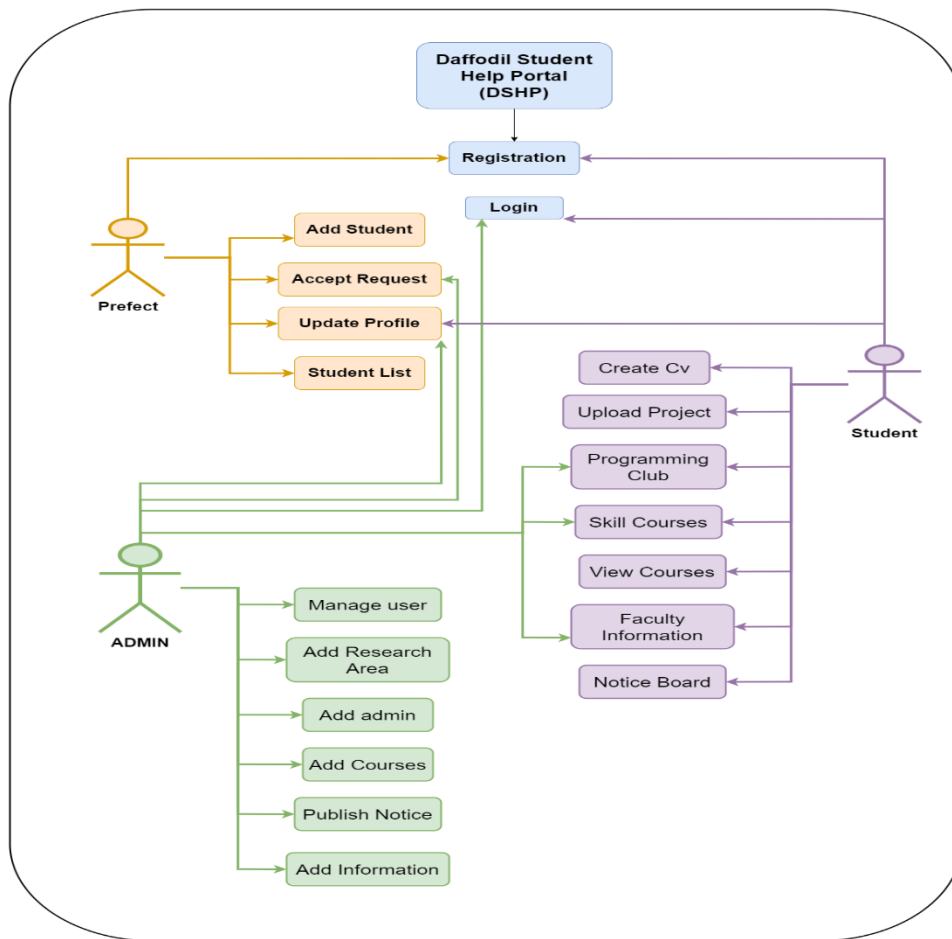
Figure 4.1 : Use Case Diagram

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4.2 Context Diagram

A context diagram is a simple sketch used to characterize an object based on its range, bounds, and connections to other entities. It gives a broad perspective of a process, emphasizing its interactions with external factors rather than its internal sub-processes[16]. The Context Diagram of our project is shown in Figure 4.2.
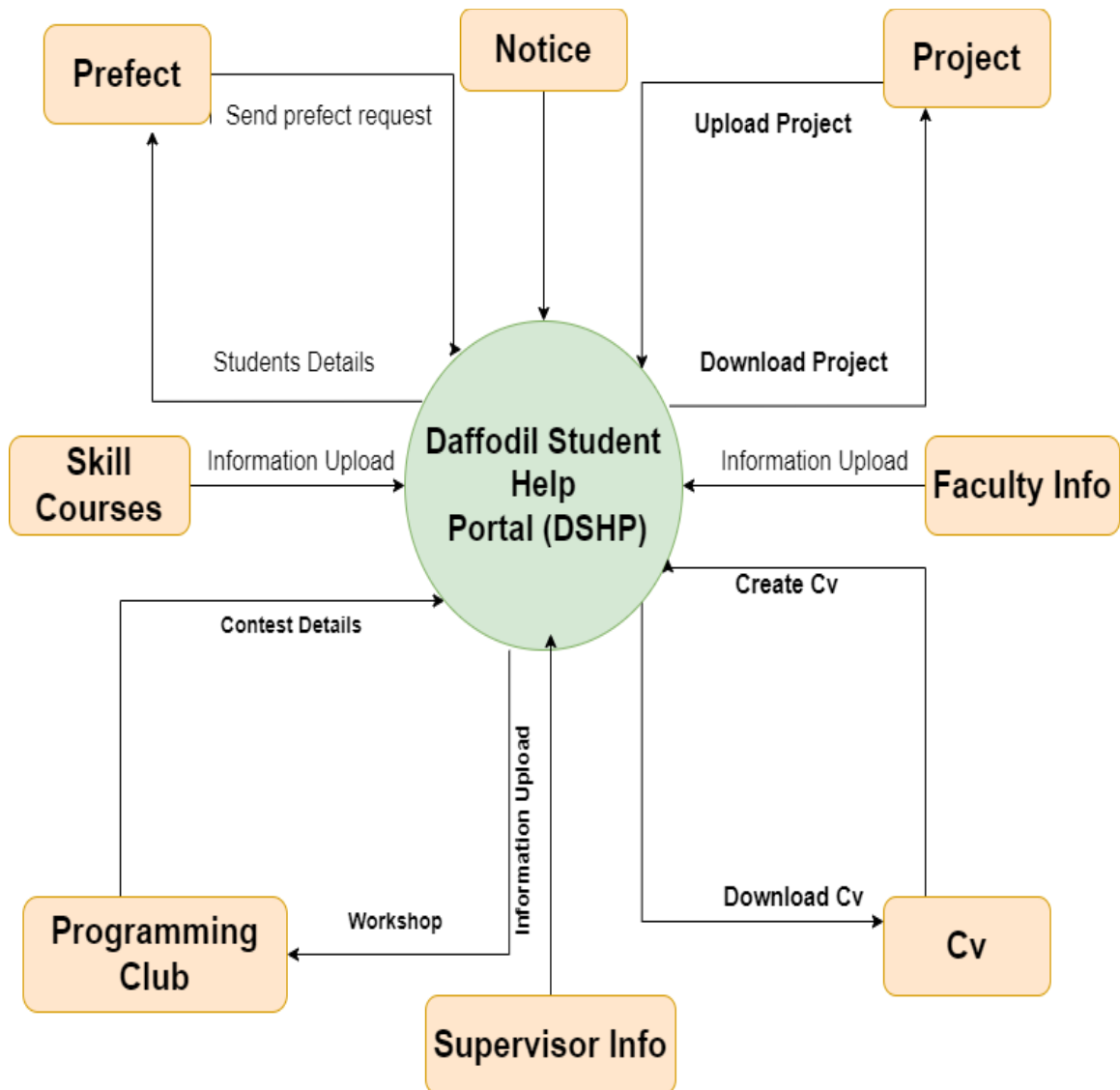
Figure 4.2: Context Diagram

4.3 DFD LEVEL - 0

DFd Level-0 Diagram is the name given to the data flow diagram. It provides a graphic depiction of the operations, data modification, and distribution among a system's constituent parts[25]. Furthermore, it offers details on the inputs and outputs of every entity in addition to the process itself. The DFd Level-0 of our project is shown in Figure 4.3.
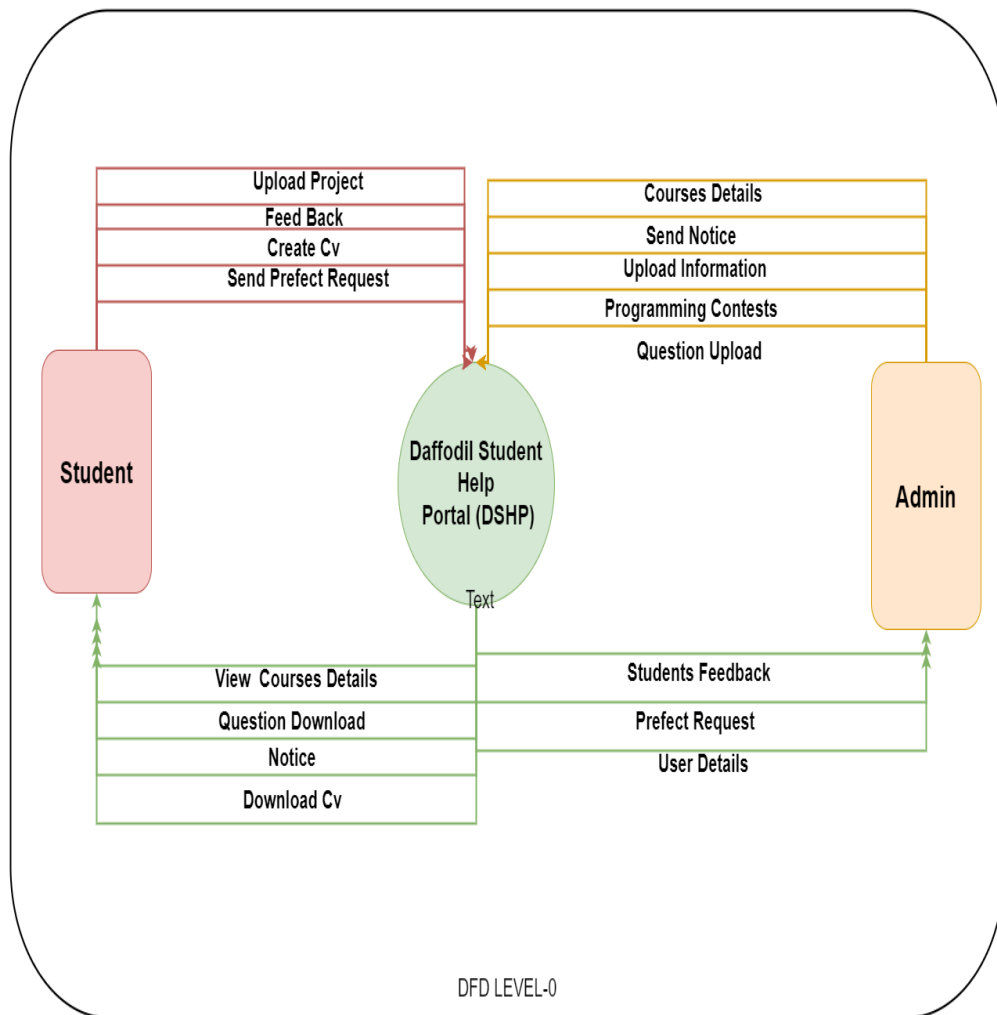
Figure 4.3: Dfd Level-0

4.4 Workflow Diagram

The workflow diagram is a flow chart of each process in the project that helps with understanding how each layout is visualized[23]. It help developers in comprehending the functions of users and administrators. To track finished work and foster greater cooperation between various departments. The Workflow for our project is shown in Figure 4.4.
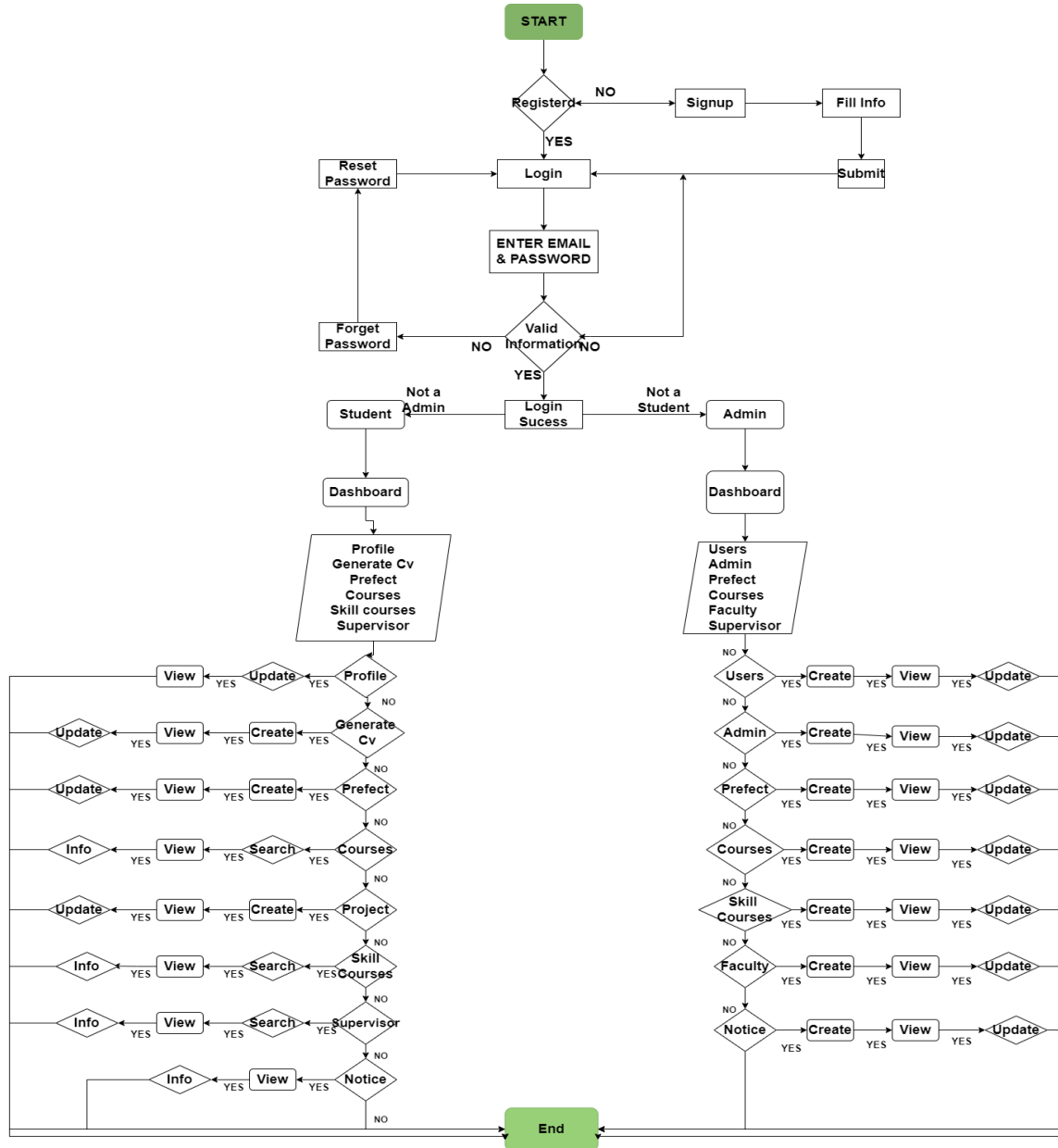
Figure 4.4: Workflow Diagram

