STUDENT PORTAL

A PROJECT REPORT

Submitted by

DARSHIL DHANDHIYA (194520307008)

DEV PADDHARIYA (194520307026)

PARAM PAWAR (194520307033)

OM SUTARIYA (194520307044)

In partial fulfilment for the award of the degree

of

DIPLOMA ENGINEERING

in

COMPUTER ENGINEERING

Guided by

Prof. Vipul Bambhaniya

Gyanmanjari Diploma Engineering College, Bhavnagar

Gujarat Technological University, Ahmedabad

(September), 2021

GUJARAT TECHNOLOGICAL UNIVERSITY AHMEDABAD GYANMANJARI

DIPLOMA ENGINEERING COLLEGE BHAVNAGAR

Certificate

This is to certify that Mr. **Darshil Dhandhiya, Dev Paddhariya, Param Pawar, Om Sutariya**. from **Gyanmanjari Diploma Engineering College, Bhavnagar** having Enrolment No: 194520307008, 194520307026, 194520307033, 194520307044 has completed **Project Report** having title **Student Portal**, in a group consisting of **4** persons under the guidance of the faculty guide **Vipul Bambhaniya.**

Institute Guide-UDP   Head of Department

Student Information Sheet

Name of Student	Dhandhiya Darshil ManishKumar		
	Surname	**Name**	**Father's Name**
Enrolment Number	194520307008		
Contact Numbers	**Mob:8460158483**	**Land Line:**	
Email ID	darshildhandhiya910@gmail.com		
College Name	Gyanmanjari Diploma Engineering College, Bhavnagar	**College Code:** 452	
Branch	Computer Engineering	**Semester:** VI	
Student Team	**Name**		**Enrolment Number**
	Dev Paddhariya		194520307026
	Param Pawar		194520307033
	Om Sutariya		194520307044
Student Signature			

ACKNOWLEDGMENT

It was very exciting for us to work on the project of Student Portal. During this work we have gained both practical as well as theoretical knowledge of great significance.

Our Project, which you are using, is the result of many people's dedication. It is the cumulative efforts of many minds working together day and night that gave us the contentment of developing the software.

On the very outset of this report, I would like to extend my sincere & heartfelt obligation towards all the personages who have helped me in this endeavor. Without their active guidance, help, cooperation & encouragement, I would not have made headway in the project.

I am extremely thankful and pay my gratitude to **Mr. Prof. A.G. Maru** (**Head of Department)** and **Prof. Vipul Bambhaniya (Project Faculty)** for his valuable guidance and support on completion of this project presently.

I extend my gratitude to **Gyanmanjari Institute Of Technology** for giving me this opportunity.

I would like to thank my group member for her support and help throughout the project.

I also acknowledge with a deep sense of reverence, my gratitude towards my parents and faculty, who has always supported me morally as well as economically.

I gratitude goes to all of my friends who directly or indirectly helped me to complete this project report.

Last but not least our acknowledgement goes to all the well-wishers of our project for their excellent support in all aspects.

ABSTRACT

This project uses a web application concept to facilitate the departmental system in educational institutes.

Such type of web application is very useful in school as well as in college for daily attendance.

A student portal project that acts as an online portal between students and the faculty. The system is designed for a particular branch such as BCA or diploma. It contains an admin who can enter details of students. Now admin can add details of Students marks, Material, Scheduling, etc.

Large libraries usually have thousands of books kept at different locations. It is sometimes tedious to search for book locations. It is also necessary to know whether a book is available or not at the library.

Web application intends to provide a well-established web-based Social Network system between a job seeker and a recruiter. This documents a networking system scope, functionalities, requirements and feasibility.
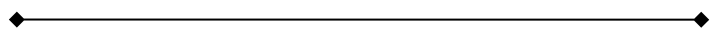
Chat Box typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response.

INDEX

1

Chapter # 1: Introduction

◆————————————————————————◆

1.1   Project profile And Information
1.2   Purpose
1.3   Scope

1.1 Project Profile

Project Title	"Student Portal"
Project Definition	Help student and need a well-designed system to improve student growth and easy to use and edit for Teachers and Students.
Type	It's a USER DEFINED PROJECT.
Operating System	Microsoft Windows 10.
Hardware Configuration	Processor - 1.0GHz Memory - 256 MB of RAM Storage - 50GB HDD
Front End	HTML, CSS
Back End	PHP, SQL Server
Internal Guide	Prof. Vipul Bambhaniya

Submitted By	**Name**	**Enrolment**
	Darshil Dhandhiya	194520307008
	Dev Paddhariya	194520307026
	Param Pawar	194520307033
	Om Sutariya	194520307044
Submitted To	Gyanmanjari Institute of Technology	

1.1   Project Introduction

A student portal project that acts as an online portal between students, teacher and the admin. The system is designed for a college. It contains an admin who can enter details of students, teachers can then login using the provided user id password and Now admin can add details of Students marks. These are marks of 6 semesters each Sem having 4 subjects each. When student's login they can see their own marks details. Students also get a student helpdesk to assist them and also a download page where students may download pdf, eBooks, PPT, Etc. from the web system.

project uses a web application concept to facilitate the departmental system in educational institutes. Such type of web application is very useful in school as well as in college for daily attendance.
Large libraries usually have thousands of books kept at different locations. It is sometimes tedious to search for book locations. It is also necessary to know whether a book is available or not at the library.

Web application intends to provide a well-established web-based Social Network system between a job seeker and a recruiter. This documents a networking system scope, functionalities, requirements and feasibility. Chat Box typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response.

Modules:

- Admin login
- Teacher login
- Student Login
- Result showing
- Showing material
- Scheduling
- Student query box (student to student)
- Student query box (student to teacher)
- News feed
- Upload result
- Upload material
- Upload scheduling
- Admin access
- Upload news
- Connection to multiple database
- Admin can enter student, staff details

Software Used:

- PHP
- MYSQL
- HTML
- CSS
- Java Script

1.2   Purpose

In recent years, computer technology and network technology are developing rapidly and their applications in education are more and more widely.

The main purpose of this Project is making **Multipurpose Website** that can help to manage college scheduling fast and easy to manipulate all kinds of college news, data sharing, query-Box so it's work like College Communication, google classroom, college Social network and it's all thing work on single network no need to use another service for college.

1.3   Scope

The scope of the system can be considered as the places where our system can be used or say it can be useful there. The basic scope of our system is usually those faculties and teachers who work for an educational institute like google classroom, messenger, College social network, scheduling, and more feasibilities.

