



**DEPARTMENT OF COMPUTER SCIENCE
GUJARAT UNIVERSITY, AHMEDABAD**

PROJECT REPORT

FOR THE PARTIAL FULLFILMENT

FOR THE DEGREE OF

POST GRADUATE DIPLOMA IN
COMPUTER SCIENCE & APPLICATIONS
(P.G.D.C.S.A. II SEMESTER)

YEAR: 2023-24

STUDENT PROJECT INFORMATION MANAGEMENT SYSTEM

GUIDED BY:

DR. HIREN JOSHI

SUBMITTED BY:

PATEL MANAN HITESHBHAI

Department Of Computer Science

Gujarat University



Certificate

Roll No : 21

Seat No : 20014

This is to certify that Mr./Ms. Patel Manan Hiteshbhai student of Second Semester of PGDCSA has duly completed his/her project titled **Student project information management system** for the semester ending in August 2024 towards partial fulfillment of degree of Post Graduate Diploma in Computer Science & Applications.

Date of Submission

Internal Project Guide

Head of Department

Acknowledgement

I extend my sincere appreciation to Dr. Jyoti Parekh, the Head of the Department, for her exemplary leadership, guidance, and support. Her valuable insights and direction significantly contributed to the success of this project. Her dedication to fostering a conducive academic environment played a crucial role in shaping our work.

I would also like to express my gratitude to Dr. Hiren Joshi, Associate professor of Department of computer science, my project supervisor and in charge of project. I thank him for always encouraging students to pursue research and for making arrangements the best opportunities. Also, his constructive feedback, and continuous encouragement. His expertise and guidance were pivotal in steering the course of our project and refining its direction.

I extend my heartfelt appreciation to my friends and family who stood by me with patience, understanding, and unwavering support. Your encouragement and belief in my abilities provided the strength necessary to overcome challenges and persevere.

Lastly, I wish to acknowledge the continuous support and guidance provided by all those who have contributed to my journey. Thank you for being an integral part of this endeavor.

With sincere gratitude,

Patel Manan Hiteshbhai

Abstract

The main reason behind implementing this project was the students can fill their project information and department view all the data, manage the data and also make report through the internet easily and reliably. The system was implemented to replace the traditional offline system by online system, due to the fact that in the epoch of the internet online student project information management system had an important role in making reports and storing accurate data in database.

The project report presents development and implementation of Student project information system. This system allow student to register in the system, student can insert project details in system, student can view / edit their data on one click, also allow admin to view / delete all over data, admin can apply filters and sorting all over data, admin can generate PDF report, admin can add / delete pre-define data and also admin can take backup of database and can retrieve of that database on single click.

The client side was needed to be friendly and responsive for smartphone user interface CSS entirely used with HTML and JavaScript. The server-side program was needed for storing all required data into the database by using MySQL database with PHP which they easily can retrieve and store the data into the database through SQL queries. It was required a widely knowledge and skills of the system design and programming languages which greatly helped to implement the web application for the need. The implementing this project was successfully done. Adding more features to the system like Students can add multiple projects, one project belongs to multiple mentors, special mentors' login – so that mentors can view their project information will be implemented in near future.

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About the Project

1 INTRODUCTION

In the epoch of the internet most of the data management are done via the internet. The data management over the internet makes the data editable, flexible and more accurate than offline system where students need to update project definition, team members, technologies offline.

1.1 Purpose

- The purpose of an online auction system is to facilitate the students to easy-to-use student project information portal, Easy insertion of student project data, View and edit their data remotely over the internet. Also admin can view and also make report in pdf with filtering fields remotely over the internet.

1.2 Objective

- Allow student to register.
- Student can insert project details.
- Student can view / edit their data.
- Admin can view / delete all over data.
- Admin can apply filters and sorting all over data.
- Admin can generate PDF report.
- Admin can add / delete pre-define data.
- Admin can take backup of database and can retrieve of that database on single click.

1.3 Aim

- To provide a simple and easy way for manage student project information over the internet.

1.4 Scope

- The scope of an Student project information management system is broad and encompasses various aspects related to the design, development, implementation, and management of the system.

Software Requirement Specification (SRS) for Student project information management system

Software required for the student project information management system:

- **Front-end: HTML, CSS, JAVASCRIPT**

With the help of the above languages, we can easily make user interface that can be used in a multiple way and also Responsive website design - so students can use website on their smartphone.

- **Backend: PHP**

For back-end language we can use PHP for the better performance.

- **Database: MySQL**

To store the data of the database we can use MySQL database.

- **Software: visual studio**

In visual studio software, we can write the code very easily, visual studio provides the snippets and a piece of code that can help us to write the code fast. And if there is syntax error, sometimes it will solve the error or show the message

- **Server: XAMPP**

- **Hosting provider: InfinityFree**

- **SSL Certification: Google Trust & ZeroSSL**

- **FTP (File Transfer Protocol) client: FileZilla**

Hardware required for the student project information management system:

Processor: 12th Gen Intel® Core™ i7 12700 - 12 cores - 4.9 GHz Turbo Frequency

RAM: 16 GB dual channel DDR4 3200MHz

SSD: 512 GB M.2 NVMe

OS: Windows 11 Home

From the information about above hardware requirements the student project information management system can easily work in this type of system.

Feasibility Study for student project information management system

Objectives

The primary objectives of this feasibility study are as follows:

- To analyze the technical feasibility of developing the student project information management system.
- To evaluate the economic viability of the project.
- To assess the operational and organizational impact of implementing the system.
- To determine the project's schedule and resource requirements.

1 Technical Feasibility

1.1 Scalability and Performance

- The system can handle multiple simultaneous users and maintain acceptable response times.
- Adequate measures can be implemented to ensure data security and privacy.

1.2 Integration

2 Schedule and Resource Feasibility

2.1 Project Timeline

- A detailed project schedule will be created, considering development phases, testing, and deployment.

2.2 Resource Allocation

- Adequate resources, including skilled personnel and necessary tools, will be allocated to ensure timely development.