4.5 Class Diagram

The class diagram is the static view of the diagram. Which depicts many kinds of objects that are present in the system as well as their interactions. In addition to having its own objects, a class can also inherit from other classes. Various distinct parts of the system are visualized, described, documented, and executable software code is also created using class diagrams[17]. The Class Diagram for our project is shown in Figure 4.5
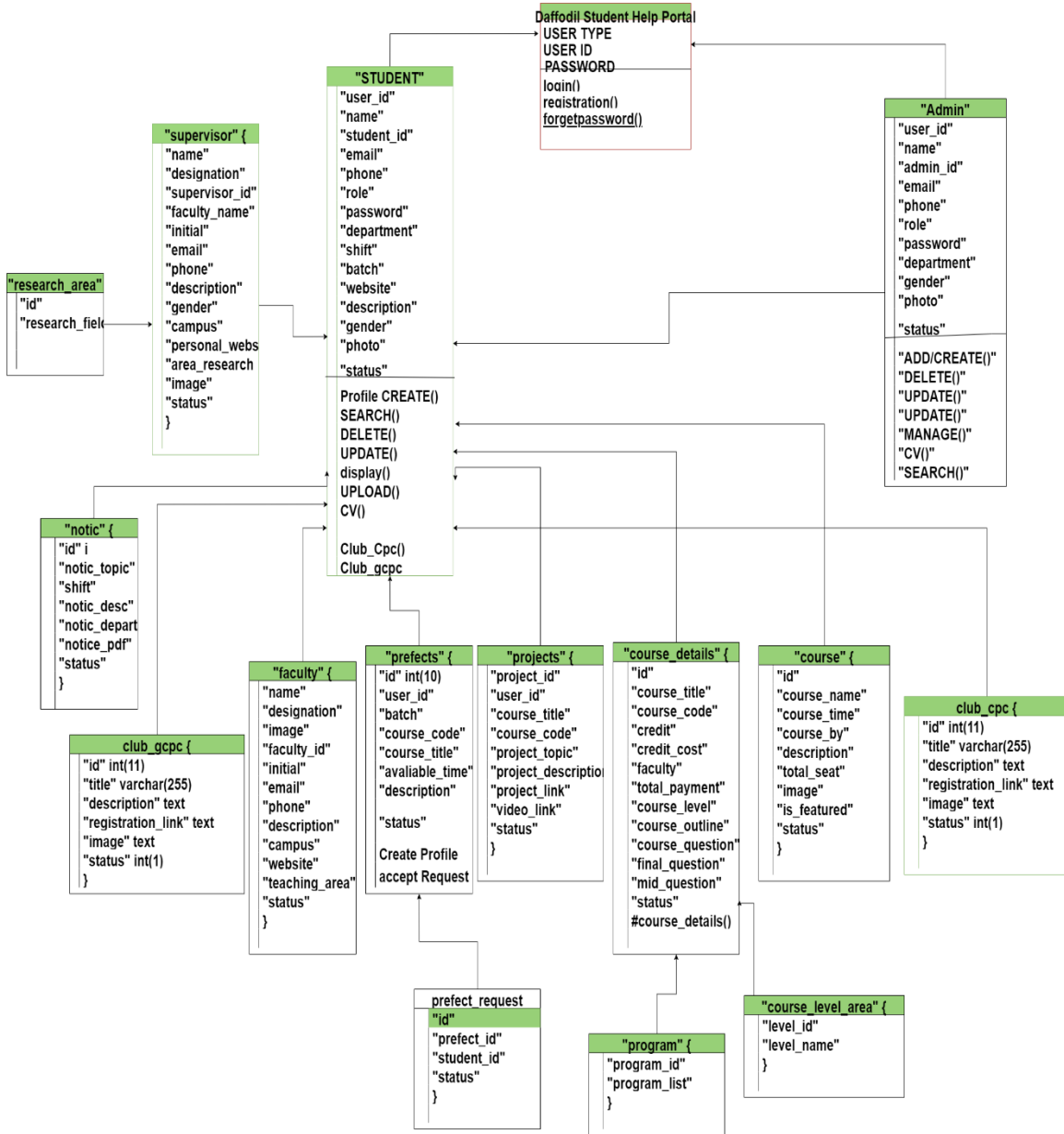
Figure 4.5.: Class Diagram

4.6 Entity Relationship Diagram (ERD)

In order to develop a database design, we mostly use Entity Relationship Diagram (ERD). It helps us to outline the object, its traits, and the relationships that link them. ER-Diagram is a graphical representation of things and their relationships known as an entity-relationship model (ERM) which is frequently used in computing to organize data in databases[24]. The ER-Diagram for our project is shown in Figure 4.6.
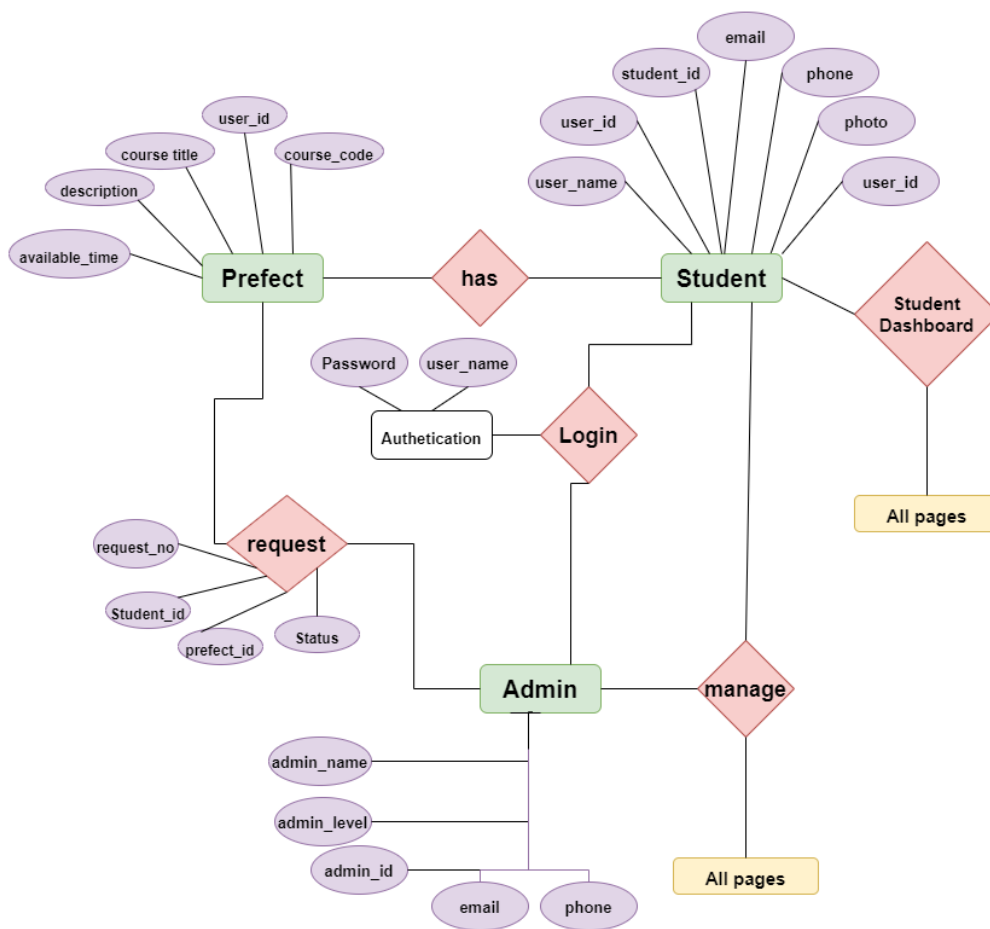
Figure 4.6: Entity Relationship Diagram

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4.7 Relational Database Design (RDD)

In order to develop the relational between database design, we mostly use relational database design (RDD)[19]. It helps us to outline the attributes, traits, and relationships that link them. Actually relationship database model is one type of er-diagram. It is a graphical representation of things and their relationships to database design which is known as a relational database design (RDD)[19.] It is frequently used in computing to organize data in databases. The relationship database design for our project is shown in Figure 4.7.
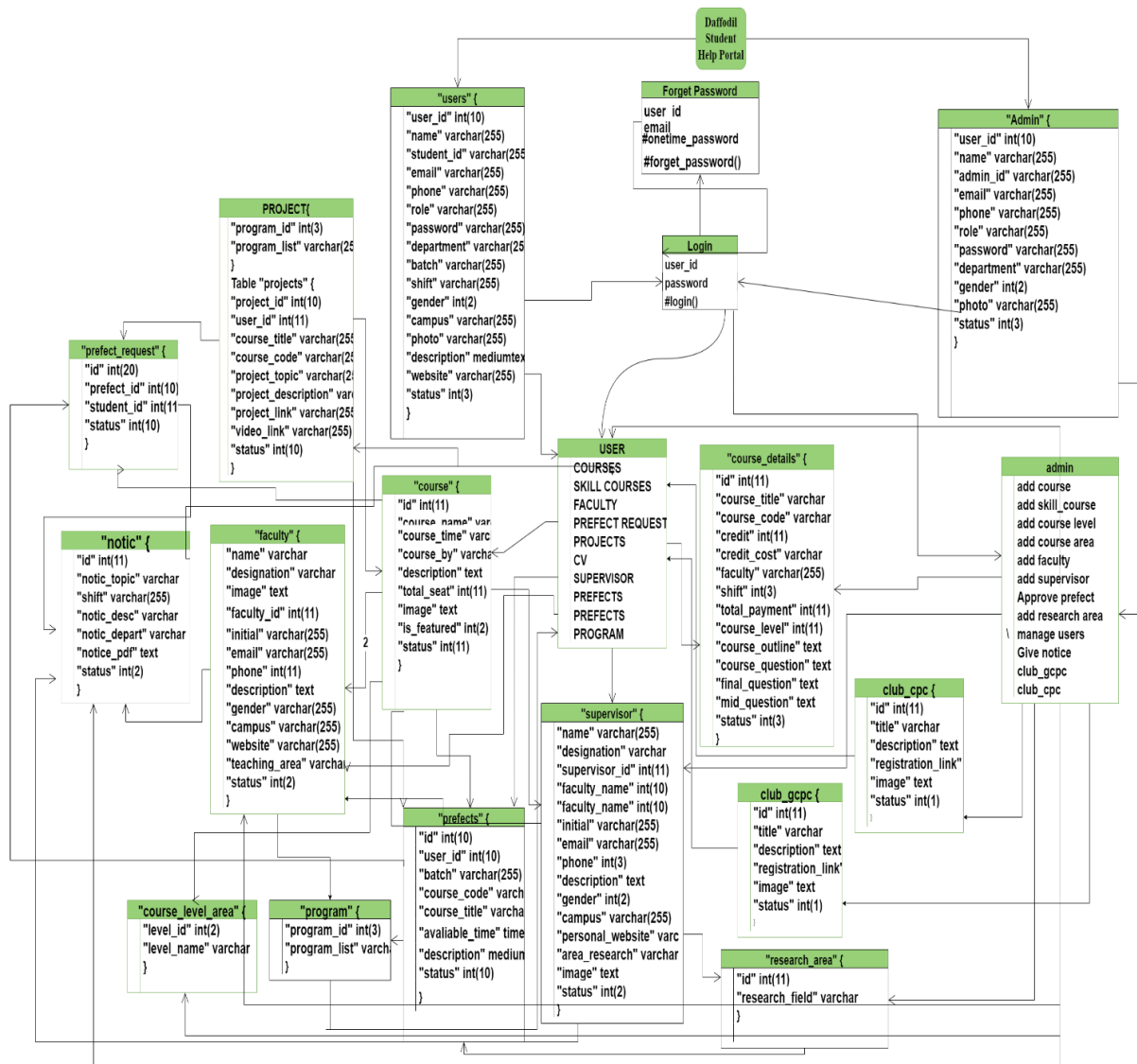
Figure 4.7: Relationship Database Diagram