It's used to help student and need a well-designed system to improve student growth and easy to edit and use for Teacher and faculty.
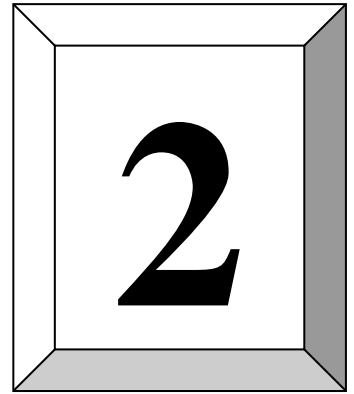
Chapter # 2: <u>SYSTEM REQUIREMENT ANALYSIS</u>
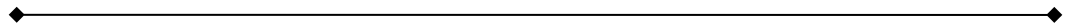
2.1 current System Study

2.2 Weakness of Current System

2.3 Problem Identification / Definition

2.4 Requirement of New System

2.5 Feasibility Study

2.5.1 Technical

2.5.2 Economical

2.5.3 Operational

2.5.4 Schedule (Timeline Chart)

2.6 Development model (Software Process Model)

2.7 Requirement Validation

2.8 Tools and Technology / Minimum Hardware and Software Requirements

2.9 System Architecture

2.10 Data Flow Diagram

2.11 Use –case Diagram

2.12 Activity Diagram

2.1 current System Study

In today's competitive and busy world, we find people usually involved in their own work. And there is truly lack of time. This same also faced by our faculties and teachers. They are in a profession where they are constantly busy in thinking about the welfare of their student and their progress; this can be a probable goal of them. The best measure to achieve this goal is **central place for all tasks**, and easy to use faculties and teachers.

This is best, faculties and teachers need to save maximum time from student portal. The site should be designed according to all online class requirements in one place like, Online classroom, Quiz maker, Query Chat-box, News feed, etc.

- Student can view study materials, Exam routine and important news related to their college, class, course in one place with a click of mouse

- Student can ask for specific query for any subject through the post option and if anyone have the solution, he / she can respond with the details.

- Students can have the messaging facility for any personal query to the portal members.

- Moreover, any student can interact with any college persons (like students of any department, governing body, administrative section etc.)

It is especially useful for any educational institute where modifications in the content can be done easily according to requirements

The project can be easily implemented under various situations. We can add new features as and when we require, making reusability possible as there is flexibility in all the modules.

2.2 Weakness of Current System

After the detailed analysis of the current system and looking forward to the present scenario I think we need or say require changing the system. As change is always accepted and required in this rapidly developing world of technology.

The portal industry is several years old, and vendors come into and out of the market every month. Since typical licensing and development costs are several hundred thousand dollars or more, vendor selection is high risk. The current volatility of the portal market and the lack of agreed upon standards argues for institutions to wait to jump into a portal unless there is a clear need or benefit that requires one.

- urgently, the college is using the university's corporate Program Curriculum Database (PCD) to record program.

- Besides the SAD and SES which are using for enrolment purpose, College's Student results System (SRS) is using for student profile including ID, Name and Program as well as the module marks.

- However, accessing and operating these systems requiring dedicated software installed on the user's machines, thus it is quite troublesome for users who do not have the software.

- For example, if a student wants to check his result from the last exam, he must use the suitable machines in the college to access, which is complicated and inflexible. Additionally, the timetable system of the college is also standalone system and only accessible through web-based interface, which currently support for desktop view only.

- As for students who despite bringing those heavy laptops to class and would prefer smart phones or tablets.

2.3 Problem Identification / Definition

After the detail study of the current system, I come to conclusion that this system needs a handful of changes considering the present world scenario and looking forward to the developing technology. The basic problem I find here is the paper-based system which is tedious and time consuming. Sometimes it is also felt repetitive as this process of examination comes on regular intervals and is needed for checking the progress of the students.

the problem is providing the complete information about the college campus. in which the college staff members, student and parents can access the information and it will be familiar with college campus it will provide interactive environment for staff, students and parents by getting knowledge of student attendance, remarks, exam performance, grade, timetable, notice etc.

Problem in existing system:

- It was limited to a single system.

- It has a lot of manual work (Manual system does not mean that we are working with pen and papers, it also includes working on spread sheets and other simple software's).

- It was time consuming process.

- The present system was very less secure.

- It is unable to generate different kinds of report.

- It was user-friendly.

Solution to this problem:

The development of the new system contains the following activities, which try to automate the entire process keeping in view of the database integration approach.

- User friendliness is provided in the application with various controls.

- It can be accessed over the internet.

- The system makes the overall project management much easier and flexible.

- Various classes have been to provide file upload and mail features.

- There Is no risk of data mi management at any level while the project development is under process.

- It provides high level of security using different protocols like https etc.

2.4 Requirement of New System

As described previously the current system has number of changes required and thus this change as a result generates circumstances for requirement of a new system. The new system is probably the best choices to consider.

- A person should be able to login to the system through the first page of the Website.

- The Administrator can create faculty profile.

- Admin can upload the data for a particular student.

- Admin can upload collage scheduling, collage news, on successful completion user (Student, parents, Faculty) can view.

- A general user will have access to see the status on student portal.

- Student can see attendance, notices, grades, report and other facilities in updated manner.

- There will be a separate page for every student as his account in which he can get notices, attendance, grades, assignments etc.

- Faculty can give the attendances and notices for the students.

- User (Student) can see collage news feed.

- Student direct communication with faculty member without using any mobile number.

- Student direct communicate with other student (Student To Student).

2.5 Feasibility Study

A feasibility study is an analysis of how successfully a project can be completed, accounting for factors that affect it such as economic, technological, and operational. Project managers use feasibility studies to determine potential positive and negative outcomes of a project before investing a considerable amount of time and money into it.

Feasibility study is made to see if the project on completion will serve the purpose of the organization for work, effort and the time that spend on it. Feasibility study lets the developer foresee the future of the project and the usefulness.

A feasibility study of a system proposal is according to its workability, which is the impact on the organization, ability to meet their user needs and effective use of resources. Thus, when a new application is proposed it normally goes through a feasibility study.

The document provides the feasibility of the project that is being designed and lists various areas that were considered very carefully during the feasibility study of this project such as Technical, Economic and Operational feasibilities.

During the stage of our feasibility study, we had to undergo the following steps as described under:

- Identify the origin of data at different levels of the system.

- Identify the expectation of end user from the finished product/system.

- Analyze the drawback(s) of the existing system.

The different types of feasibility are:

- Technical

- Economical

- Operational

- Schedule (TimeLine Chart)

The different types of feasibility according to the aspect of our system are explained below:

2.5.1 Technical Feasibility: -

The system must be evaluated from the technical point of view first. The assessment of this feasibility must be based on an outline design of the system requirement in the terms of input, output, programs, and procedures. Having identified an outline system, the investigation must go on to suggest the type of equipment, required method developing the system, of running the system once it has been designed.

- The system is technically feasible if the user using it is aware or known to the current technology we are using. Our system can easily be known to anyone as it is just user friendly and simple to acquire.

- Secondly the software or tools needed to run the application are easily available.

- We can also count another aspect that is the developers aware of the technology used in their application. Hence, it is technically feasible

- It lays out details on how a good or service will be delivered, which includes transportation, business location, technology needed, materials and labour.