Existing System Features & Limitations for the student project information management system

Features:

1. Student Registration and Authentication:

- Users can create accounts and log in securely.
- User roles are defined, distinguishing between student and Admin.

2. Student functionalities:

- Student can insert project details.
- Student can view / edit their data.
- Student can change their password.

3. Admin functionalities:

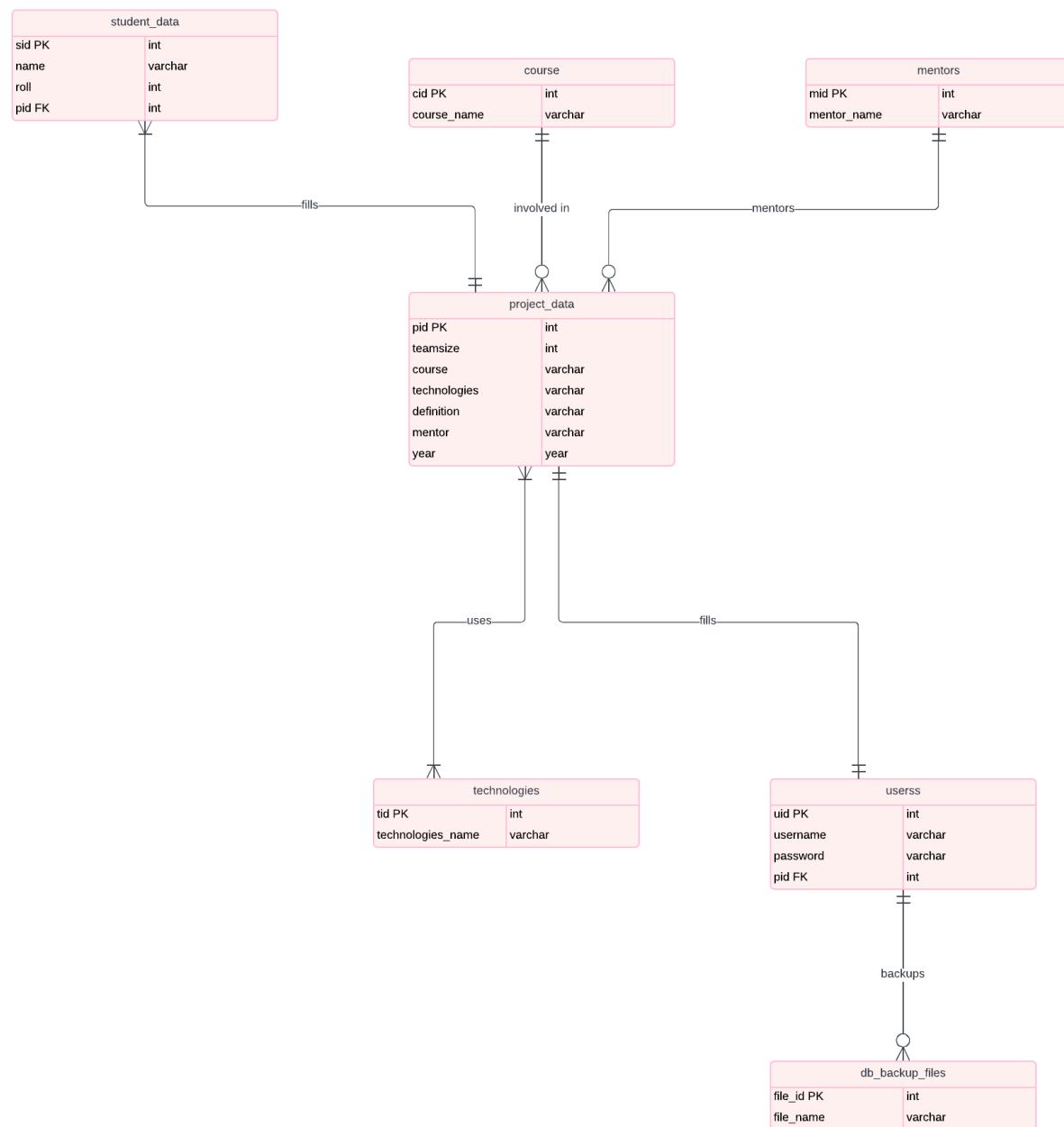
- Admin can view / delete all over data.
- Admin can apply filters and sorting all over data.
- Admin can generate PDF report.
- Admin can add / delete pre-define data.
- Admin can take backup of database and can retrieve of that database on single click.