4.8 Logical Data Diagram

A specific kind of data model is called a logical data model (LDM). Which is generally deals with data. It is used to create visual representations of the data entities, properties, and logical connections among them[21]. We use the mysqli server to set up and retrieve our project data from our database. The logical data diagram for our project is shown in Figure 4.8
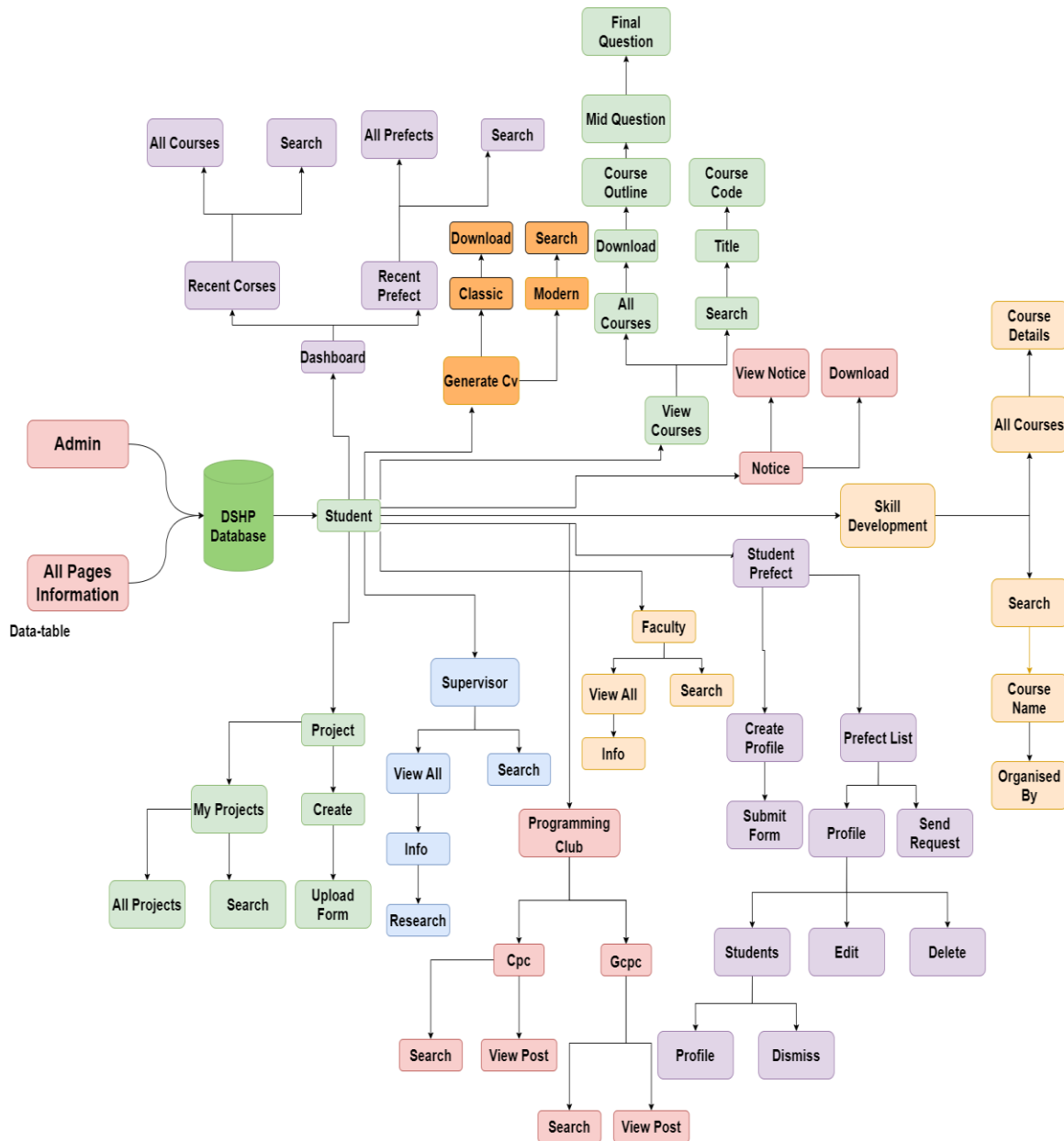
Figure 4.8: Logical Data Diagram

CHAPTER 5
DATABASE IMPLEMENTATION

5.1 Implementation of Database

Data of our website is stored on a mysql database server. because the most dependable, long-lasting, and popular language for creating online applications is sql. Tables are used to hold data in mysql databases. A table is a grouping of linked data that has columns and rows. It enables us to preserve and retrieve info whenever we need it[19][20].

5.2 Table for "Courses "-

Table 5.2: Database Table for **"Courses"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	id	int(11)	Yes	No
02	course_name	varchar(255)	No	No
03	course_time	varchar(255)	No	No
04	course_by	varchar(255)	No	No
05	description	text	No	No
06	total_seat	int(11)	No	No
07	image	text	No	No
08	is_featured	int(2)	No	No
09	status	int(11)	No	No

5.3 Table for "Course Details" –

Table 5.3: Database Table for **"Courses Details"**

No	Column-name	Column-Type	Primary-key	Foreign-key
1	id	int(11)	Yes	No
2	course_title	varchar(255)	No	No
3	course_code	varchar(255)	No	No
4	credit	int(3)	No	No
5	credit_cost	varchar(255)	No	No
6	faculty	varchar(255)	No	No
7	shift	int(3)	No	No
8	total_payment	int(11)	No	No
9	Course_level	int(11)	No	No
10	Course_outline	text	No	No
11	Course_question	text	No	No
12	Final_question	text	No	No
13	Mid_question	text	No	No
14	status	int(3)	No	No

5.4 Table for "Course_Level_Area"-

Table 5.4: Database Table for **"Course Level Area"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	Level_id	int(2)	Yes	No
02	Level_name	varchar(255)	No	No

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5.5 Table for "Faculty"-

Table 5.5: Database Table for **"Faculty"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	name	varchar(255)	No	No
02	designation	varchar(255)	No	No
03	image	text	No	No
04	Faculty_id	int(11)	No	No
05	initial	varchar(255)	No	No
06	email	varchar(255)	No	No
07	phone	int(11)	No	No
08	description	text	No	No
09	gender	varchar(255)	No	No
10	campus	varchar(255)	No	No
11	website	varchar(255)	No	No
12	Teaching_area	varchar(255)	No	No
13	status	int(2)	No	No

5.6 Table for "Prefect_request"-

Table 5.6: Database Table for **"Prefect_request"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	id	int(20)	**Yes**	No
02	Prefect_id	int(10)	No	No
03	Student_id	int(11)	No	No
04	status	int(10)	No	No

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5.7 Table for "Prefect"-

Table 5.7: Database Table for **"Prefect"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	id	int(10)	Yes	No
02	User_id	int(10)	No	No
03	batch	varchar(255)	No	No
04	Course_code	varchar(255)	No	No
05	Course_title	varchar(255)	No	No
06	Available_time	time	No	No
07	description	medium text	No	No
08	status	int(10)	No	No

5.8 Table for "Notice"-

Table 5.8: Database Table for **"Notice"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	id	int(11)	Yes	No
02	Notice_topic	varchar(255)	No	No
03	Shift	varchar(255)	No	No
04	Notice_desc	varchar(255)	No	No
05	Notic_depart	varchar(255)	No	No
06	Notice_pdf	text	No	No
07	Status	int(2)	No	No

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5.9 Table for "Projects"-

Table 5.9: Database Table for **"Projects"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	Project_id	int(10)	Yes	No
02	User_id	int(10)	No	No
03	Course_title	varchar(255)	No	No
04	Course_code	varchar(255)	No	No
05	Project_topic	varchar(255)	No	No
06	Project_description	varchar(255)	No	No
07	Project_link	varchar(255)	No	No
08	Video_link	varchar(255)	No	No
09	Status	int(10)	No	No

5.10 Table for "Supervisor"-

Table 5.10: Database Table for **"Supervisor"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	Name	varchar(255)	Yes	No
02	Designation	varchar(255)	No	No
03	Supervisor_id	int(11)	No	No
04	Faculty_name	varchar(255)	No	No
05	Initial	varchar(255)	No	No
06	Email	varchar(255)	No	No
07	Phone	int(3)	No	No
08	Description	text	No	No
09	Gender	int(2)	No	No

No	Column-name	Column-Type	Primary-key	Foreign-key
10	Campus	varchar(255)	No	No
11	Personal_Website	varchar(255)	No	No
12	Area_Research	varchar(255)	No	No
13	Image	text	No	No
14	Status	int(2)	No	No

5.11 Table for "Users"-

Table 5.11: Database Table for **"Users"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	User_id	int(10)	Yes	No
02	name	varchar(255)	No	No
03	Student_id	varchar(255)	No	No
04	email	varchar(255)	No	No
05	phone	varchar(255)	No	No
06	role	varchar(255)	No	No
07	password	varchar(255)	No	No
08	department	varchar(255)	No	No
09	batch	varchar(255)	No	No
10	shift	varchar(255)	No	No
11	gender	int(2)	No	No
12	campus	varchar(255)	No	No
13	photo	varchar(255)	No	No
14	description	varchar(255)	No	No
15	website	varchar(255)	No	No
16	status	int(3)	No	No

5.12 Table for "Program_Request"-

Table 5.12: Database Table for **"Program_Request"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	program_id	int(3)	Yes	No
02	program_list	varchar(255)	No	No

5.13 Table for "Gcpc"-

Table 5.13: Database Table for **"Gcpc"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	**id**	int(11)	Yes	No
02	**title**	varchar	No	No
03	**description**	text	No	No
04	**registration_link**	text	No	No
05	**image**	text	No	No
06	**status**	int(1)	No	No

5.14 Table for "Research_Area"-

Table 5.14: Database Table for **"Research_Area"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	id	Int(11)	Yes	No
02	research_field	varchar(255)	No	No

5.15 Table for "Cpc"-

Table 5.15: Database Table for **"Cpc"**

No	Column-name	Column-Type	Primary-key	Foreign-key
01	**id**	int(11)	Yes	No
02	**title**	varchar	No	No
03	**description**	varchar	No	No
04	**registration_link**	varchar	No	No
05	**image**	varchar	No	No
06	**status**	int(1)	No	No

5.16 Description of Database Implementation

Here we discuss how our systems database functionality will work-

➢ **"**DIU STUDENT HELP PORTAL**"** related all the data, information, and pdf files are kept in the database.

➢ Admin can accept the request of students for their student prefect profile.

➢ User's required administrator details like: gmail, university id, and login password. All this information's are stored in the database.

➢ Admin can manually edit user's details in the database.

➢ Users & admins must have to do sign in first, then login. There login details will be re-checked in login time do ensure there information's are matched with the database details.

➢ Admin can add Courses details, faculty's information, notices, skill development courses details in the system which are kept in the database.

➢ Users can search faculty's information, skill developments courses details, and university courses details from database.

➢ Prefect's can access their students basic details.

CHAPTER 6

DESIGN IMPLEMENTATION & ERROR TESTING

6.1 Front-End Design Implementation

We need to design a Sophisticated frontend design. Because A Unique, Creative, and User-Friendly front-end design encourages us to adopt a new system. If our system design is bulky and complicated then it will be rejected by our users. That's why our website design is Straightforward and user-friendly, which will be accepted by most users. We use bootstrap 4.1 html, css, javascript, jquery, And php for our front-end design.

6.2 Framework

Bootstrap: We use bootstrap 4.1 as our CSS Framework. Bootstrap is open source framework. Which helps us to make our website responsive and user-friendly. It saves our time and helps us to properly utilize our time[12]. Bootstrap web responsive code And front-end design codes are pre-written. So we have to just make proper use of bootstrap pre-written codes, And it helps us to make our website more responsive and user-friendly[13].

6.3 Languages

HTML 5: Our language for markup is html. It provides a fundamental framework of the website. The most popular markup language for creating online applications is html, which stands for hyper text markup language [9]. It provides a fundamental overview of a website and instructions on how its information should be presented.

CSS 3: To give our website a decent design, we employ css. Cascading style sheets is what CSS stands for. It used to regulate how multipurpose website features were laid out. Using CSS, we can manage things like picture size, font color, and html components[11]. Actually, CSS specifies how a website's HTML components should be described.

Java Script: The most popular programming language for web applications is JavaScript. It is frequently used for the creation of mobile apps, interactive ux designs, and online applications, as well as for machine learning. Both learning and applying it are relatively simple. It assists with the creation of animation, real-time form submission, and dynamic websites[10].

PHP : The most popular server-side programming language for creating web applications is Php. It assists in the dynamic design of our website. Php is capable of managing numerous databases, generating sessions, and handling dynamic content[14]. We utilize Php as our website's programming language because of this.

6.4 Implemented Features

In Our " Diu Student Help portal " there are various types of features. Before testing, we must analyze our features and operational functionalities. We must ensure that the possible output and the project goals must be met. Our project Functionalities are given below:

- ➢ Home Page
  - ✓ Home Description
  - ✓ Banner Slider
  - ✓ Our facilities
  - ✓ Ranking
  - ✓ Teachers
  - ✓ Skill Development Course
  - ✓ Testimonial
  - ✓ Overall students details
- ➢ About Us
  - ✓ Our Description
  - ✓ Why we are different
  - ✓ Technical Team Details

- ➢ Help Center
  - ✓ Facilities
  - ✓ Faculty Information
  - ✓ Guideline Video
- ➢ Courses
  - ✓ Course Features
- ➢ Contact
  - ✓ Contact Form
  - ✓ Diu map
- ➢ Login
  - ✓ Students Login
  - ✓ Admin login
- ➢ Sign Up
- ➢ Admin Panel

  - ✓ Home
  - ✓ Dashboard
  - ✓ Faculty Information
  - ✓ Supervisor Information
  - ✓ Skill Courses
  - ✓ Courses Details
  - ✓ Notice Area
  - ✓ Research Area
  - ✓ Courses Level & Term
  - ✓ Shift List
  - ✓ User
  - ✓ Dashboard

- ➢ Student Panel
  - ✓ Home
  - ✓ Dashboard

- ✓ Profile
- ✓ CPC
- ✓ GCPC
- ✓ Generate Cv
  - • Classic
  - • Modern
- ✓ View Courses
- ✓ Projects
  - • Create
  - • My Projects
- ✓ Skill develop
- ✓ Student Prefect
  - • Create Profile
  - • View Profile
- ✓ Faculty Information
- ✓ Supervisor
- ✓ Notice Board
- ✓ Sign Out

6.5 Testing of Implemented Code

It's mandatory to do testing of the application after its implementation. As a result, we can be certain that the project's outcome will satisfy our goals and objectives. Before the code is utilized by the client or customer, every developer must evaluate it. We can more easily discover our flaws and problems thanks to it. The presence of certain problems during implementation is very natural. There are two different categories of errors: run-time errors and assemble-time errors[6][28]. Without these, we wouldn't be able to guarantee that the features we've built function properly. There are two types of entities here: legitimate entities and invalid entities. If both entities are work properly so we can ensure that our system is error-free. Valid entities must be succeeded & invalid entities

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must be failed it's the working mechanism of both entities. We must ensure that our project output must meet our project goals. Lets See some advantages of testing implementation-

➤ It helps us for get more accurate output.
➤ Get high quality application & Performance
➤ Give immediate output to the Developer
➤ Get a error and bug free project
➤ Give satisfaction to the user end
➤ Help to determine the performance of the software

6.6 Penetration Test

Penetration testing involves simulating a cyberattack on our system to examine all aspects of security that's also referred to as a pen test [3]. A web application's security is provided via penetration testing, which functions as a web application firewall (waf). Penetration testers utilize the same tools and techniques to determine how a system's vulnerabilities would affect corporate operations [4]. We do penetration testing on our system as a result.

6.7 Penetration Testing Stages

Penetration testing stages are divided into several parts. Which are shows in given Figure 6.7 :

Analysis and WAF configuration
Results are used to configure WAF settings before testing is run again.