The project should be developed such that the necessary functions and performance are achieved within the constraints. The project is developed within latest technology. Through the technology may become obsolete after some period, since never version of same software supports older versions, the system may still be used. So, there are minimal constraints involved with this project. The system has been developed using Java the project is technically feasible for development.

2.5.2 Economic Feasibility: -

The developing system must be justified by cost and benefit. Criteria to ensure that effort is concentrated on project, which will give best, return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require.

- Is the system fitted to the budget we have, and it should not be a kind to burden to anyone's pocket?

- Would it be cost-effective to develop the system, or it is worthwhile to remain with current system?

- No other database tools are required as the database used in our system is given together with the system so it's economically feasible.

- Our system is easy to set up no external updating to the system is required. Hence, it is economically feasible.

- It is a projection of the amount of funding or start-up capital needed, what sources of capital can and will be used and what kind of return can be expected on the investment.

Since the system is developed as part of project work, there is no manual cost to spend for the proposed system. Also, all the resources are already available, it gives an indication of the system is economically possible for development.

2.5.3 Operational Feasibility: -

- Developed system will provide the adequate throughput and all necessary information to end-users.

- It will provide efficient and cost-effective access to up-to-date data.

- If installed properly, the system will provide with adequate result as we require only a printer and computer.

- Thus, it is operationally feasible to develop the proposed system.

- It is a projection of the amount of funding or start-up capital needed, what sources of capital can and will be used and what kind of return can be expected on the investment.

2.6 Development model (Software Process Model)

According to the nature of our project we are planning to use the spiral model as it is developed in some basic phases which help in proper and perfect development to the system.

We have used Waterfall Model as Software Engineering life Cycle Process. It is the simplest; oldest and most widely used process model for software development. This model acquires its name from the fact that classic software life cycle is represented as a sequence of descending steps.
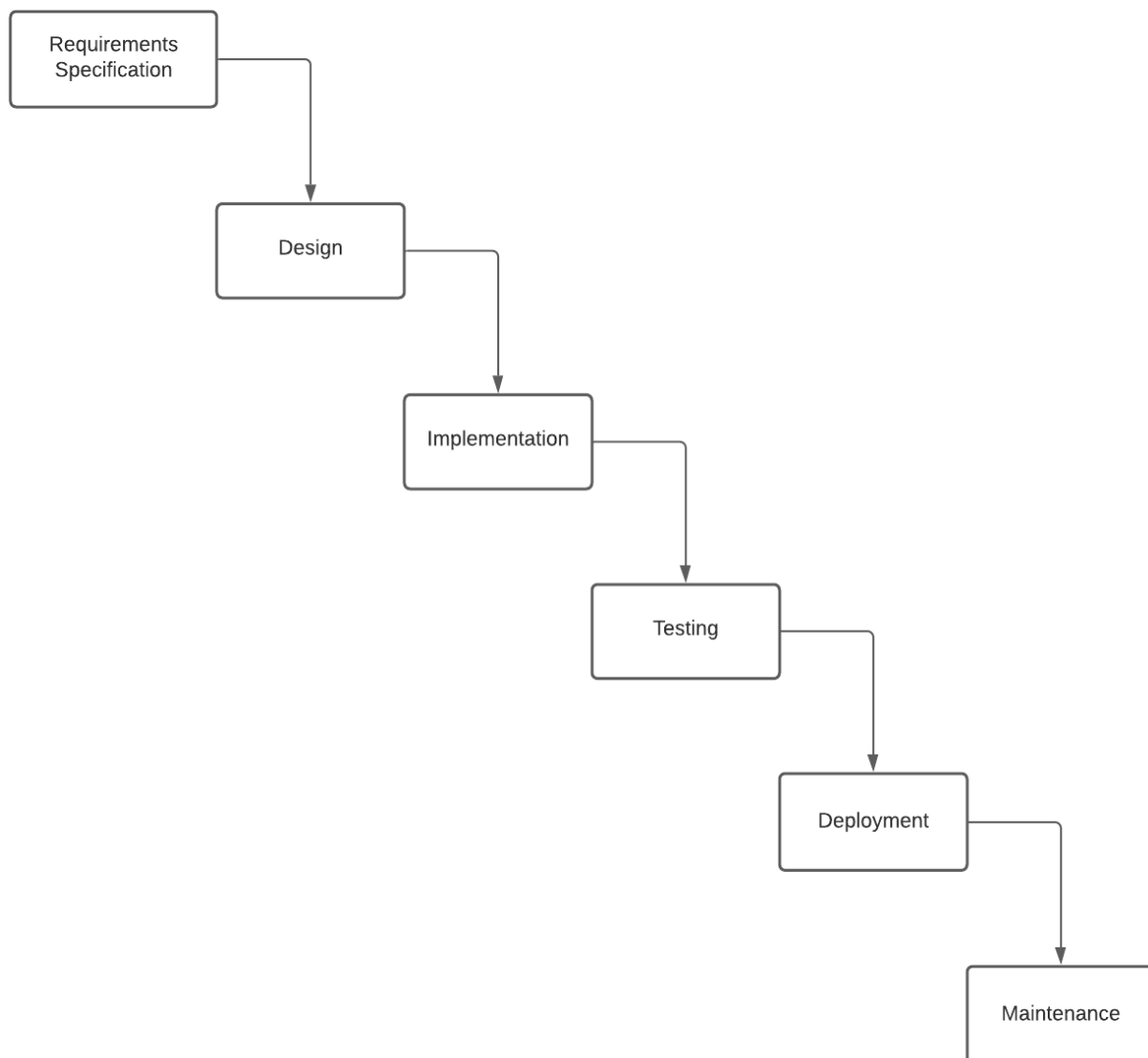
2.6.1 Requirement Analysis: -

This process is also known as feasibility study. In this phase, the development team studied the site requirement. They investigate the need for possible dynamic representation of the site and increase security features. By the end of feasibility study, the team furnishes a document that holds the different specific recommendations for the candidate system. It also includes personnel assignments, costs, project schedules, target dates etc. the requirement gathering process is intensified and focused specially on software. The essential purpose of this phase is to find the need and to define the problem that needs to be solved. During this phase following facts were gathered.

- Determined the user need
- Identified the facts
- Establish the goals and objective for the proposed system
- Feasibility for the new system

2.6.2 System Analysis and Design: -

In this phase the software's overall structure and its nuances are defined. In terms of client server technology, the no of tiers needed for the package architecture, database design, data structure design etc. are defined in this phase. Analysis and Design are very crucial in entire development cycle. Any glitch in this phase could be expensive to solve in the later stage of software development. Hence following is the essential approach taken doting website designing

- DFD
- Database Designing
- Form Designing
- Pseudo code for methods

2.6.3 Implementation

With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.

2.6.3 Testing: -

Once the code is generated, the website testing begins. Different testing methodologies are done to unravel the bugs that were committed during the previous phases. Different testing methodologies am used:

- Acceptance testing

- White Box testing
- Black Box testing

2.6.4 Deployment

- You need a process model that has been explicitly designed to accommodate a product that evolved over time.