4. Additional functionalities:

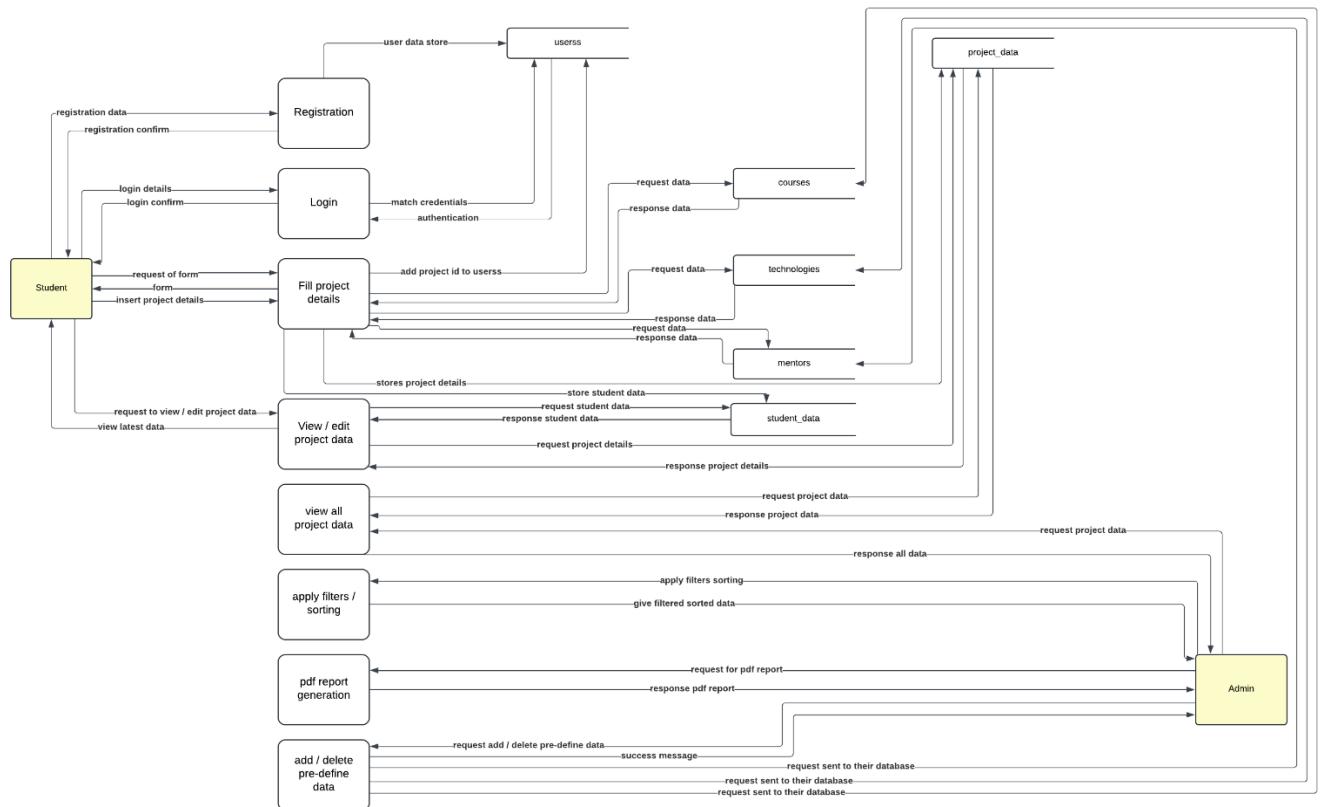
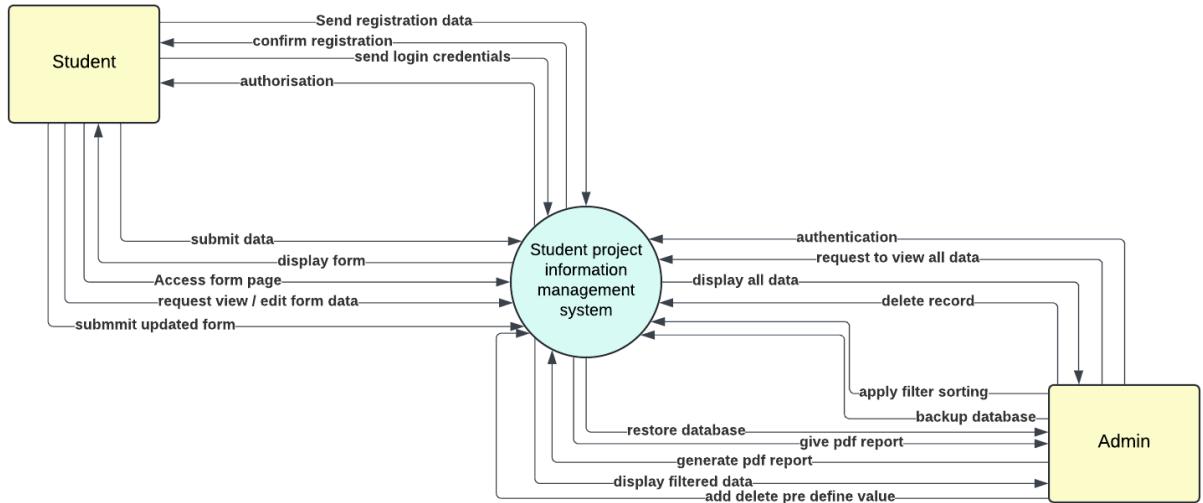
- Responsive website design - so students can use website on their smartphone.
- Multiple validation - for formatting input.
- HTTPS protocol - for secure data transmission.
- SQL injection prevention.
- Cache prevention - for better updating of css and better user browsing experience.
- Cache Busting - by appending a unique timestamp to the URL.

System Analysis & Design

ER Diagram



Data Flow Diagram



Data Dictionary

Table Name: PROJECT_DATA

Table Purpose: This table store project data of all students.

Field Name	Data Type	Field Size	Constraints	Sample Data
pid	INT	11	PRIMARY KEY AUTO_INCREMENT	1
teamsize	INT	3	NOT NULL	4
course	VARCHAR	25	NOT NULL	PGDCSA
definition	VARCHAR	255	NOT NULL	Student Project Information System
technologies	VARCHAR	255	NOT NULL	HTML, CSS, JavaScript, PHP
mentor	VARCHAR	30	NOT NULL	Dr. Hiren Joshi
year	YEAR	4	NOT NULL	2024

Table Name: STUDENT_DATA

Table Purpose: This table store student data of all students.

Field Name	Data Type	Field Size	Constraints	Sample Data
sid	INT	11	PRIMARY KEY AUTO_INCREMENT	1
name	VARCHAR	30	NOT NULL	Manan Patel
roll	INT	5	NOT NULL	21
pid	INT	11	FOREIGN KEY NOT NULL	55

Table Name: DB_BACKUP_FILES

Table Purpose: This table store backup file name for retrieve selection.

Field Name	Data Type	Field Size	Constraints	Sample Data
file_id	INT	11	PRIMARY KEY AUTO_INCREMENT	1
File_name	VARCHAR	35	NOT NULL	backup-13-08-2024-12-31-16.sql

Table Name: MENTORS

Table Purpose: This table store mentors details.

Field Name	Data Type	Field Size	Constraints	Sample Data
mid	Int	11	PRIMARY KEY AUTO_INCREMENT	1
Mentor_Name	VARCHAR	30	UNIQUE NOT NULL	Dr. Jigna Satani

Table Name: COURSES

Table Purpose: This table store courses details.