Maintaining access
APTs are imitated to see if a vulnerability can be used to maintain access.

05

04

PENETRATION TESTING STAGES

01

02

03

Planning and reconnaissance
Test goals are defined and intelligence is gathered.

Scanning
Scanning tools are used to understand how a target responds to intrusions.

Gaining access
Web application attacks are staged to uncover a target's vulnerabilities.

Figure 6.7 :Penetration testing Stages

6.8 Different Ways of Penetration Testing

- ➢ **External Penetration Testing:** External penetration testing is the assets of a corporate company that is outside or visible on the internet. The main goals of the external penetration testing are companies email, the domain name server(DNS), and companies website itself[3].

- ➢ **Internal Penetration Testing:** In internal penetration testing, a tester can access applications behind the firewall interfaces. This attack is performed by a malicious insider, servers, internal router interfaces, and internal firewall interfaces[3]. This type of testing is beneficial, to find the estimated harm by an employee whose credentials were stolen data.

- ➢ **Blind Penetration Testing:** In this test Penetration tester strategies is simulates the system and how attackers can attack the system and gather the company's information. In this testing testers have no information about the company, they only know the name of the company[3].

- ➢ **Double-Blind Penetration Testing:** In this testing, simulates a real attack by a pen tester and gives no notice to the organization of the test. So they don't have any time to the defend themselves before an attempted breach. Pen-tester also has no information about the Organization.

6.9 Benefits of Penetration Testing

When we do penetration testing it helps us to eliminate dangerous security flows of our system. Penetration testing helps us to archive our project goals and objectives. Let's see the benefits of penetration testing:

- ➢ It helps us to test our cyber-defense capability.
- ➢ It determines the robustness of the system.

- ➢ Find the weakness of the system.
- ➢ Expose the identified vulnerabilities of a system.
- ➢ Avoid Business Operability And Data Breaches.
- ➢ Protect Companies images & Reputation.
- ➢ Secure Users Data Privacy & Security Regulations.

6.10 System testing

When a system is entirely developed and all of its features have been incorporated, system testing is carried out. In this testing, we examine every aspect of the system's operation.. There are several types of system testing which are given below:

- ➢ **Usability Testing:** The main goal of this test is to determine how user-friendly our system is. It looks at the system's capacity to achieve its goals, the user's flexibility in operating it, the quality of the user experience, and overall aesthetics [6][28].

- ➢ **Performance Testing:** This test helps us to know about system speed, stability and peak response times.

- ➢ **Functional Testing:** Functional testing is often referred to as functional completeness testing. It assists in our understanding of any functionality's missing capabilities [6][28]. We can make a list of the extra features that require development.

- ➢ **Compatibility Testing:** Software capability tests ensure that our system gives same performance in the different operating systems and different hardware platforms

- ➢ **Load Testing:** Load testing is a non-functional testing. Which helps us to understand how the software will perform under real-life load [6][28].

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➢ **Integration Testing:** Integration testing is a sort of software testing in which the various units, modules, or components of a software program are tested together. which links and assesses hardware and software components, or both, to examine how they interact with one another [7]. This testing establishes if the aforementioned applications work well together. Usability testing is an application of integration testing.

➢ **Regression Testing:** Regression testing guarantees that none of the modifications to the development process are the root of any newly discovered defects [7]. Additionally, it guarantees that no remaining bugs won't emerge in upcoming system modules.

➢ **Recovery Testing:** The recovery test helps us to know how much our system is robust, reliable, truth-worthy, and capable of recovering after the crash.

➢ **Acceptance Testing:** This is the last stage of developing a system Which test is conduct by the real-End user. Here we test the system performance output are met with the project objectives or not.

6.11 System Testing Result

After executing the system we run some test cases which helps us to know our system is run properly or not. In the following table 6.11 we compare our expected out and actual output is same or not [5][28].

Table 6.11: System Testing Result

Test Cases	Testing Input	Expected Output	Actual Output	Test Result
Sign Up (Student Registration)	Enter Name, email, phone & Password	Redirect into login page	Redirect into login page	Test Passed

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Login (Student & Admin)	Enter Correct Information (Email/Student id & Password)	Redirect Into Dashboard Page	Redirect Into Dashboard Page	Test Passed
Login (Student)	Enter Incorrect Information (Personal Email & Password)	Display Incorrect Email In Login Page	Display Incorrect Email In Login Page	Test Passed
Forget Password (Student)	Enter Registered Email And click Forget Password	Get A One time Password in Gmail	Get A One time Password in Gmail	Test Passed
Add New Courses (Admin)	Enter Course Details	Display New Courses on user and Admin site	Display New Courses on user and Admin site	Test Passed
Add Skill Development Courses (Admin)	Enter Skill Development Course Details	Display New Skill Development Course User Site	Display New Skill Development Course User Site	Test Passed
Send Notice (Admin)	Admin send a Notice.(Pdf And Notice Details)	New Notice Shows On Users Dashboard	New Notice Shows On Users Dashboard	Test Passed

Show User Data (Admin)	Admin Click On users Data	Users Data Shows On Admin Dashboard	Users Data Shows On Admin Dashboard	Test Passed
Create Automated Cv (Student)	Users Input Details for Cv	An Automated Cv Will be create	An Automated Cv Will be create	Test Passed
Download Cv	Student Click on Download	CV will be Downloaded	CV Downloaded	Test Passed
Create Project (Student)	Student Upload Their Project	Project Will Save on My Projects Page	Project Will Save on My Projects Page	Test Passed
View Course (Student)	Click On View Course	Courses Displayed Which is added by admin	Courses Displayed Which is added by admin	Test Passed
Update Profile (Student,Admin)	Student Change Profile Picture	New Profile Picture Shows	New Profile Picture Shows	Test Passed
Create Prefect Profile (Student)	Input Create Prefect Details	Display Prefect Request Pending by admin	Display Prefect Request Pending by admin	Test Passed
Prefect Approved (Admin)	Accept Prefect Request	Prefect Profile will be Activated	Prefect Profile will be Activated	Test Passed
Prefect Request (Student)	Click on Send Request	After Accepting the request it shows Accepted	Shows Accepted	Test Passed
LogOut (Student/Admin)	Click on SignOut	Close The Session	Session Is Closed	Test Passed

CHAPTER 7

Project Sample Screenshot

Home Page: The home page of "Diu student help portal" is shown in figures 7.1, 7.2,7.3. After clicking on the link, we are taken to this page**.**
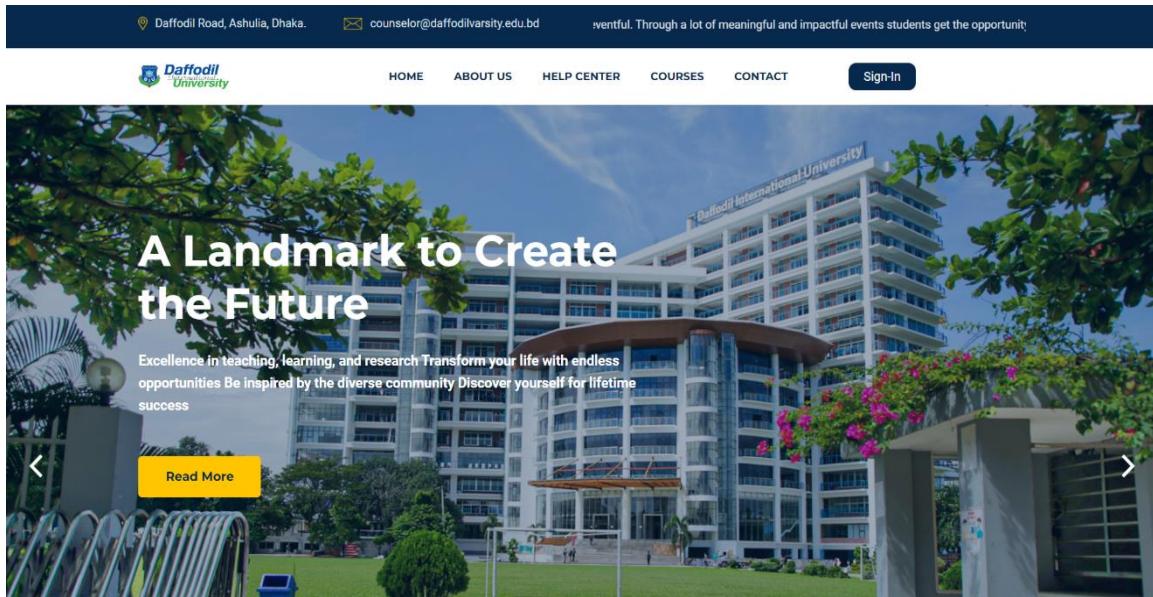
Figure 7.1: **Homepage**
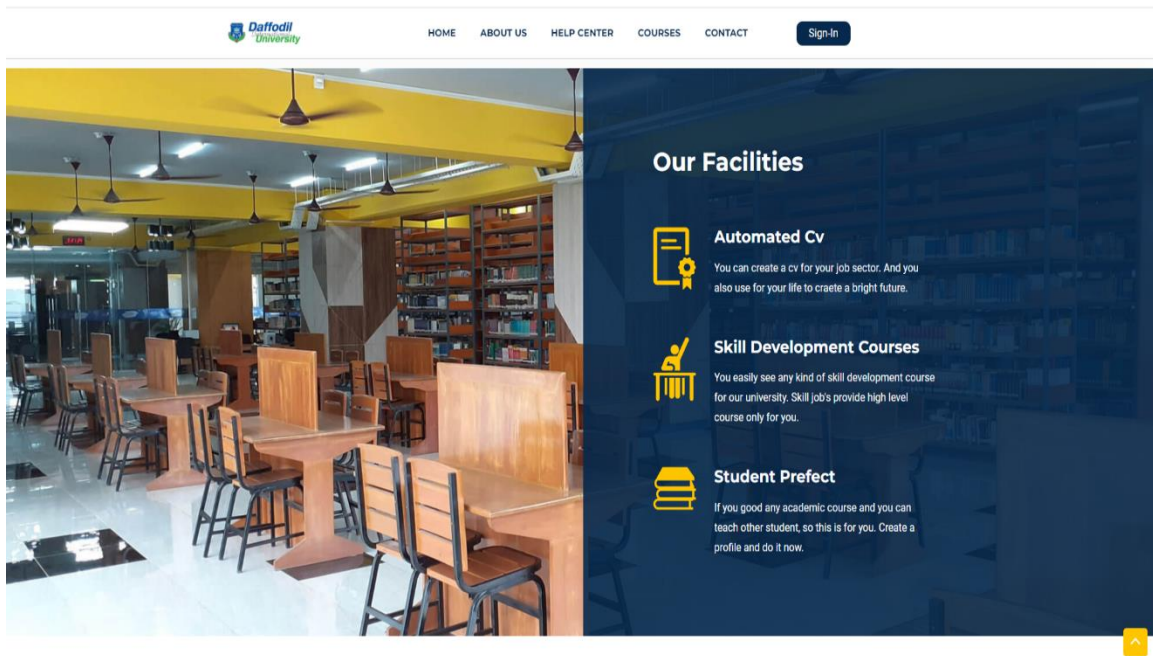
Figure 7.2: **Homepage**
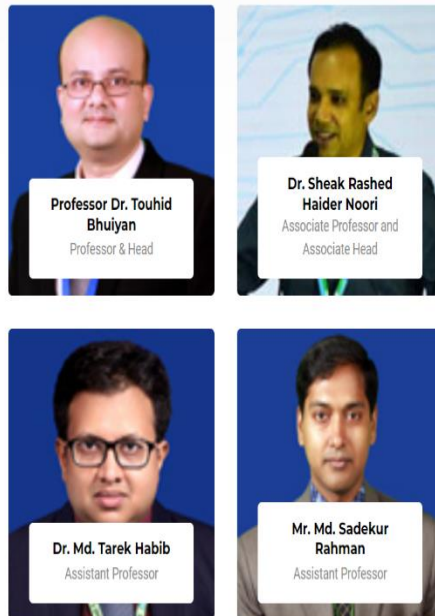
Figure 7.3: **Homepage**

About Us: The About Us Page of our project is shown in figures 8.4. After clicking on the link, we are taken to this page**.**
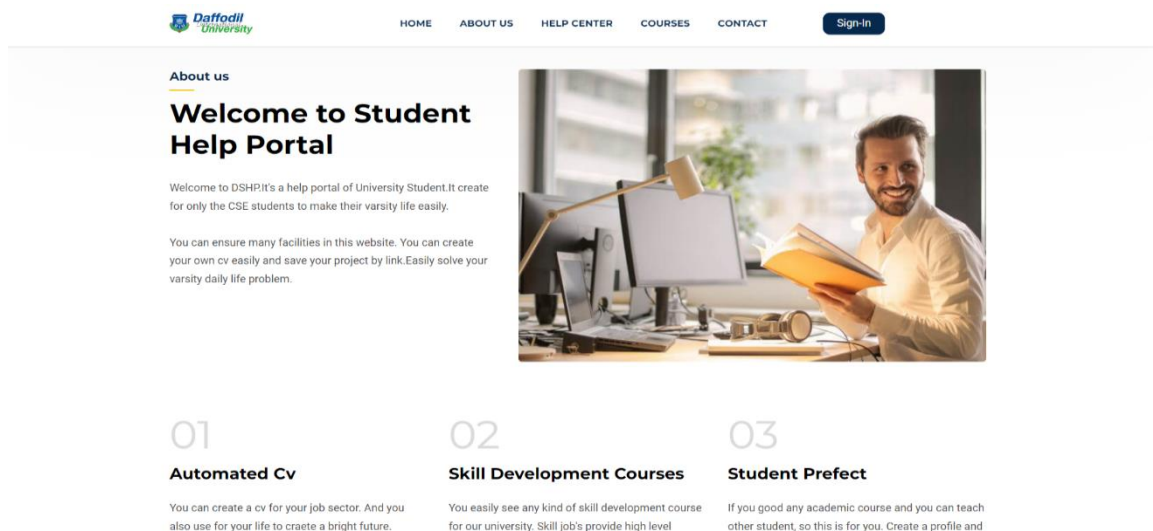
Figure 7.4: **About Us Page**