- It is iterative that enables you to develop increasingly more complete version of the software

- A series of evolutionary releases are delivered. During the early iterations, the release might be a model or prototype. During later iterations, increasingly more complete version of the engineered system is produced.

- The first circuit in the clockwise direction might result in the product specification; subsequent passes around the spiral might be used to develop a prototype and then progressively more sophisticated versions of the software.

- Each pass results in adjustments to the project plan. Cost and schedule are adjusted based on feedback. Also, the number of iterations will be adjusted by project manager.

- Good to develop large-scale system as software evolves as the process progresses and risk should be understood and properly reacted to. Prototyping is used to reduce risk.

2.7 Requirement Validation

Requirement's validation is the process of checking that requirements defined for development, define the system that the customer really wants. To check issues related to requirements, we perform requirements validation. We usually use requirements validation to check error at the initial phase of development as the error may increase excessive rework when detected later in the development process.

In the requirements validation process, we perform a different type of test to check the requirements mentioned in the Software Requirements Specification (SRS), these checks include:

- Completeness checks
- Consistency checks
- Validity checks
- Realism checks
- Ambiguity checks
- Verifiability

The output of requirements validation is the list of problems and agreed on actions of detected problems. The lists of problems indicate the problem detected during the process of requirement validation. The list of agreed action states the corrective action that should be taken to fix the detected problem.

There are several techniques which are used either individually or in conjunction with other techniques to check to check entire or part of the system:

2.7.1 Test case generation:

Requirement mentioned in SRS document should be testable, the conducted tests reveal the error present in the requirement. It is generally believed that if the test is difficult or impossible to design than, this usually means that requirement will be difficult to implement and it should be reconsidered.

2.7.2 Prototyping:

In this validation techniques the prototype of the system is presented before the end-user or customer, they experiment with the presented model and check if it meets their need. This type of model is generally used to collect feedback about the requirement of the user.

2.7.3 Requirements Reviews:

In this approach, the SRS is carefully reviewed by a group of people including people from both the contractor organizations and the client side, the reviewer systematically analyses the document to check error and ambiguity.

2.7.4 Automated Consistency Analysis:

This approach is used for automatic detection of an error, such as nondeterminism, missing cases, a type error, and circular definitions, in requirements specifications.

First, the requirement is structured in formal notation then CASE tool is used to check inconsistency of the system, The report of all inconsistencies is identified, and corrective actions are taken.

2.7.5 Walk-through:

A walkthrough does not have a formally defined procedure and does not require a differentiated role assignment.

- Checking early whether the idea is feasible or not.
- Obtaining the opinions and suggestion of other people.
- Checking the approval of others and reaching an agreement.

2.8 Tools and Technology / Minimum Hardware and Software Requirements

The minimum hardware and software requirements of the software are as follows but this is the recommended needs of the system: -

- **Supported Operating Systems**: Windows, Linux.

- **Version**: All operating systems must be 32 bit only.

- **Processor**: 1GHz Pentium/AMD processor or more (Recommended)

- **RAM**: 256 MB (Recommended)

- **Hard Disk**: Up to 1GB of available space may be required

- **Display**: 1024 x 768 high color, 32-bit (Recommended)

network must be on connected any type of like ethernet, Wi-Fi, cellular data connection.