Field Name	Data Type	Field Size	Constraints	Sample Data
cid	Int	11	PRIMARY KEY AUTO_INCREMENT	1
Course_Name	VARCHAR	40	UNIQUE NOT NULL	MCA

Table Name: TECHNOLOGIES

Table Purpose: This table store technologies details.

Field Name	Data Type	Field Size	Constraints	Sample Data
tid	Int	11	PRIMARY KEY AUTO_INCREMENT	1
Technologies_Name	VARCHAR	255	UNIQUE NOT NULL	PHP, MySQL, ReactJS

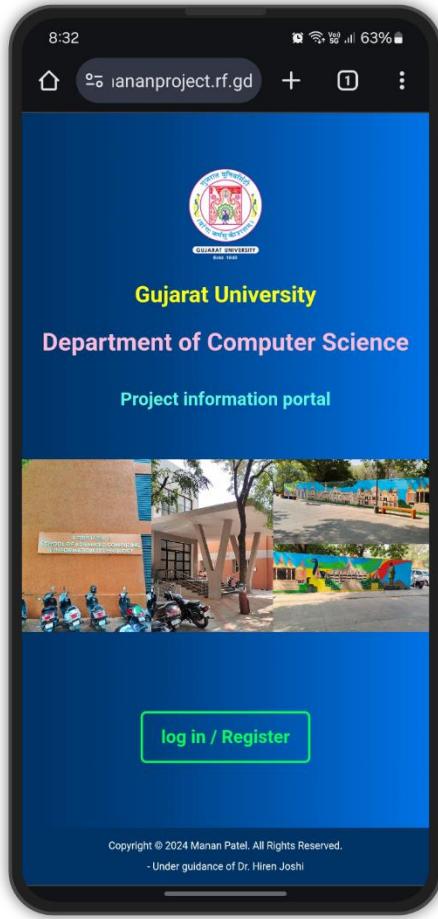
Table Name: USERSS

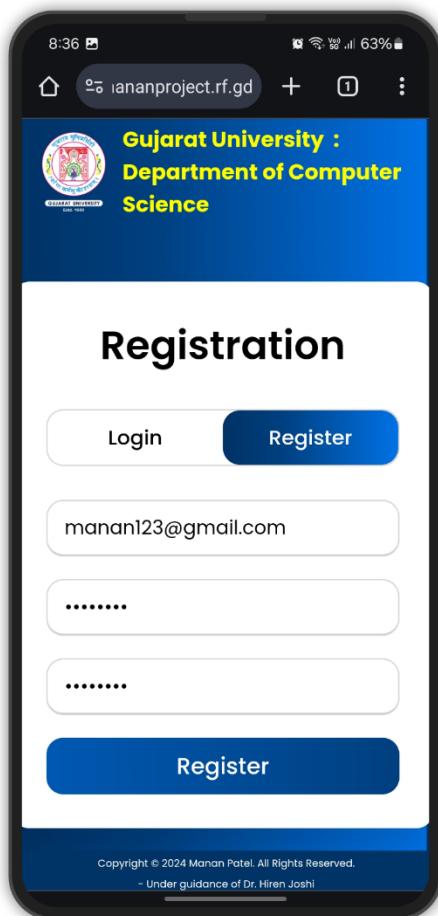
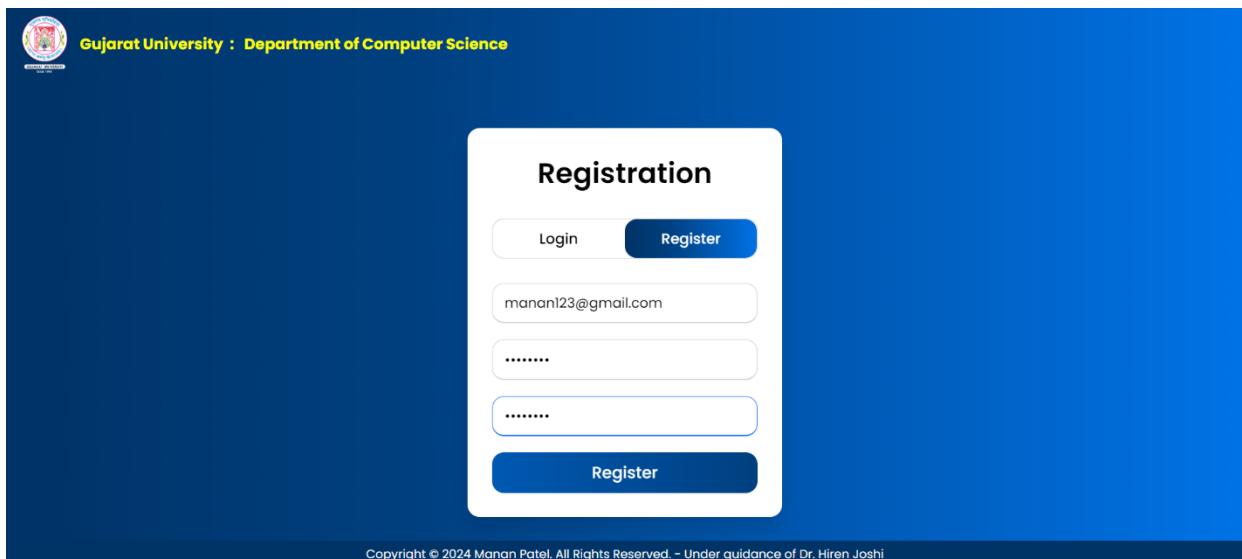
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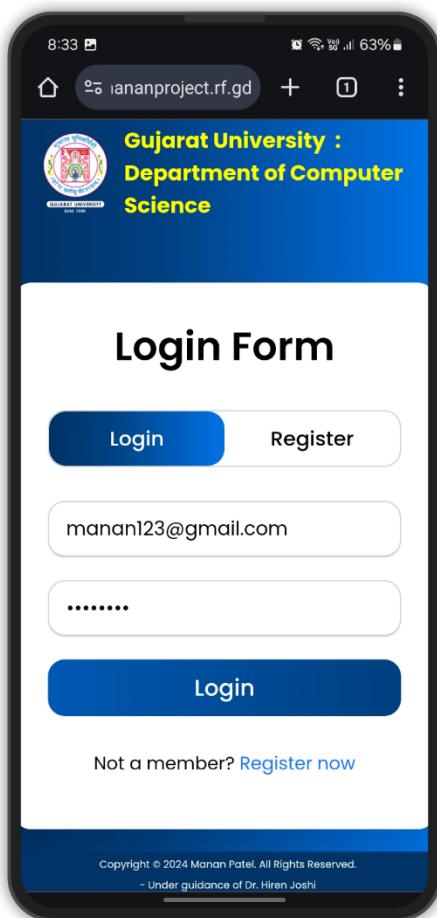
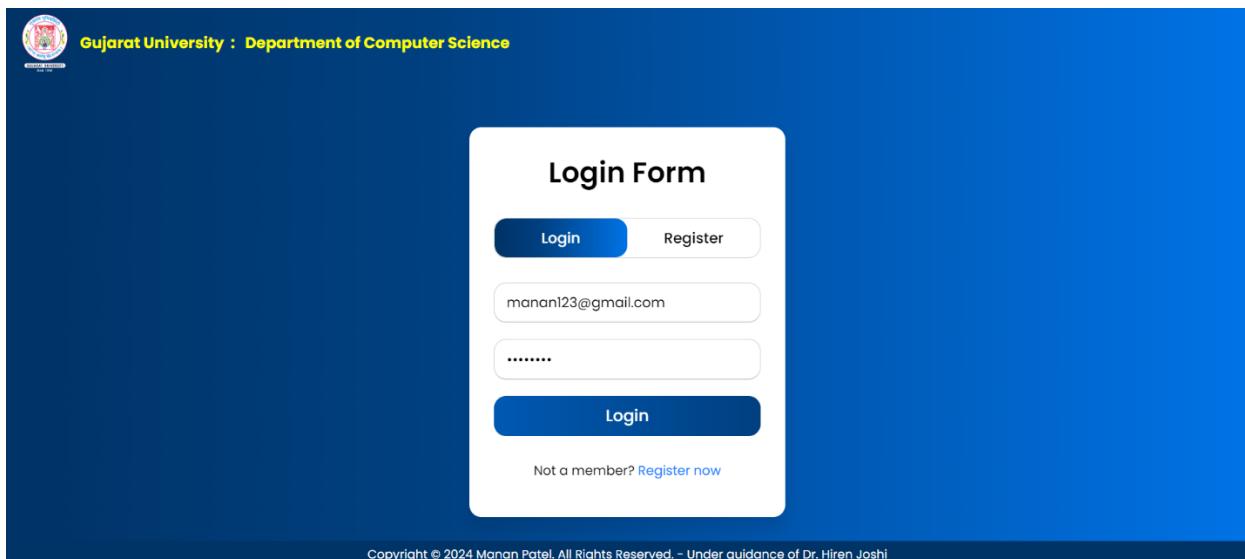
System Implementation