Technical Team: The **Technical team** Section of about us page is shown in figures 8.5 . After clicking on the link, we are taken to this page**.**
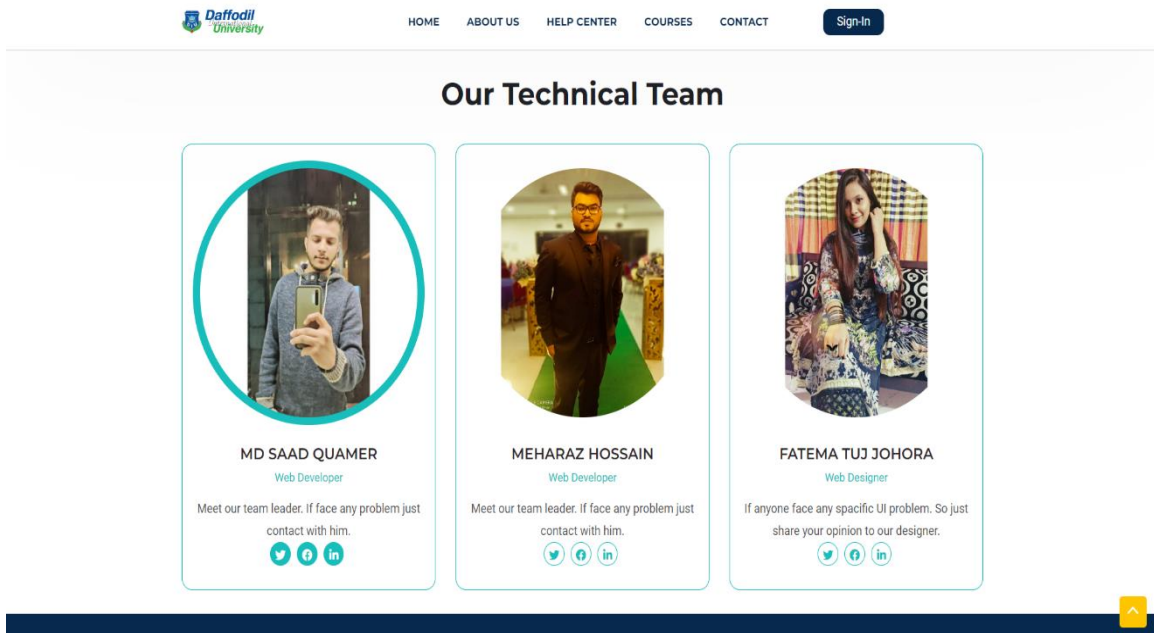
Figure 7.5: **Technical Team**

Courses: The **Courses Page** of our project is shown in figures 8.6.After clicking on the link, we are taken to this page**.**

Figure 7.6: **Courses Page**

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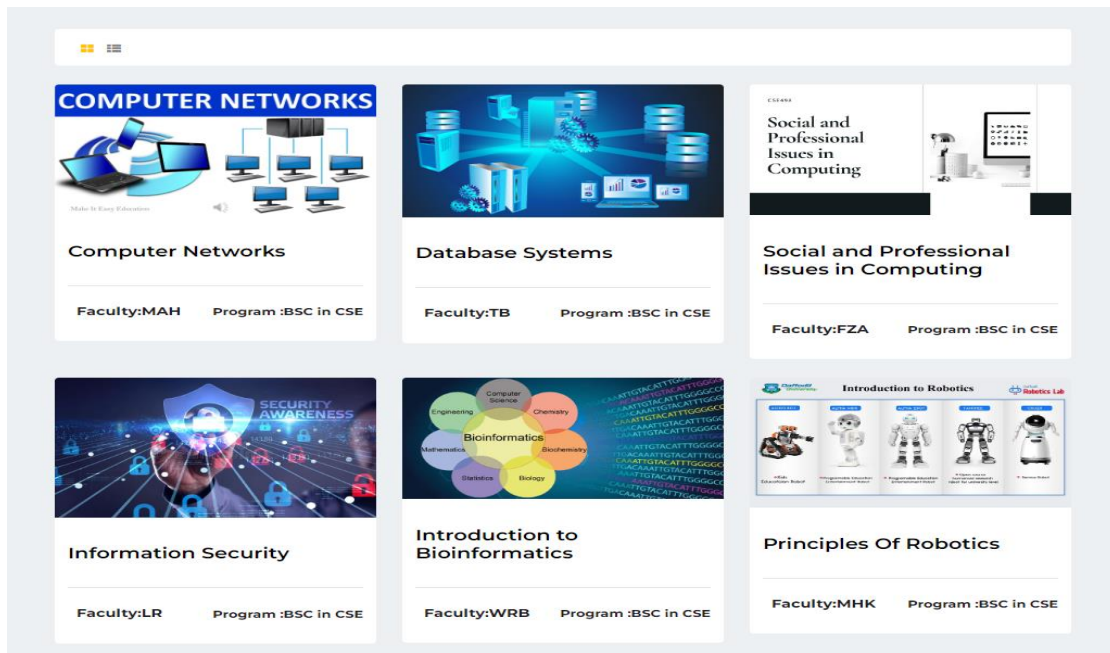
Signup Page: The **Signup Page** of our project is shown in figures 7.7. After clicking on the link, we are taken to this page**.**
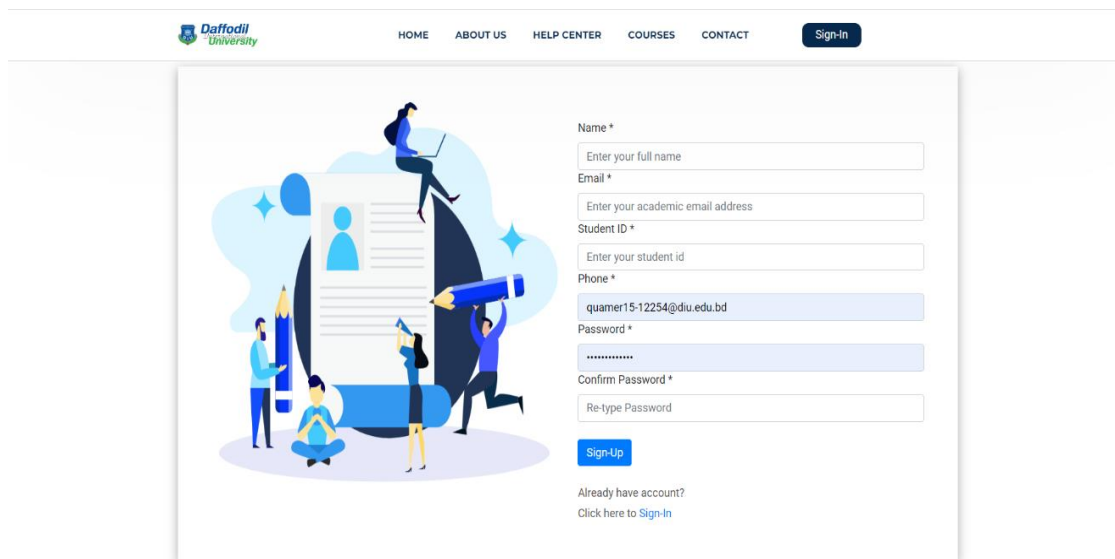
Figure 7.7: **Sign Up Page**

User Login: The **User Login** Page of our project is shown in figures 7.8.After clicking on the link, we are taken to this page**.**
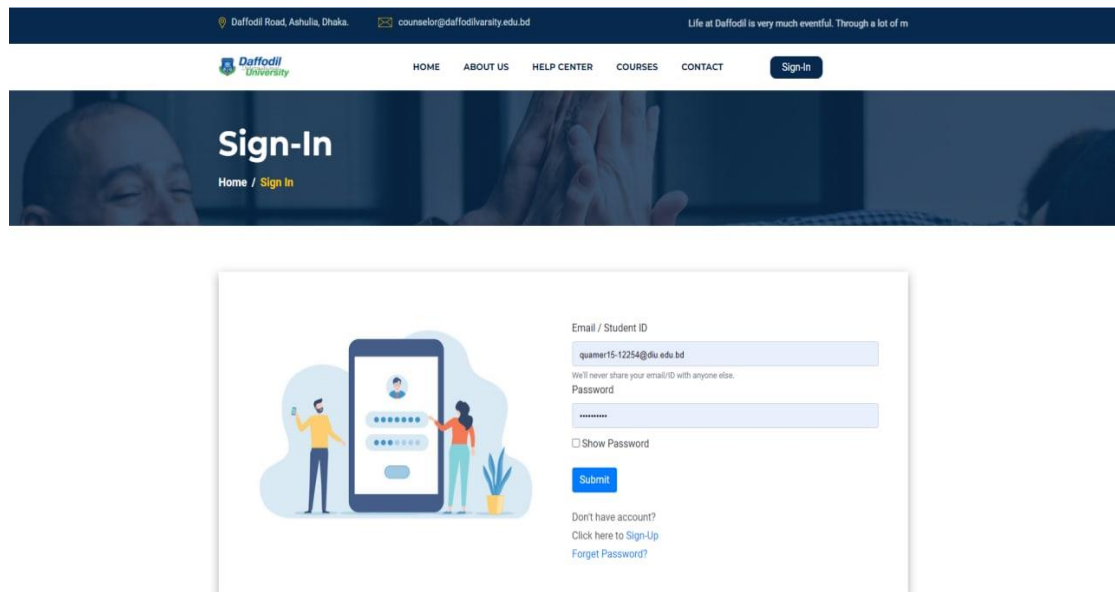
Figure 7.8: **User Login Page**

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Forget Password Page: The **Forget Password Page** of our project is shown in figures 7.9 . After clicking on the link, we are taken to this.
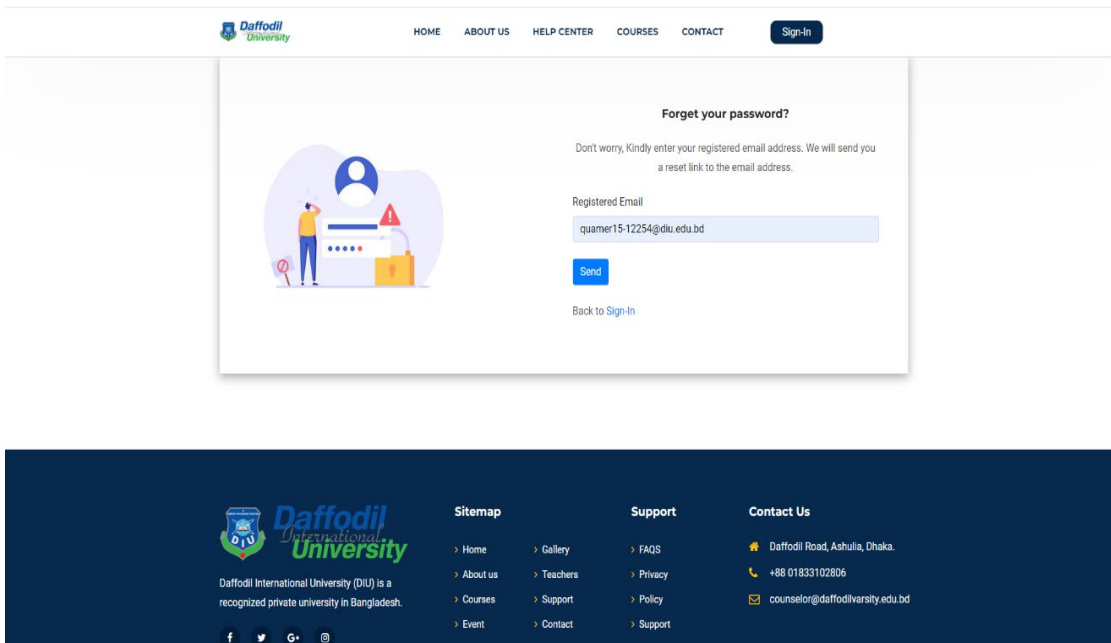
Figure 7.9: **Forget Password Page**

Student Dashboard : The **Student Dashboard** Page of our project is shown in figures 7.10 . After clicking on the link, we are taken to this.
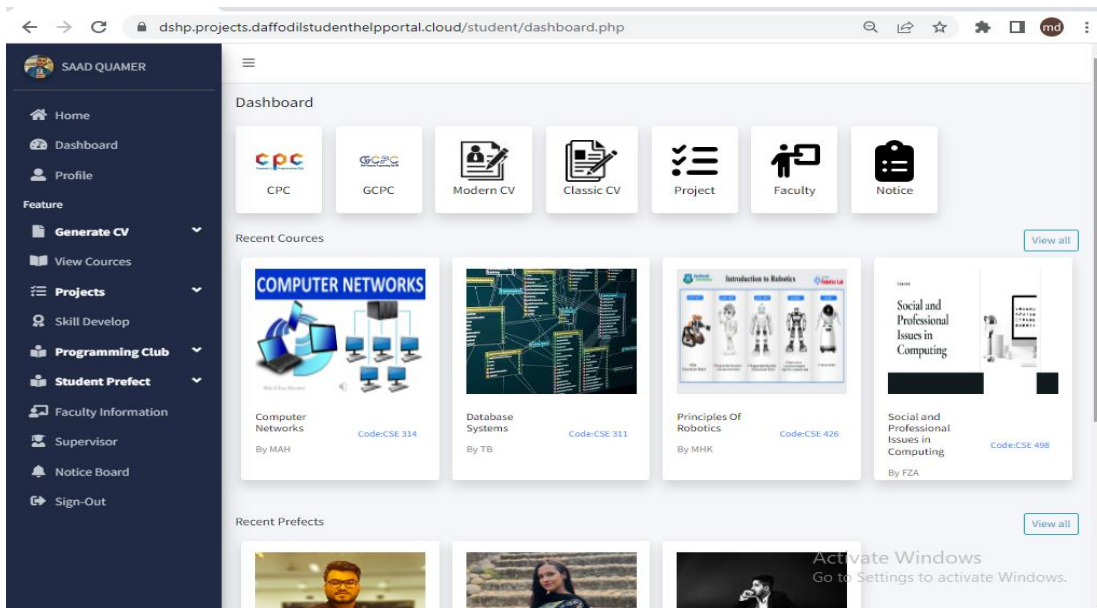
Figure 7.10: **Student Dashboard**