2.9 System Architecture

2.10 Data Flow Diagram

2.11   Use –case Diagram

2.12   Activity Diagram

3
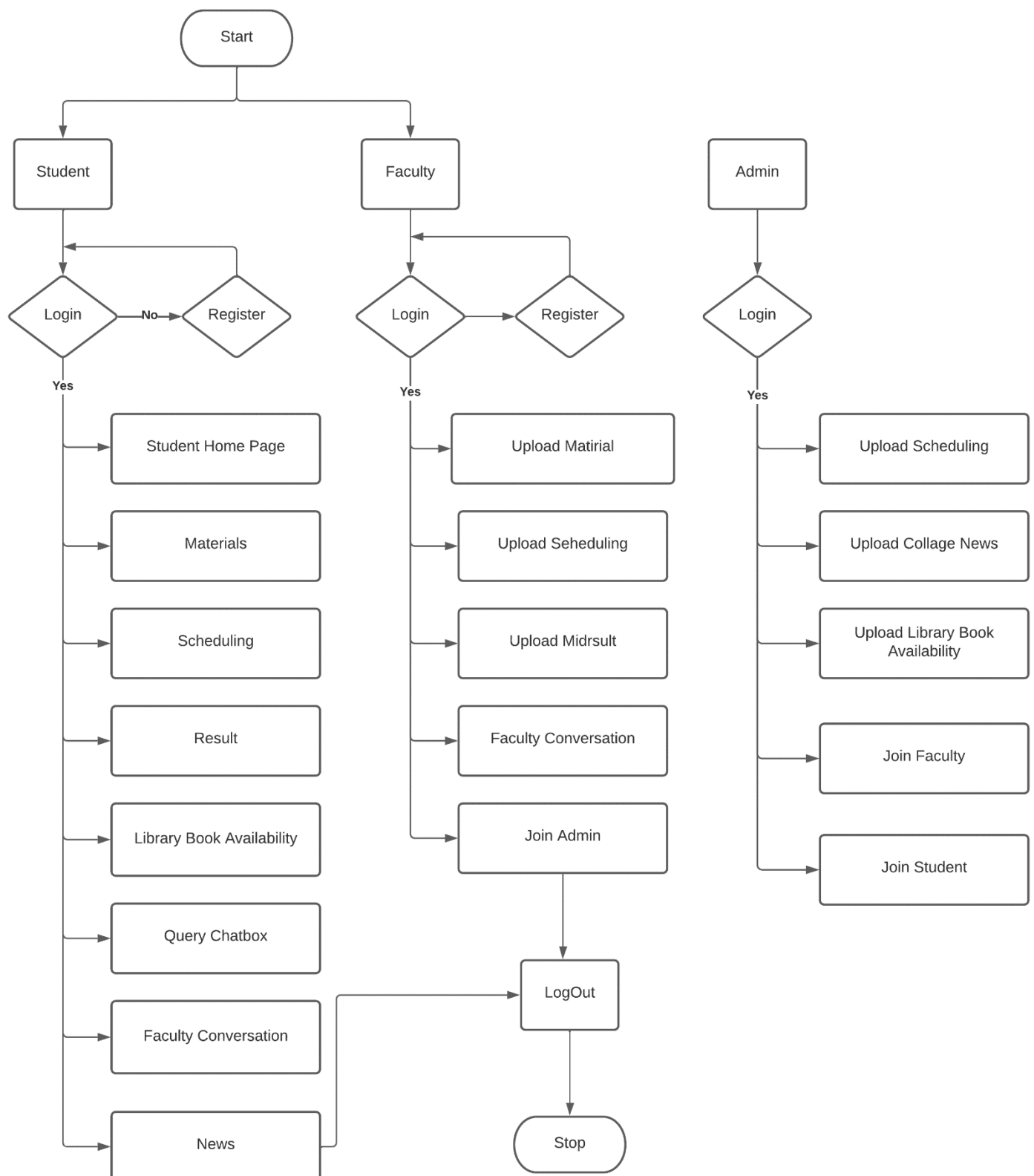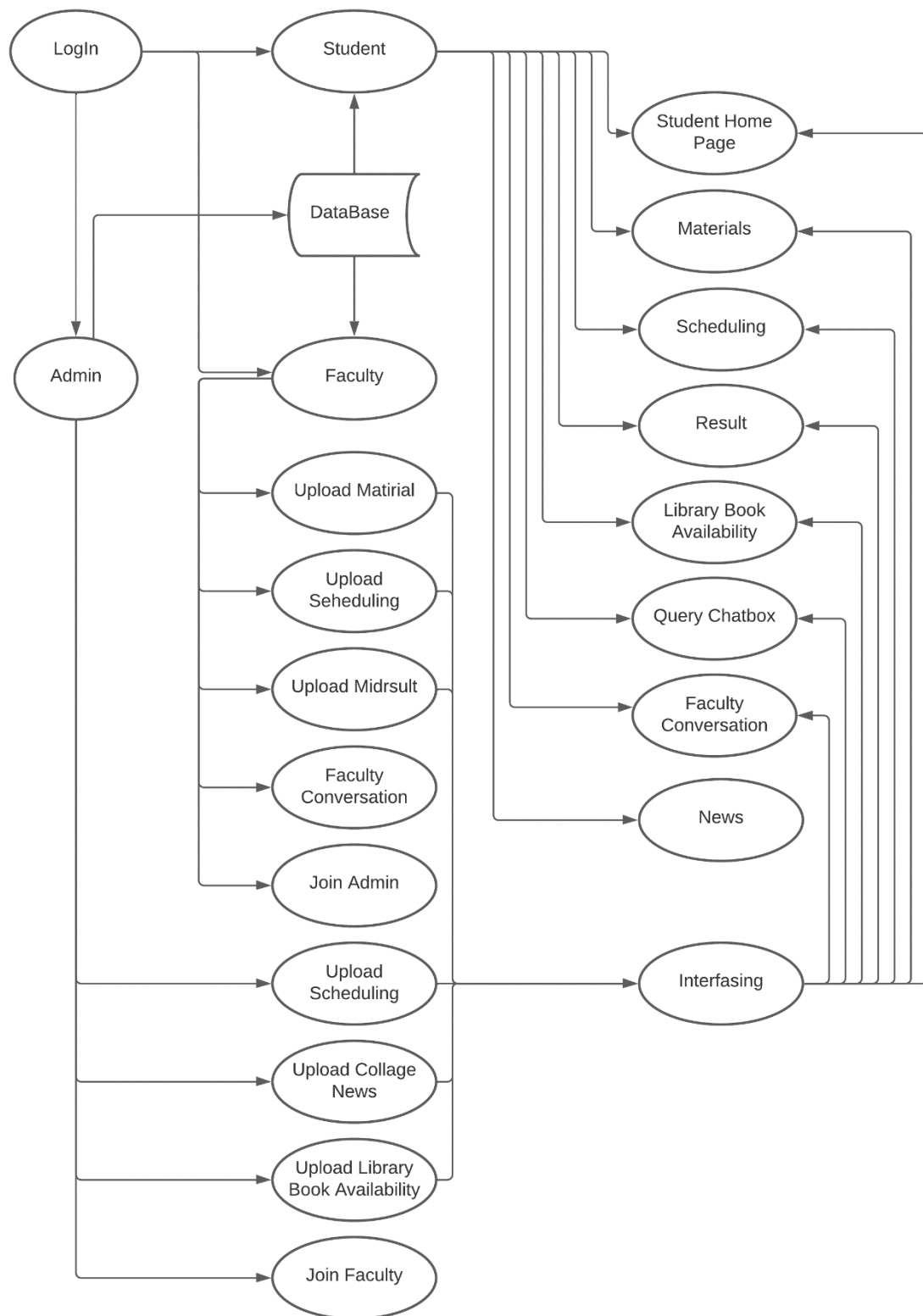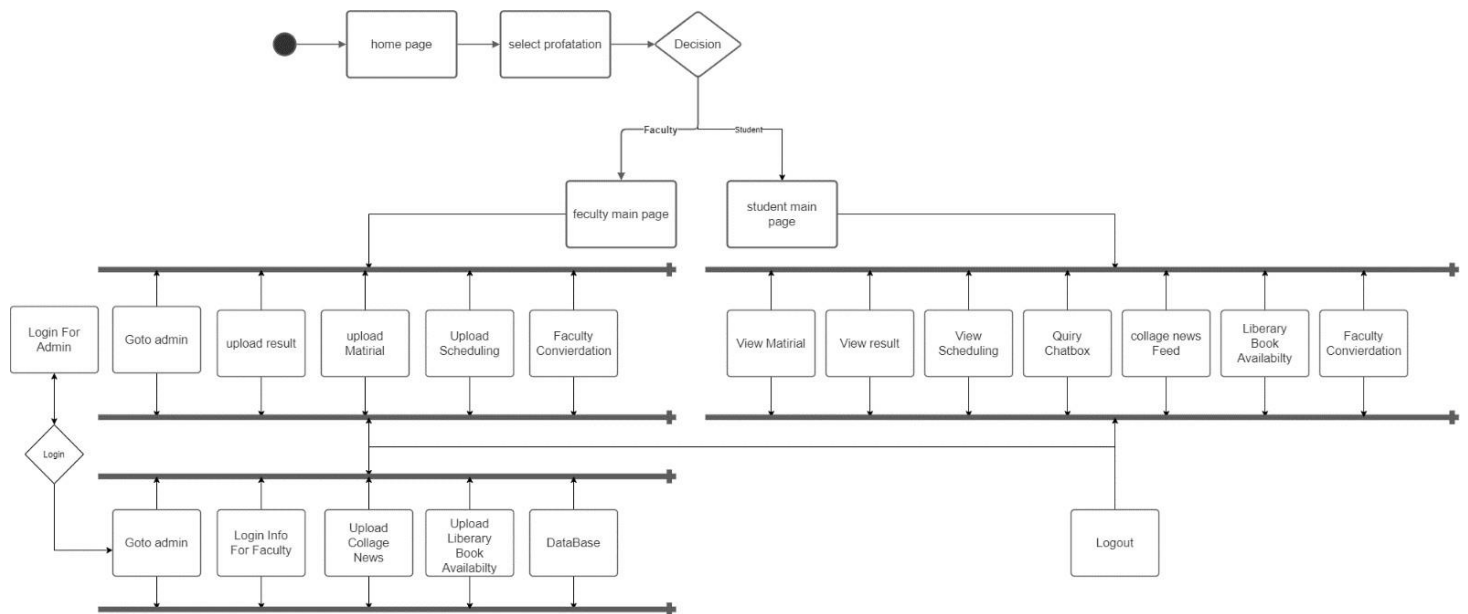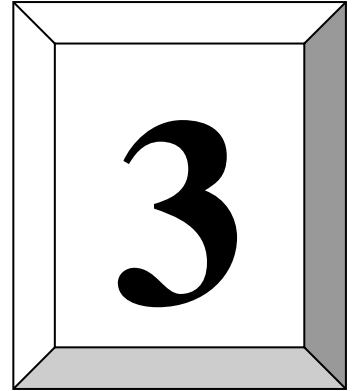
Chapter # 3: System Design
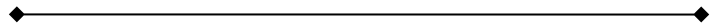
3.1   Database Design
3.1.1 Data Dictionary
3.1.2 Entity-Relationship Diagram
3.2   GUI Design (Self-Created GUI Screen shot)