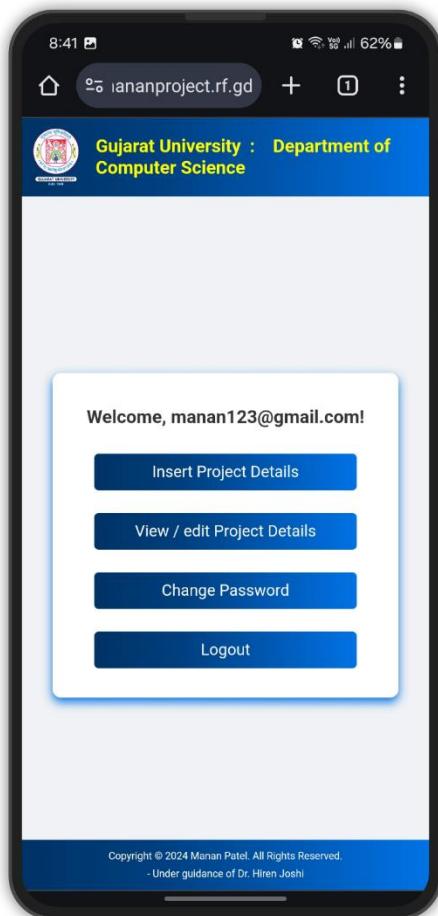
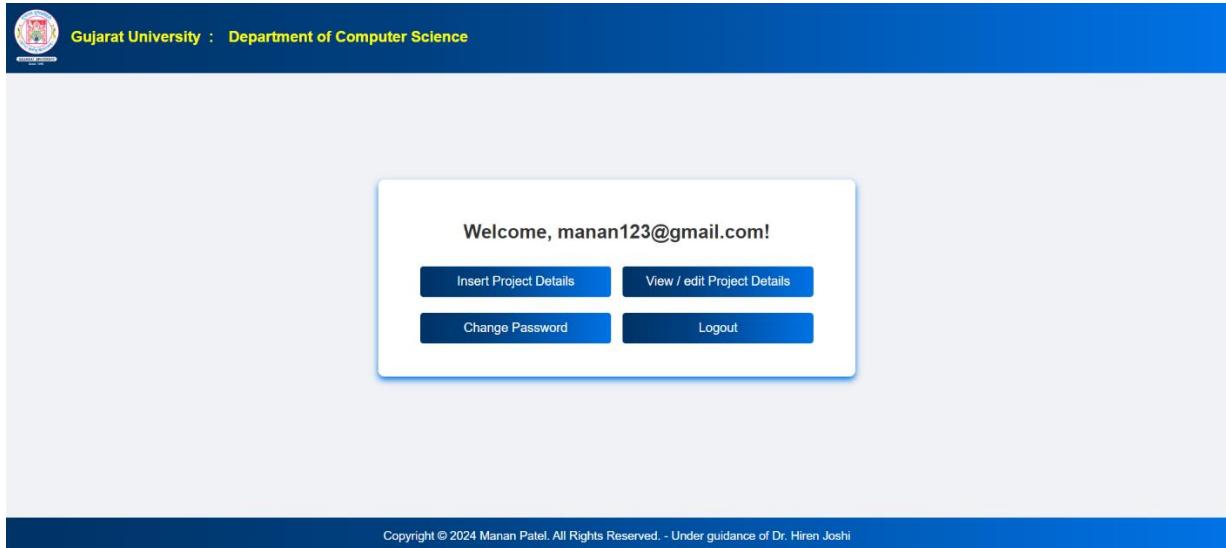
Screenshots