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Student Profile : The **Student Profile** Page of our project is shown in figures 7.11 . After clicking on the link, we are taken to this.
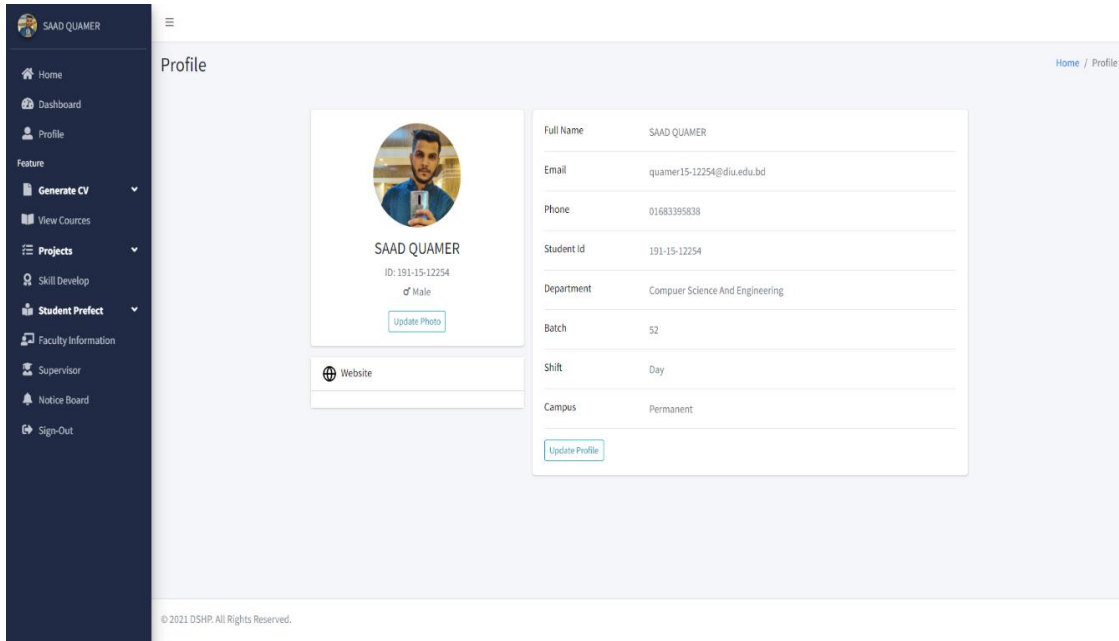
Figure 7.11: **Student Profile**

Update Profile Image : The **Update Profile Image** Page of our project is shown in figures 7.12 After clicking on the link, we are taken to this.
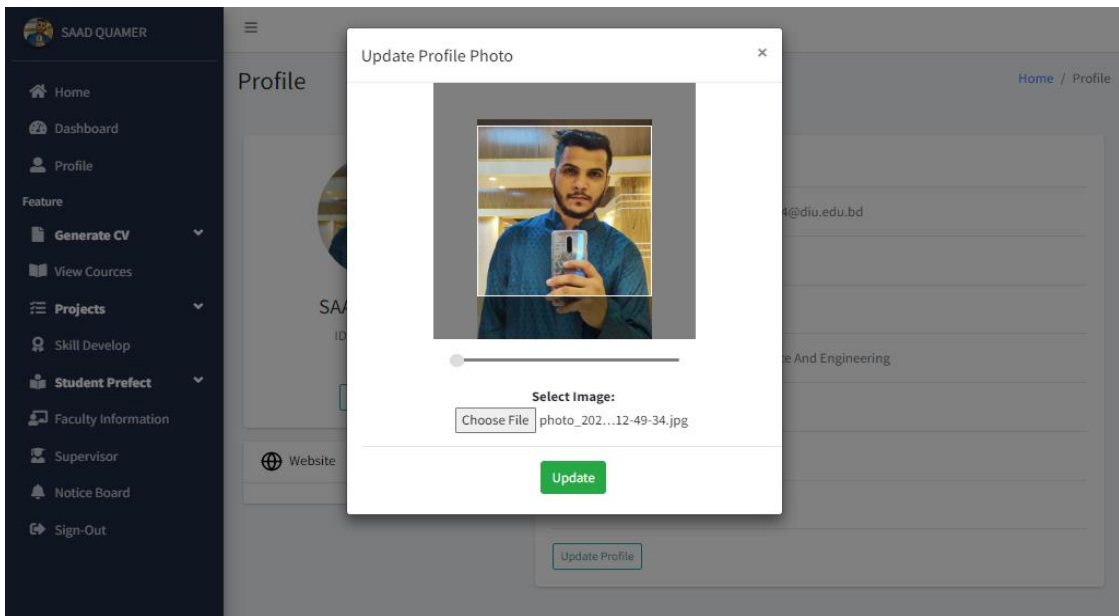
Figure 7.12: **Update Profile Image**

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Classic Cv : The **Classic Cv** Page of our project is shown in figures 7.13 . After clicking on the link, we are taken to this.
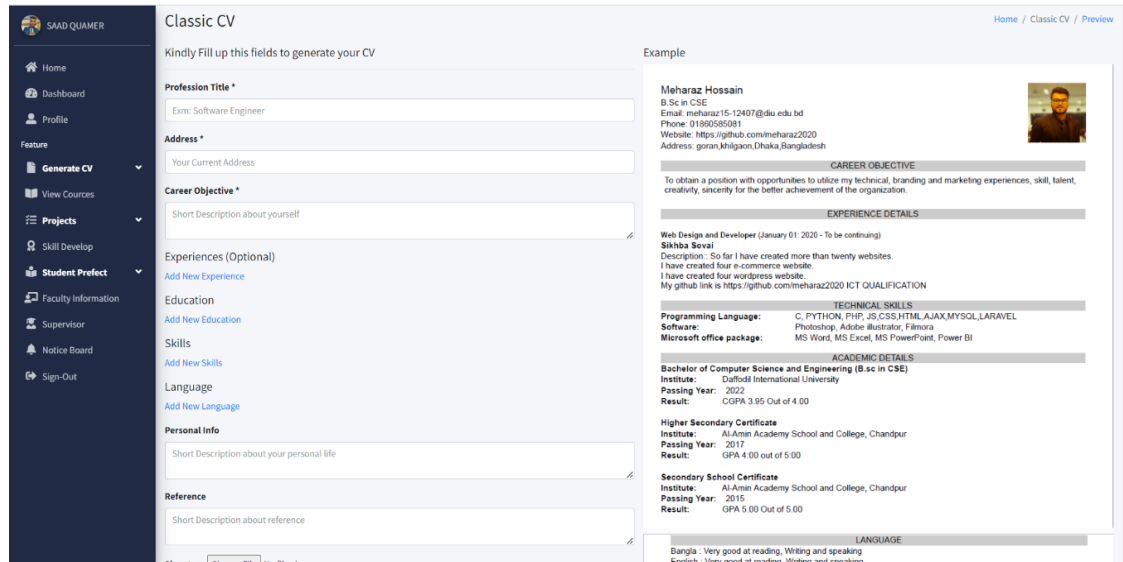
Figure 7.13: **Classic Cv**

Modern Cv : The **Modern Cv** Page of our project is shown in figures 7.14 After clicking on the link, we are taken to this.
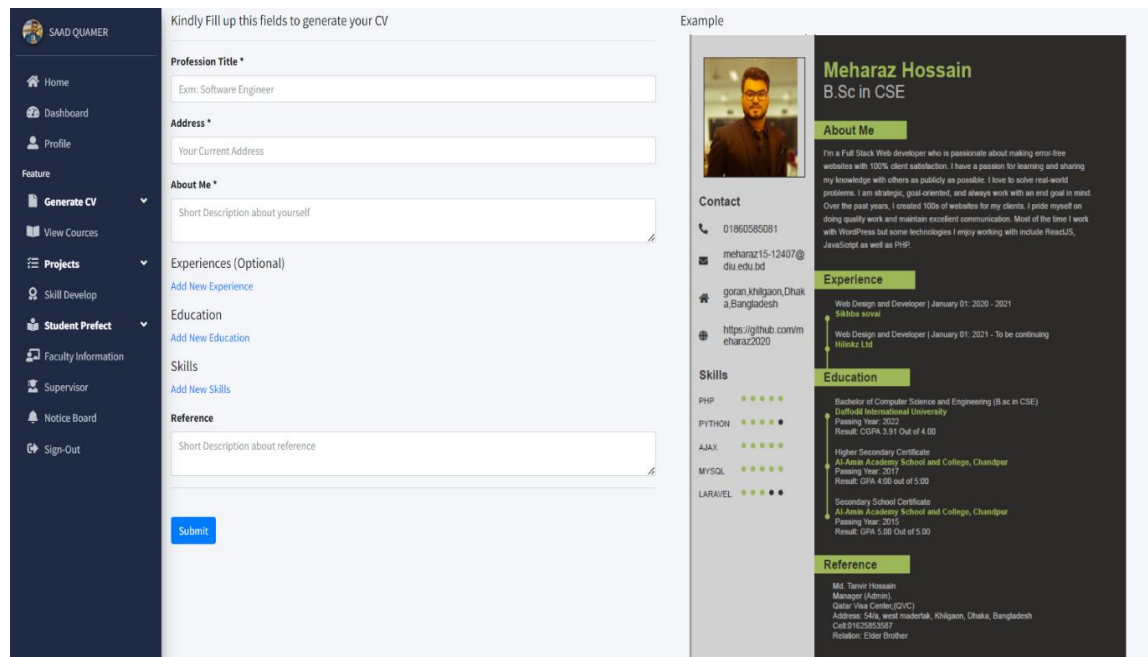
Figure 7.14: **Modern Cv**

Create Prefect: The **Create Prefect** Page of our project is shown in figures 7.15. After clicking on the link, we are taken to this.
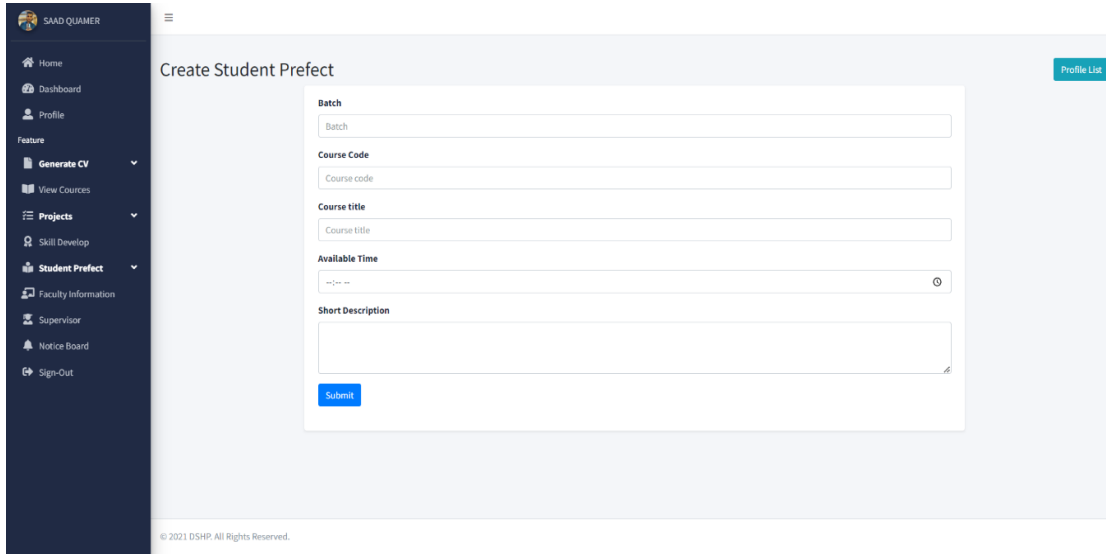
Figure 7.15: **Create Prefect**

Project Upload Confirmation: The **Project Upload Confirmation** Page of our project is shown in figures 7.16 .After clicking on the link, we are taken to this .
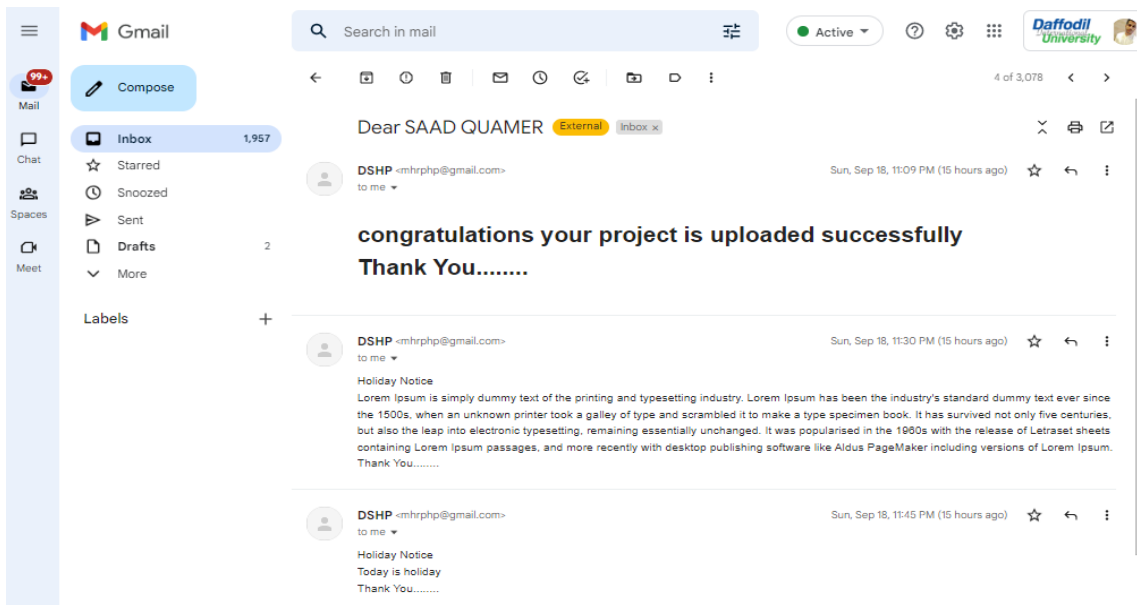
Figure 7.16: **Project Confirm Mail**