3.1   Database Design

Database:

The name of the database is the same as that of the project name barring the prj_ convention.
E.g. The Database for the QPGS is made in SQL Server

Database Tables:

The names are given on the basis of the data stored for which entity. E.g. The table storing the Details of Faculties-Faculty

Database Fields:

The names of the fields are made by combining the Initials of the table name and the identity that the field stores. E.g.: The field storing the id of the subjects in the table named Subjects-subsid

A. Data Dictionary:

- A **data dictionary** is a data structure that stores metadata, i.e., (structured) data about data. The software package for a stand-alone data dictionary or data repository may interact with the software modules of the DBMS, but it is mainly used by the designers, users and the definitions of all schema objects in the database.
- How much space has been allocated for, and is currently used by, the schema objects
- Default values for columns
- Integrity constraint information
- The names of Oracle users
- Privileges and roles each user have been granted
- Auditing information, such as who has accessed or updated various schema objects

Other general database information Administrators of a computer system for information resource management.

3.1.1 Data Dictionary

studentdb

admin

Column	Type	Null	Default	Comments
id *(Primary)*	int	No		
email	varchar(255)	No		
password	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	1	A	No	

book

Column	Type	Null	Default	Comments
author	varchar(255)	No		
isbn *(Primary)*	int	No		
price	int	No		
category	varchar(255)	No		
copies	int	No		
title	varchar(255)	No		
photo	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	isbn	0	A	No	

chats_faculty

Column	Type	Null	Default	Comments
uname	varchar(255)	No		
msg	varchar(255)	No		
dt	varchar(255)	No		

No index defined!

chats_student

Column	Type	Null	Default	Comments
uname	varchar(255)	No		

msg	varchar(255)	No			
dt	varchar(255)	No			

No index defined!

faculty_registration

Column	Type	Null	Default	Comments
id *(Primary)*	bigint	No		
FirstName	varchar(255)	No		
lastName	varchar(255)	No		
email	varchar(255)	No		
profile_photo	varchar(255)	No		
password	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	2	A	No	

material

Column	Type	Null	Default	Comments
id *(Primary)*	bigint	No		
uploaded_on	varchar(255)	No		
descc	varchar(255)	No		
file_name	varchar(255)	No		
link	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	1	A	No	

news

Column	Type	Null	Default	Comments
file_name	varchar(255)	No		
uploaded_on	varchar(255)	No		
id *(Primary)*	int	No		
descc	varchar(255)	No		
link	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

result

Column	Type	Null	Default	Comments
file_name	varchar(255)	No		
uploaded_on	varchar(255)	No		
id (Primary)	int	No		
descc	varchar(255)	No		
link	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

scheduling

Column	Type	Null	Default	Comments
file_name	varchar(255)	No		
uploaded_on	varchar(255)	No		
id (Primary)	int	No		
descc	varchar(255)	No		
link	varchar(255)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	4	A	No	