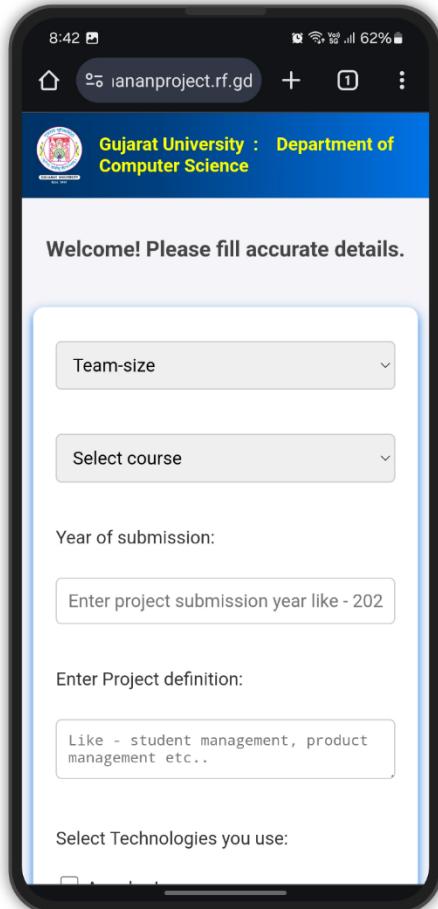






The screenshot shows a web page with a blue header bar. On the left of the header is the Gujarat University logo, and next to it is the text "Gujarat University : Department of Computer Science". Below the header, a message reads "Welcome! Please fill accurate details." followed by a form with several input fields:

- "Team-size" dropdown menu
- "Select course" dropdown menu
- "Year of submission:" text input field with placeholder "Enter project submission year like - 2024"
- "Enter Project definition:" text input field with placeholder "Like - student management, product management etc.."
- "Select Technologies you use:" text input field with placeholder "Like - student management, product management etc.."



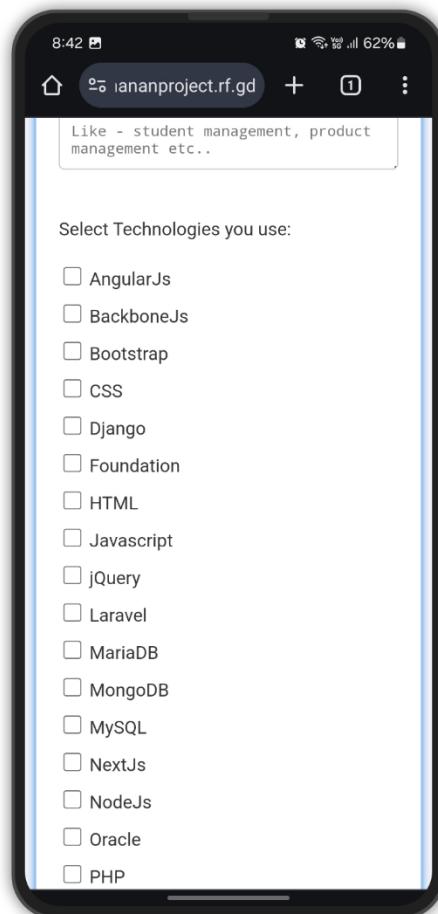
Enter project submission year like - 2024

Enter Project definition:

Like - student management, product management etc..

Select Technologies you use:

<input type="checkbox"/> AngularJs	<input type="checkbox"/> BackboneJs
<input type="checkbox"/> Bootstrap	<input type="checkbox"/> CSS
<input type="checkbox"/> Django	<input type="checkbox"/> Foundation
<input type="checkbox"/> HTML	<input type="checkbox"/> Javascript
<input type="checkbox"/> jQuery	<input type="checkbox"/> Laravel
<input type="checkbox"/> MariaDB	<input type="checkbox"/> MongoDB
<input type="checkbox"/> MySQL	<input type="checkbox"/> NextJs
<input type="checkbox"/> NodeJs	<input type="checkbox"/> Oracle
<input type="checkbox"/> PHP	<input type="checkbox"/> PostgreSQL
<input type="checkbox"/> Python	<input type="checkbox"/> ReactJs
<input type="checkbox"/> Semantic	<input type="checkbox"/> SQLite
<input type="checkbox"/> Tailwind	<input type="checkbox"/> Typescript
<input type="checkbox"/> VueJs	

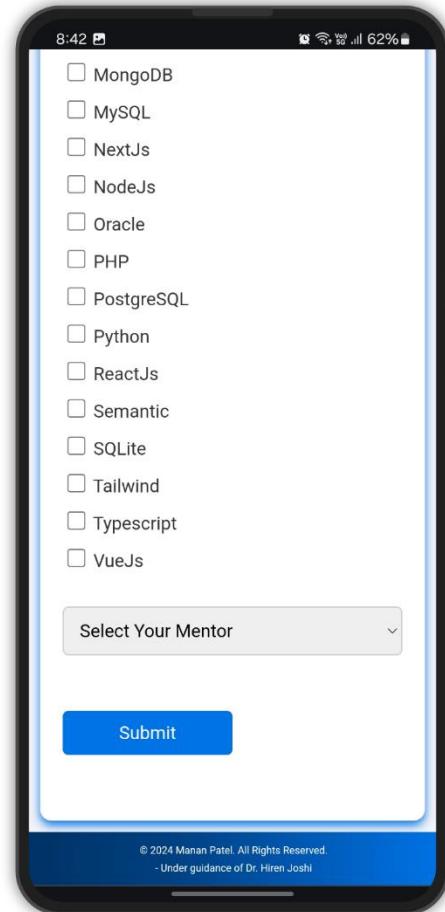


- AngularJs
- BackboneJs
- CSS
- Django
- Foundation
- HTML
- Javascript
- jQuery
- Laravel
- MongoDB
- MySQL
- NodeJs
- Oracle
- PHP
- PostgreSQL
- Python
- ReactJs
- Semantic
- SQLite
- Tailwind
- Typescript
- VueJs