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User Courses Page: The **User Courses** Page of our project is shown in figures 7.17 After clicking on the link, we are taken to this .
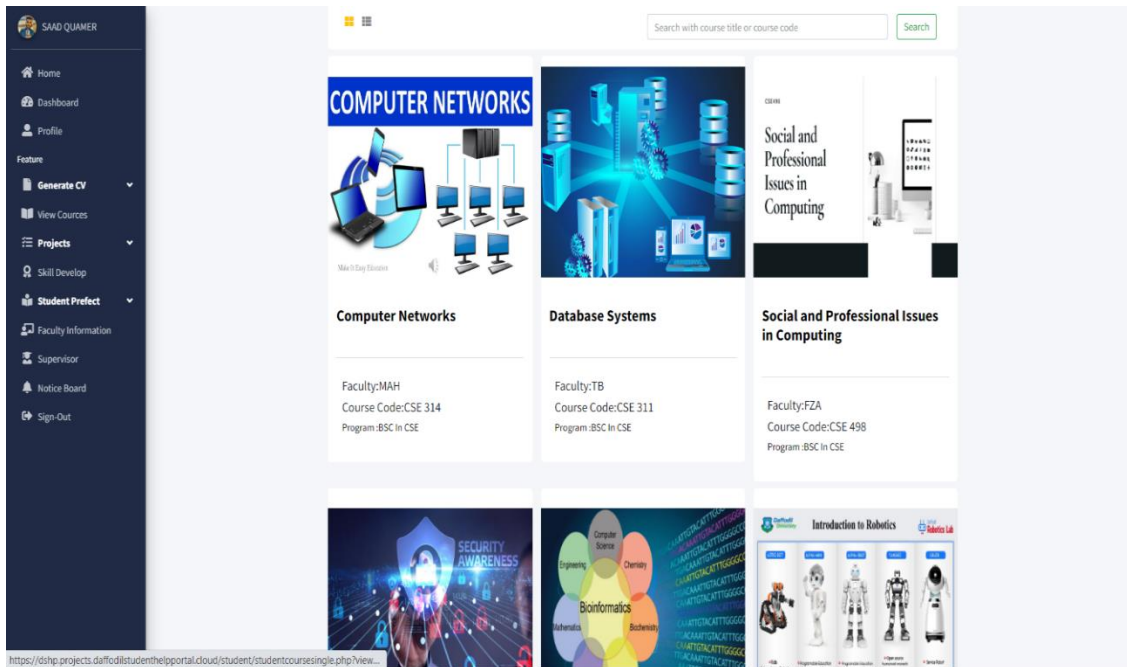
Figure 7.17: **User Courses**

Prefect Student Page: The **Prefect Student Page** of our project is shown in figures 7.18 . After clicking on the link, we are taken to this .
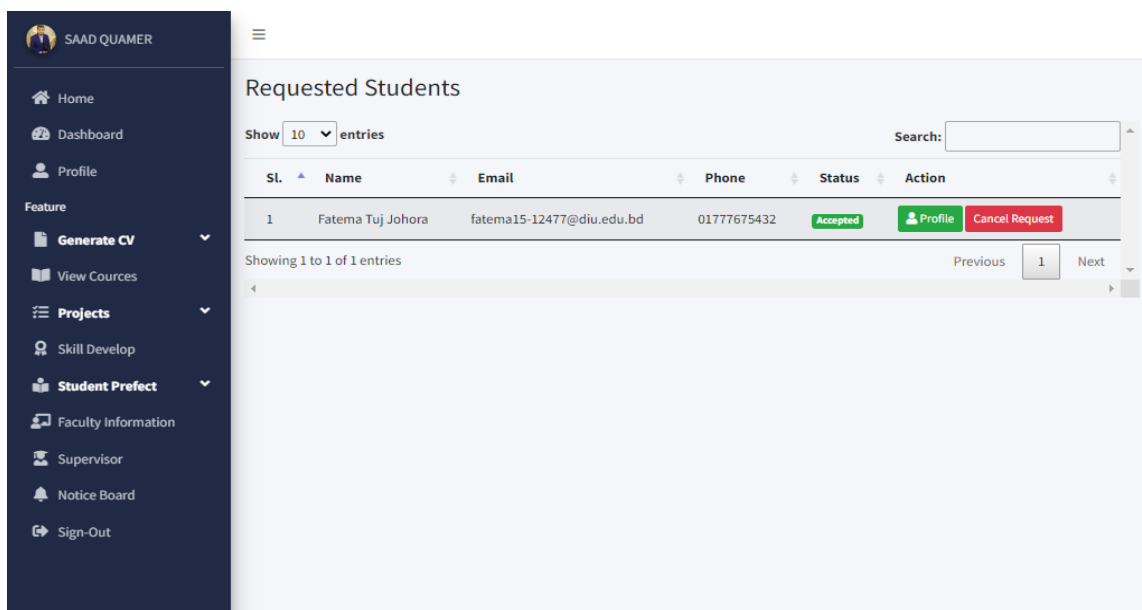

Figure 7.18: **Prefect Student Page**

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View Prefect Page: The **View Prefect Page** of our project is shown in figures 7.19 . After clicking on the link, we are taken to this .
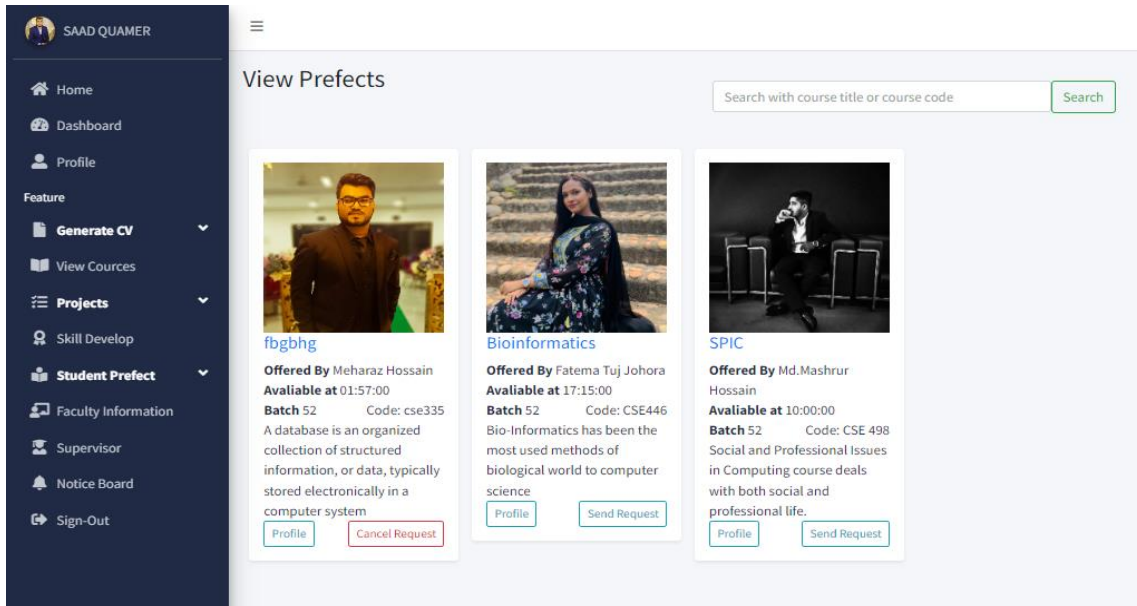

Figure 7.19: **View Prefect Page**

Admin Dashboard: The **Admin Dashboard Page** of our project is shown in figures 7.20 . After clicking on the link, we are taken to this.
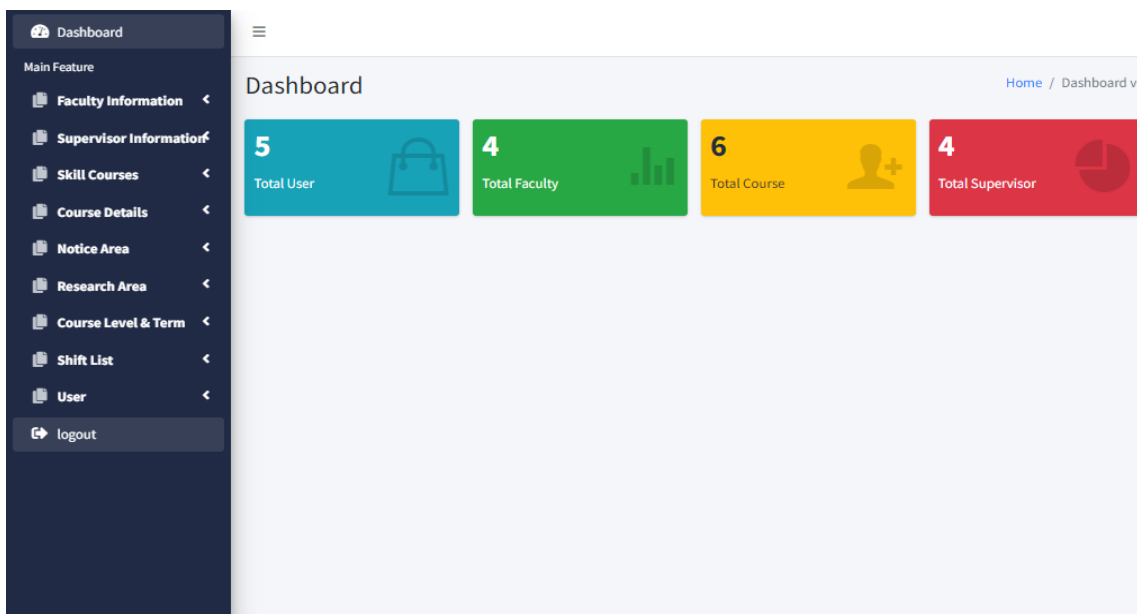

Figure 7.20: **Admin Dashboard Page**

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Admin All Courses: The **Admin All Courses Page** of our project is shown in figures 7.21 After clicking on the link, we are taken to this .

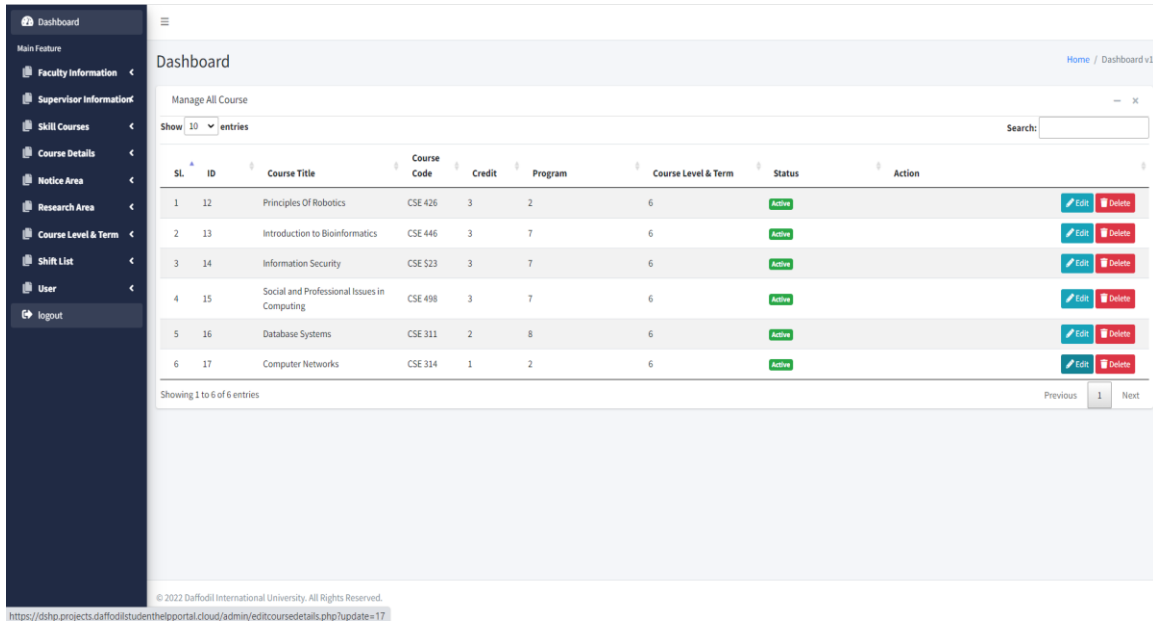Figure 7.21: **Admin All Courses Page**

Add Admin: The **Add Admin Page** of our project is shown in figures 7.22 After clicking on the link, we are taken to this .
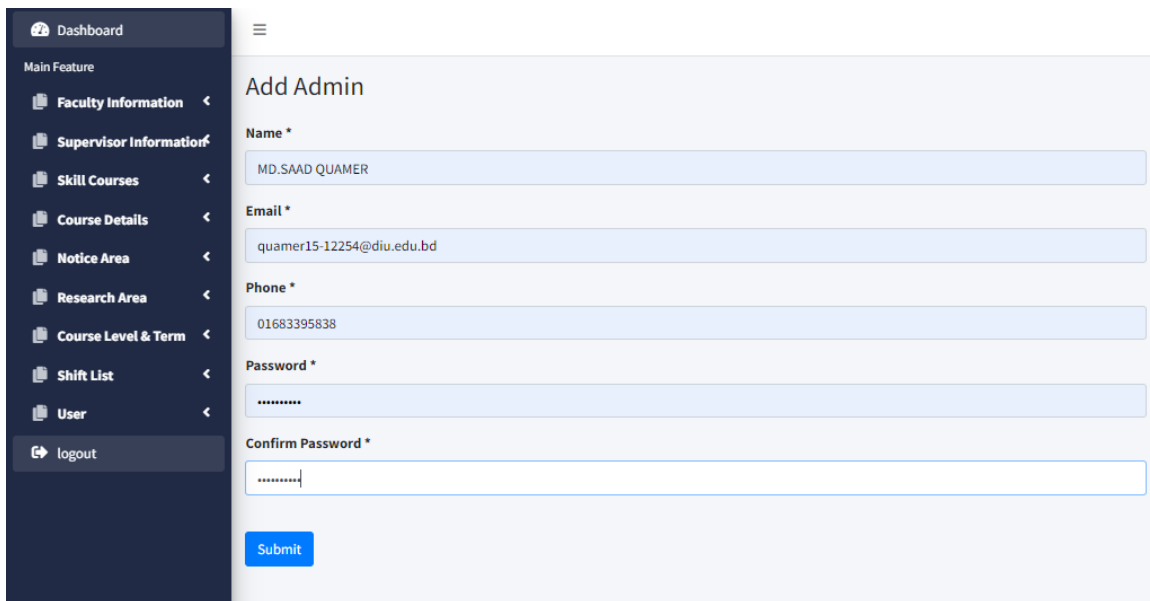