student_ragistration

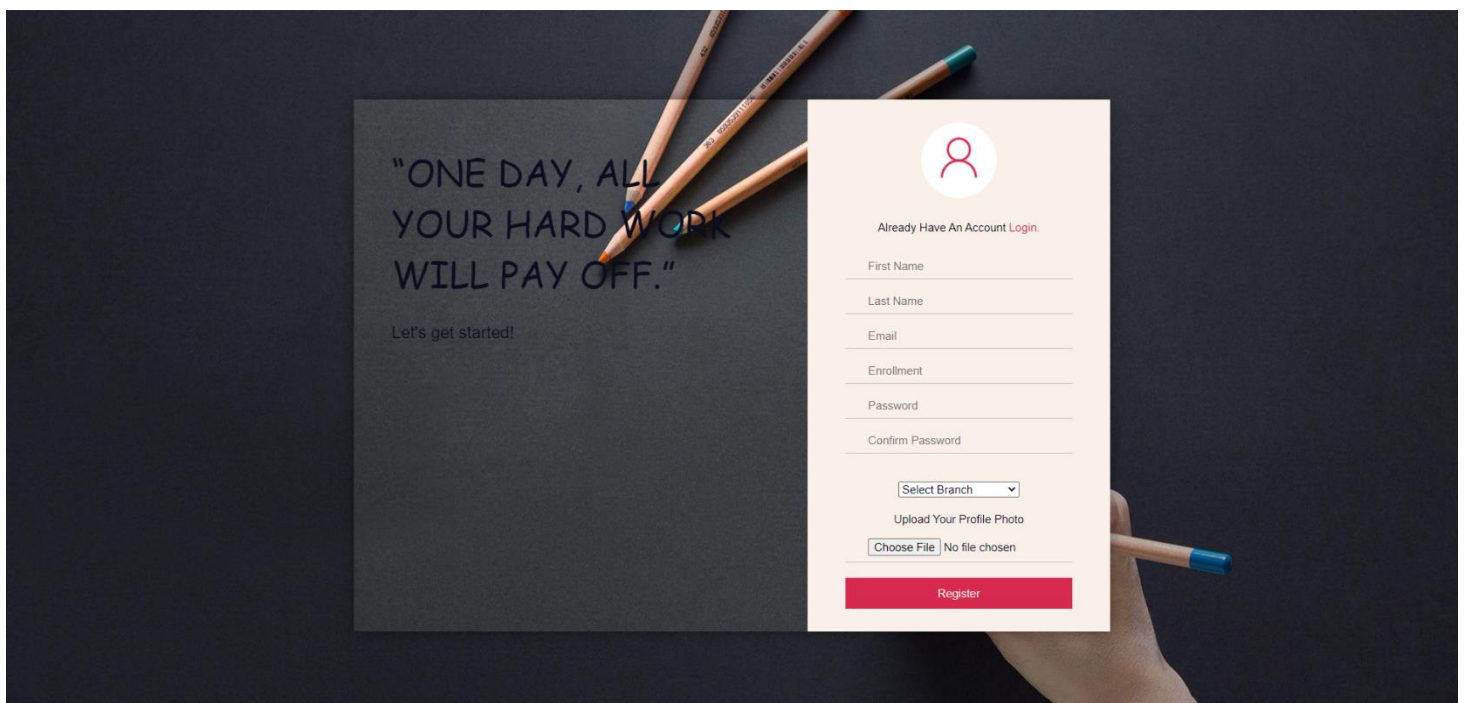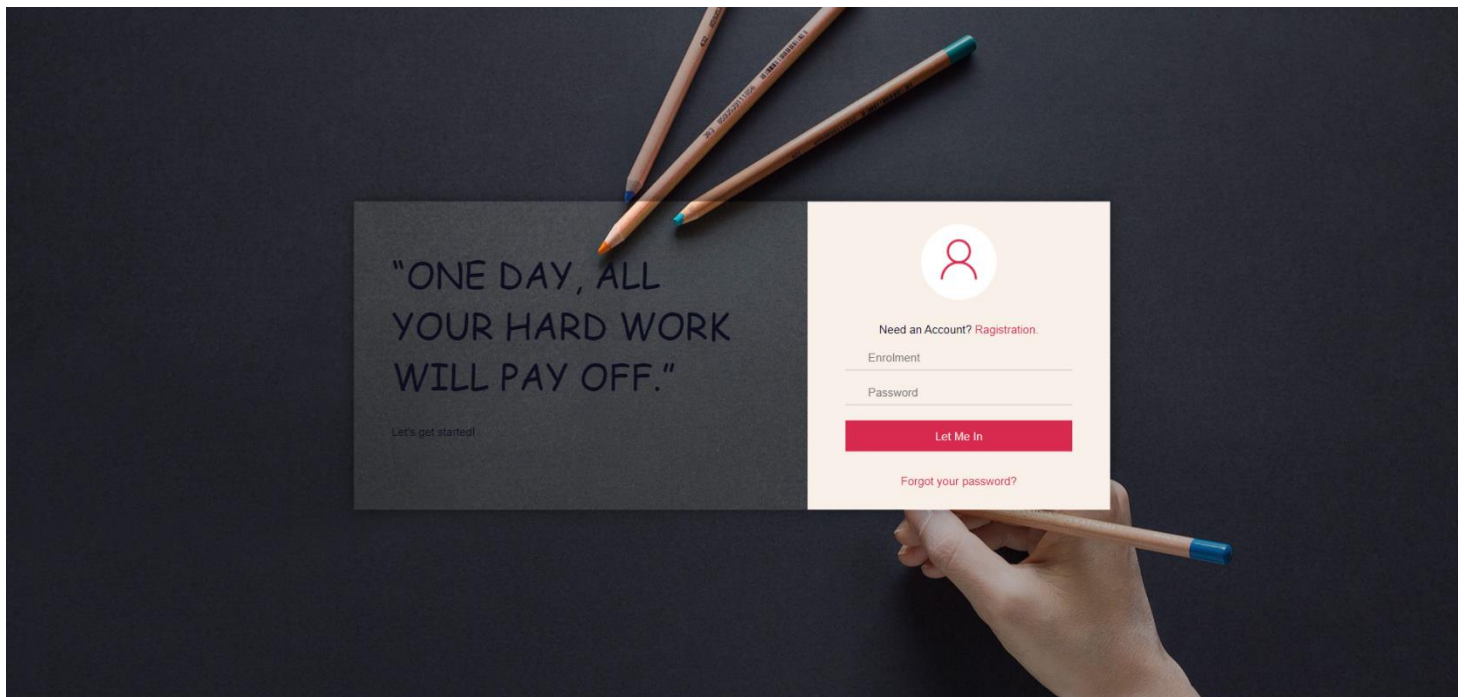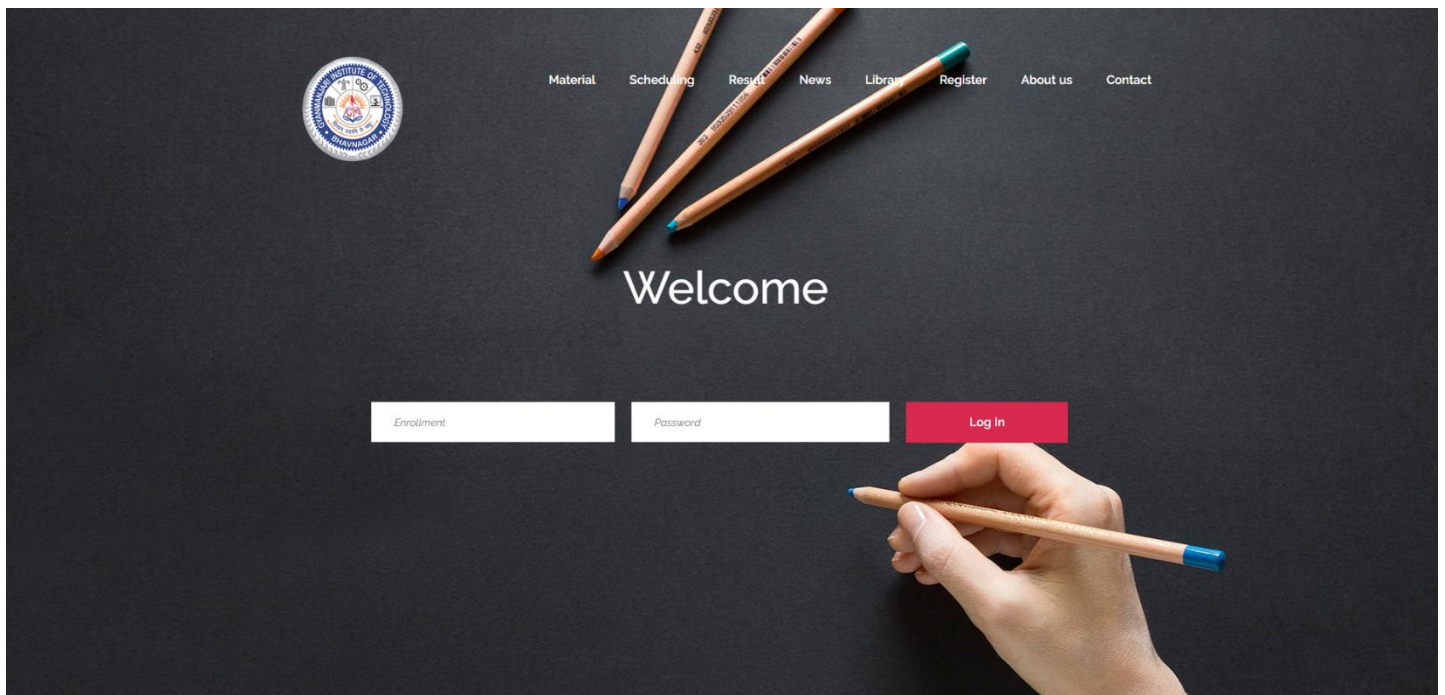| Column	Type	Null	Default	Comments
FirstName	varchar(255)	No		
lastName	varchar(255)	No		
email	varchar(255)	No		
enrollment	bigint	No		
id (Primary)	int	No		
password	varchar(255)	No		
branch	varchar(255)	No		
profile_photo	varchar(255)	No		