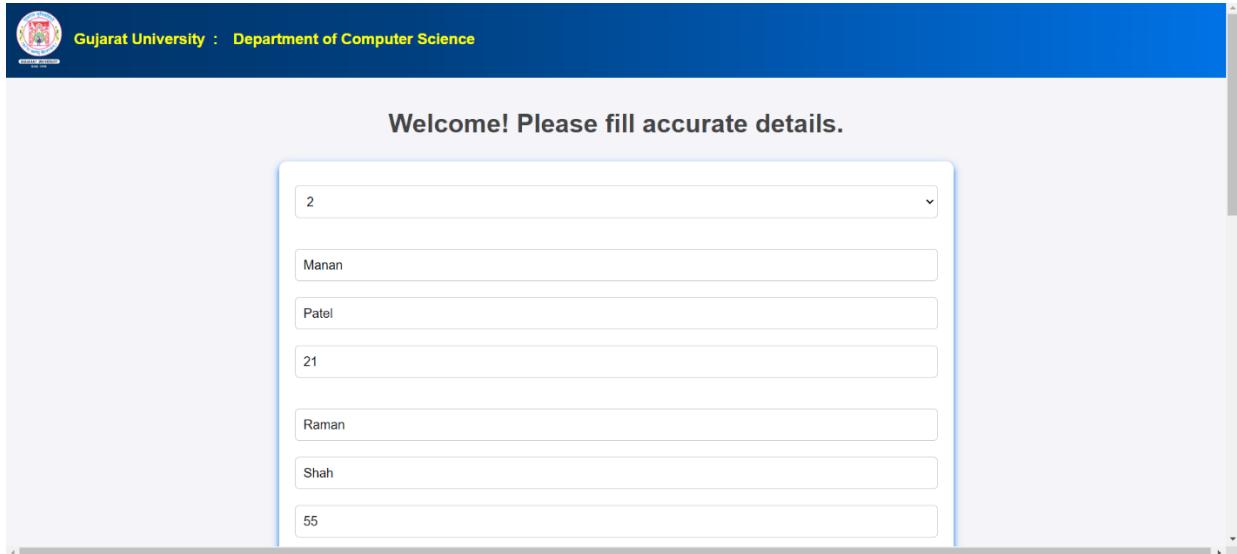
Select Your Mentor

Submit

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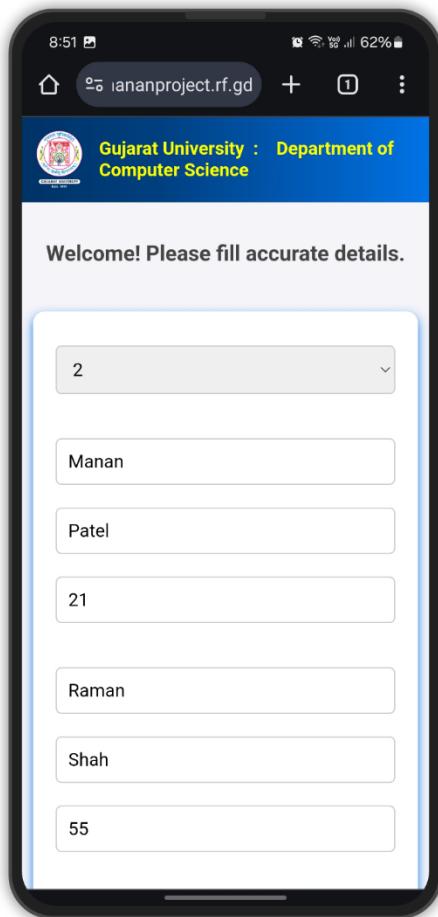
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Gujarat University : Department of Computer Science

Welcome! Please fill accurate details.

2
Manan
Patel
21
Raman
Shah
55



PGDCSA

Select course

PGDCSA

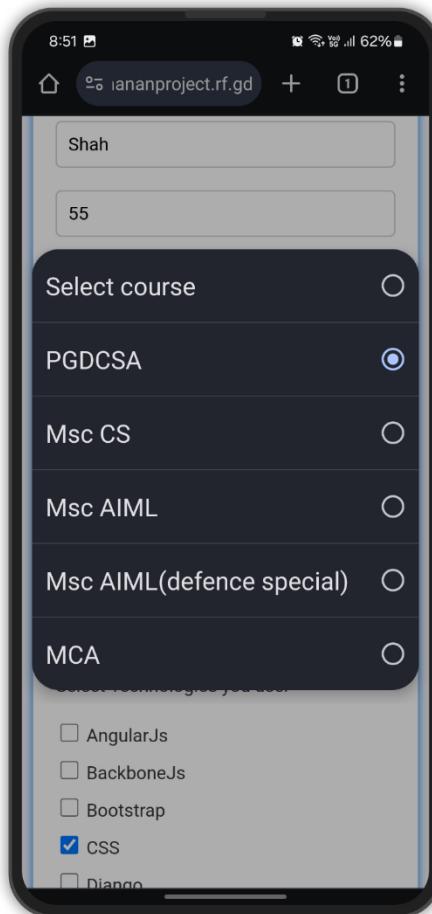
Msc CS
Msc AIML
Msc AIML(defence special)
MCA

Enter Project definition:

Student Project Information Management

Select Technologies you use:

<input type="checkbox"/> AngularJs	<input type="checkbox"/> BackboneJs
<input type="checkbox"/> Bootstrap	<input checked="" type="checkbox"/> CSS
<input type="checkbox"/> Django	<input type="checkbox"/> Foundation
<input checked="" type="checkbox"/> HTML	<input checked="" type="checkbox"/> Javascript
<input type="checkbox"/> jQuery	<input type="checkbox"/> Laravel
<input type="checkbox"/> MariaDB	<input type="checkbox"/> MongoDB
<input checked="" type="checkbox"/> MySQL	<input type="checkbox"/> Next.js
<input type="checkbox"/> NodeJs	<input type="checkbox"/> Oracle
<input type="checkbox"/> Python	