Figure 7.22: **Add Admin Page**

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All Notice: The **All Notice Page** of our project is shown in figures 7.23,7.24 . After clicking on the link, we are taken to this
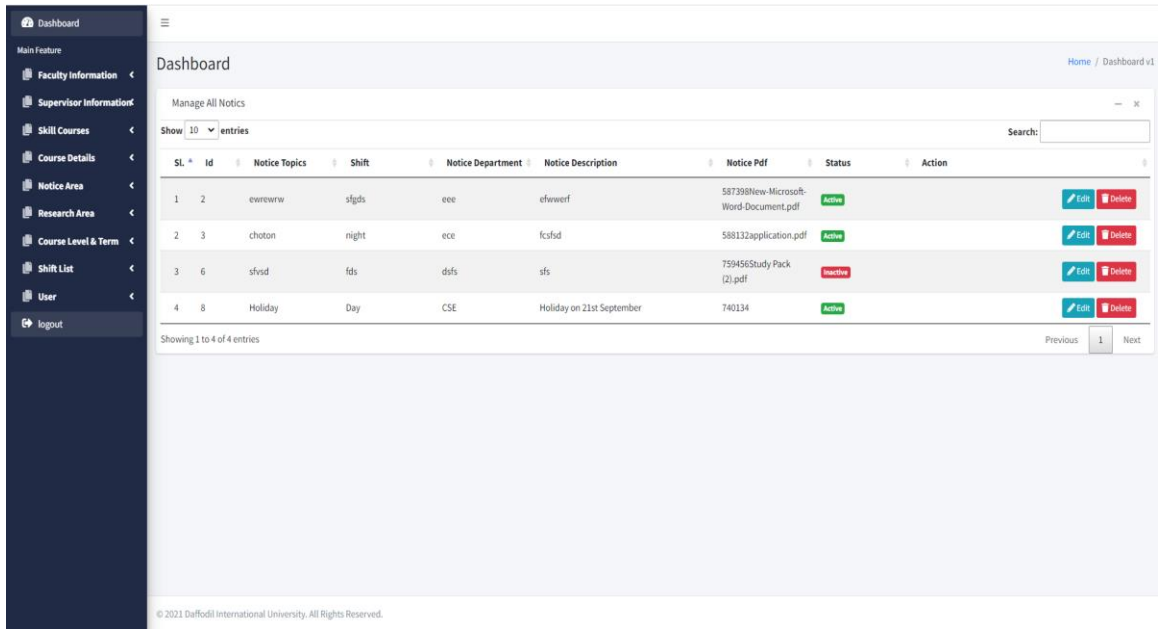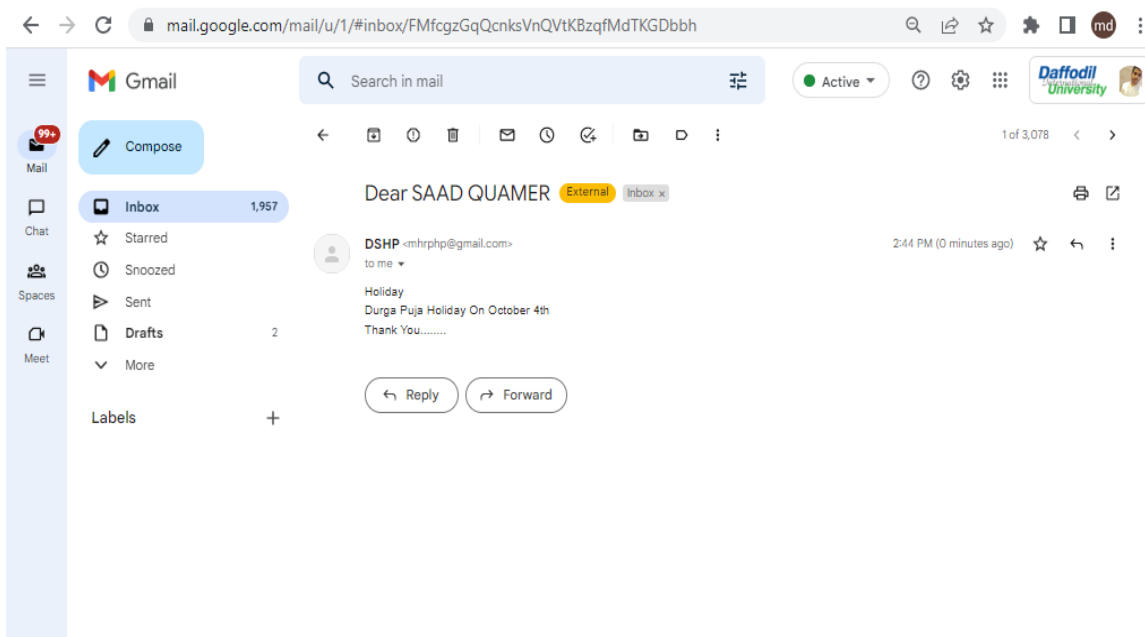

Figure 7.23: **All Notice Page**

Figure 7.24: **Notice Mail**

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CPC Post Page: The **Contact Page** of our project is shown in figures 7.25. After clicking on the link, we are taken to this
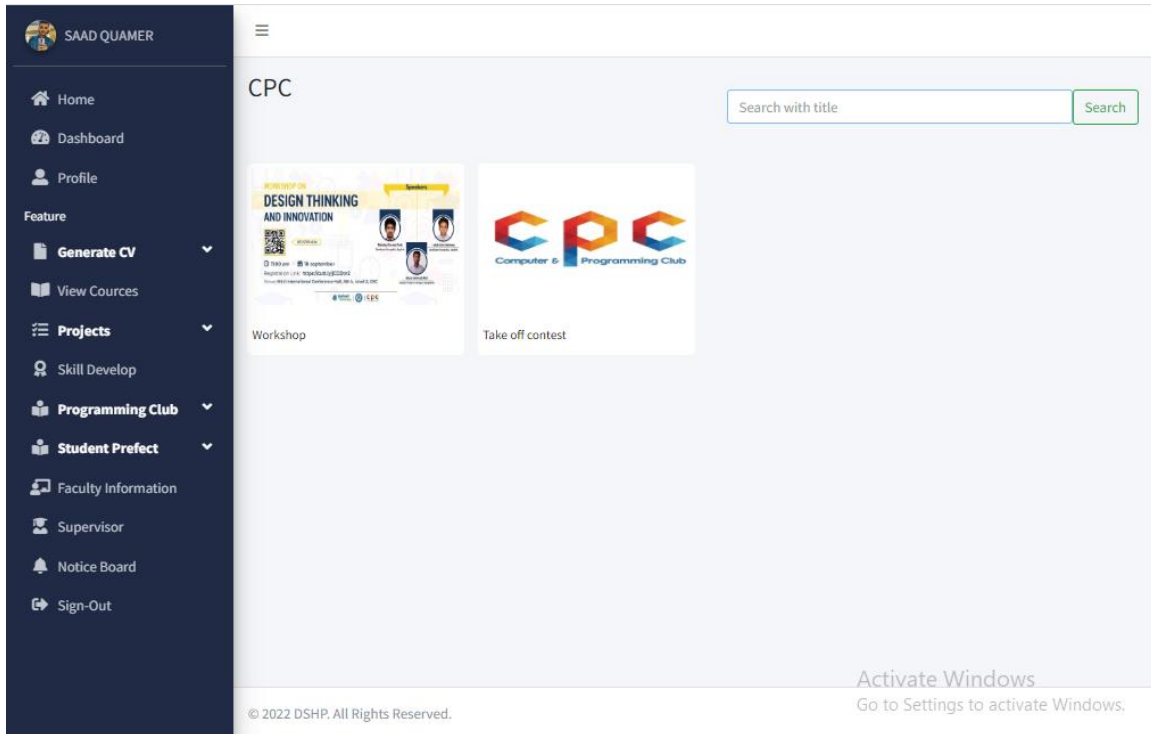

Figure 7.25: **Cpc Post Page**

Contact Page: The **Contact Page** of our project is shown in figures 7.26. After clicking on the link, we are taken to this
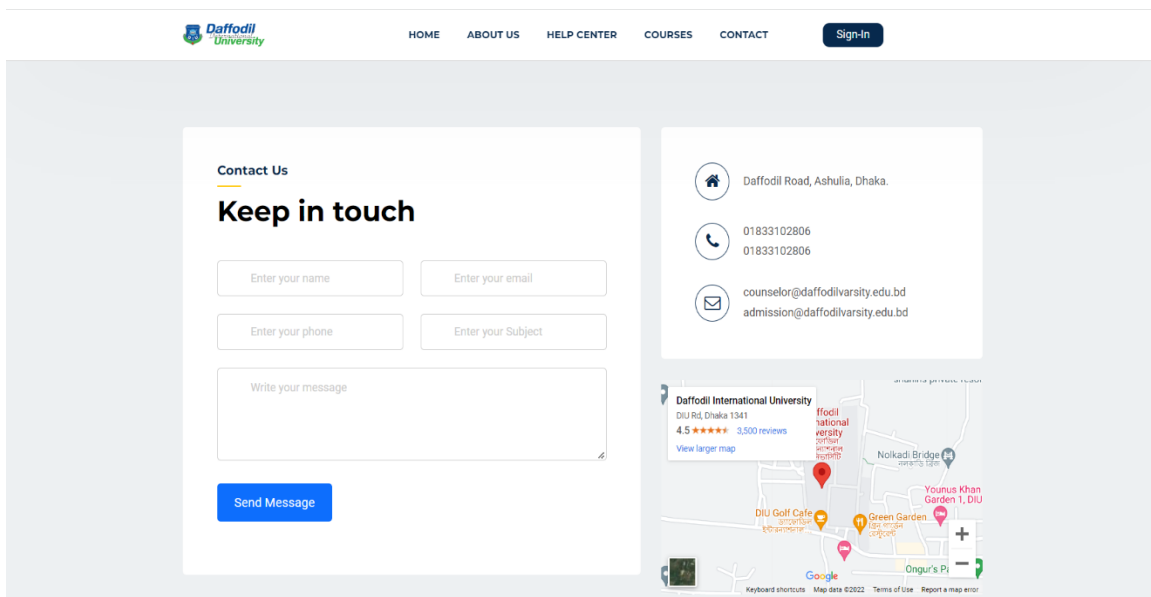

Figure 7.26: **Contact Page**

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Chapter 8

Impact on students, University environment, and Sustainability

8.1 Impact on Students

The "Diu Student Help Portal" web application will have a significant impact on our university's students. They benefit from it in many ways. Students will be able to keep their university projects in one location, making it easy for them to access such projects in the future if they need to demonstrate their prior work. Students may contact the student prefect for assistance if they need assistance understanding a particular subject or specific guidance or advice. Additionally, student prefects can arrange their time and profiles according to regulations. Students will be able to automatically build their own resumes, which they may use for a variety of purposes. Students who are interested in research and thesis projects can learn more about the faculty members' research areas, which assists them in selecting an appropriate supervisor. Students will be able to learn about the university courses they are taking to build certain skills. Therefore, employing our approach will assist our students in all of these ways.

8.2 Impact on University Environment

As we develop a system for university students so it positively impacts the university. Our web application is user-friendly. So students can easily use this for their General purpose. As students can create Professional cv, get university notices, Get know about University skill development courses, get help from student prefect for their project or research, Know about Professors or faculty members skill development courses. So all of these things helps them to Develop their Research Skills, Help with job placements, And encourage to develop a particular skill. When students are benefited at the same time University also will be benefited. So overall University student's job placements will be also increased. So university education quality will be increased. That's Why "Diu Student Help Portal" gives positive impact on our University.

8.3 Robustness & Sustainability Plan

A robustness & Sustainability plan plays a vital to make a project successful. If our Project have lack of robustness so users face many difficulties like server down issues, long response time, functionality doesn't work properly, face database recovery issues. For example, In future, some students try to find courses details and past exam question for their practice. But at the same time they face several problems like long server load time, some functionality can't work properly. So if we solve these issues we can Get the robustness of the system. A project is sustainable when a system is able to fulfill our new requirements and made our system's future maintenance easier. Suppose in the future we want to do data analysis work in our system. We do analysis on basis of student's project data and their skill development courses. Whose students who done more projects and do skill developments courses they will get priority for university job placements . Without these we share their analyst data in several company for their placements .So if we can ensure all of these functionalities our system is reliable ,robustness ,and sustainable for future work.

CHAPTER 9
CONCLUSION AND FUTURE SCOPE

9.1 Project Discussion and Conclusion

Student life at universities is made simpler and more flexible by our DIU "Student Help Portal "system. Here, our main goal is to find solutions to various issues that university students run into. Additionally, we strive to make the job placement process much simpler and more flexible for them. With our project output, we make sure that our project goals and objectives are satisfied. Students can make their own resumes as part of this assignment, and get assistance from the student prefect for the relevant course or project, Students will be able to preserve their university work in one location and learn about university skill development courses. Every organization seeks to choose people with the necessary skills. Every organization wants to choose job candidates that are highly qualified and have relevant expertise. Therefore, taking courses in skill development helps students find jobs more easily and adaptively. We put a lot of effort into making sure that the project deliverables fit our project goals. Finally, our efforts are crucial in ensuring that this endeavor reaches the project's objective.

9.2 Project Further Development Scope

We must ensure that the system can meet our new requirements and that the future maintenance of the system is adaptable. We already have a plan in place to expand the capabilities of our system. In the future, we aim to use data analytics. Students who have completed more projects and taken skill-building courses will be given preference when it comes to employment placements at universities. Without them, we wish to combine them with the database of the (BLC). Because we receive a ton of information on our university students there. By using BLC and our system data, we can train our system to identify which students are actually qualified for job placement. When several employers arrive for job placement, we may provide them with information on deserving and capable pupils. Thus, this approach will enable us to keep track of our objectives, and further improvement will assist deserving students in obtaining employment based on their talents. Thus, it will become the most beneficial Website for students in the future.

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