Indexes

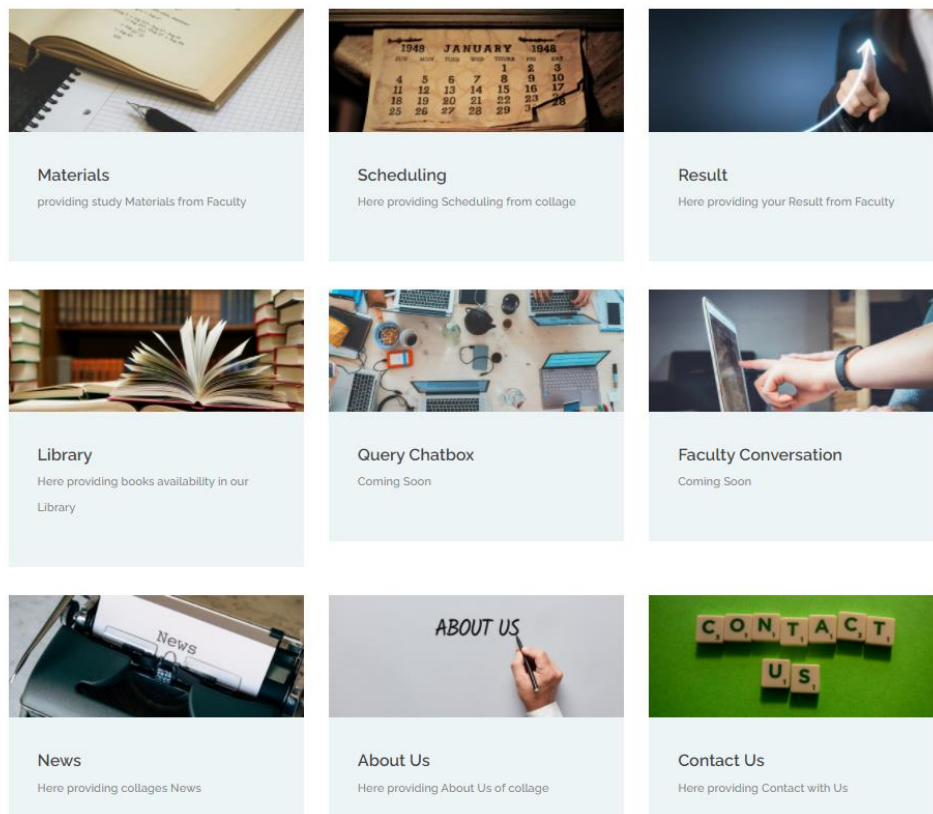| Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

3.1.2 Entity-Relationship Diagram
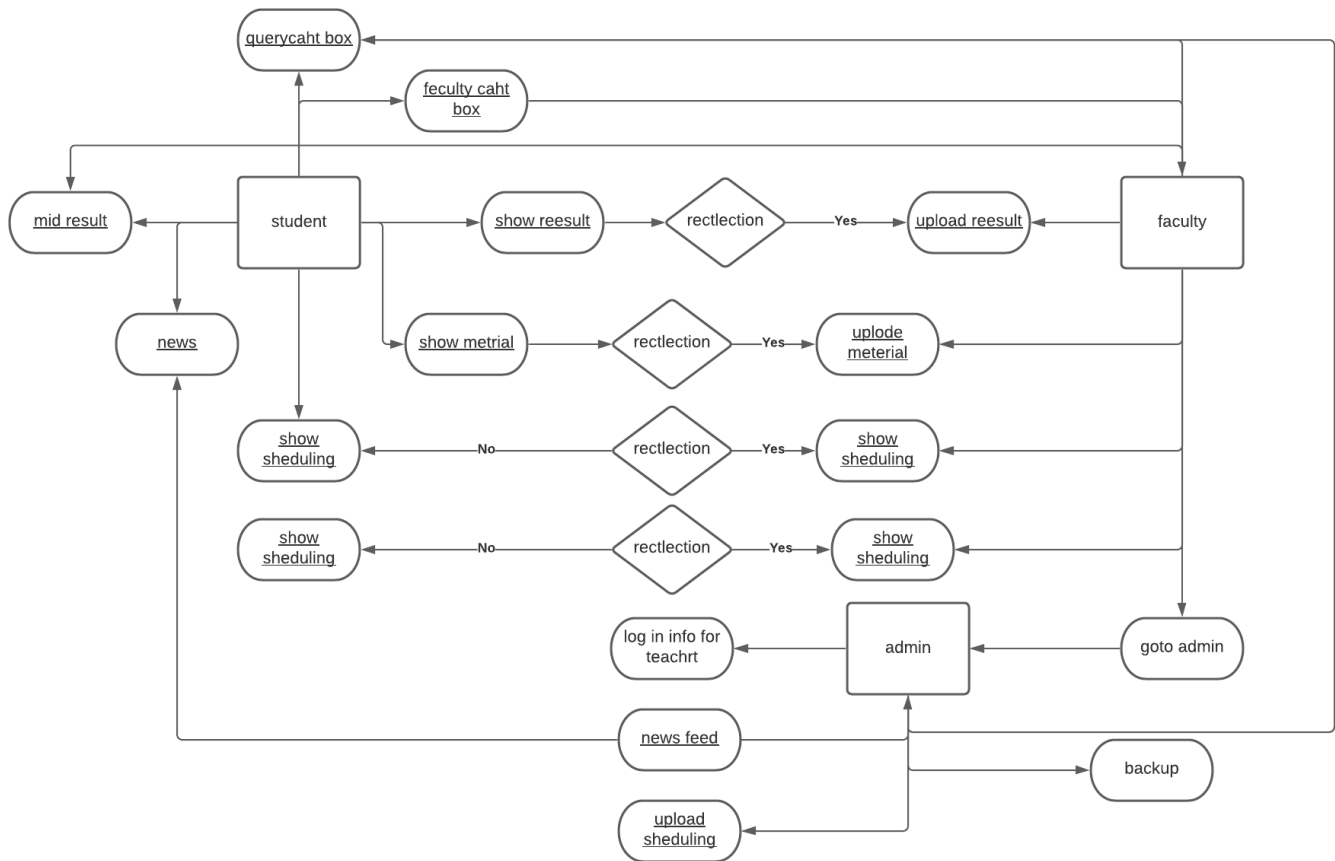
3.2   GUI Design (Self-Created GUI Screen shot)

Categories

Materials

providing study Materials from Faculty

Scheduling

Here providing Scheduling from collage

Result

Here providing your Result from Faculty

Library

Here providing books availability in our Library

Query Chatbox

Coming Soon

Faculty Conversation

Coming Soon

News

Here providing collages News

About Us

Here providing About Us of collage

Contact Us

Here providing Contact with Us

Reference

➤ Links:

- **https://www.wikipedia.org/**
- **https://www.geeksforgeeks.org/**
- **https://www.slideshare.net/**

➤ Books

- PHP Chapter-5

Appendix