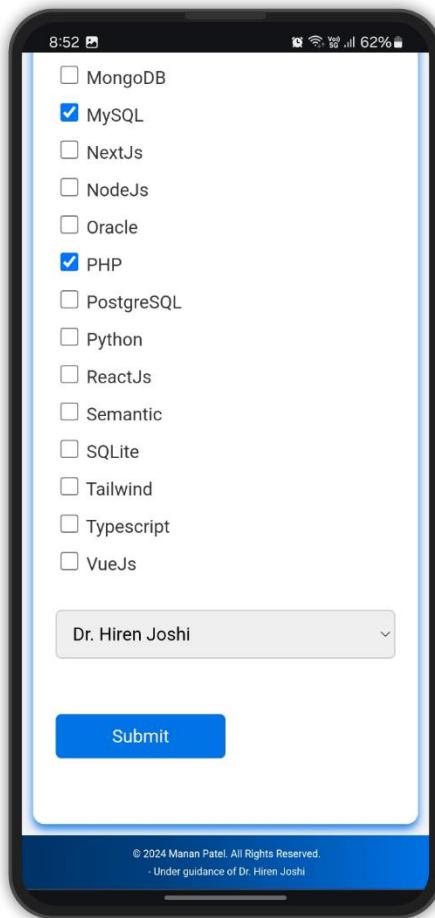
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Dr. Hiren Joshi

Submit

AngularJs
Bootstrap
Django
 HTML
jQuery
MariaDB
 MySQL
Node.js
 PHP
Python
Semantic
Tailwind
Vue.js

Backbone.js
 CSS
Foundation
 Javascript
Laravel
MongoDB
Next.js
Oracle
PostgreSQL
React.js
SQLite
TypeScript



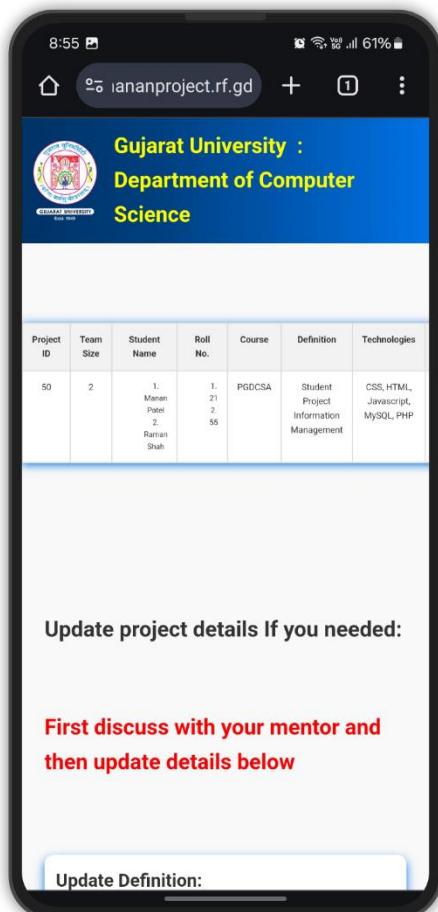
 Gujarat University : Department of Computer Science

Project ID	Team Size	Student Name	Roll No.	Course	Definition	Technologies	Mentor	Year
50	2	1. Manan Patel 2. Raman Shah	1. 21 2. 55	PGDCSA	Student Project Information Management	CSS, HTML, Javascript, MySQL, PHP	Dr. Hiren Joshi	2024

Update project details If you needed:

First discuss with your mentor and then update details below

Update Definition:



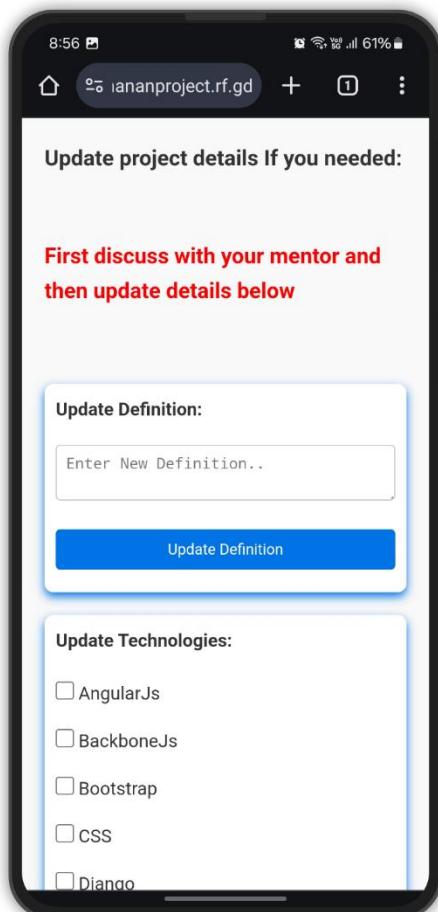
Update project details If you needed:

First discuss with your mentor and then update details below

Update Definition:

Update Technologies:

<input type="checkbox"/> AngularJs	<input type="checkbox"/> BackboneJs
<input type="checkbox"/> Bootstrap	<input type="checkbox"/> CSS
<input type="checkbox"/> Django	<input type="checkbox"/> Foundation
<input type="checkbox"/> HTML	<input type="checkbox"/> Javascript



Update Technologies:

- AngularJs
- Bootstrap
- Django
- HTML
- jQuery
- MariaDB
- MySQL
- NodeJs
- PHP
- Python
- Semantic
- Tailwind
- VueJs

- BackboneJs
- CSS
- Foundation
- Javascript
- Laravel
- MongoDB
- NextJs
- Oracle
- PostgreSQL
- ReactJs
- SQLite
- Typescript

[Update Technologies](#)



Select New Mentor

Update Mentor

Update Course:

Select New Course

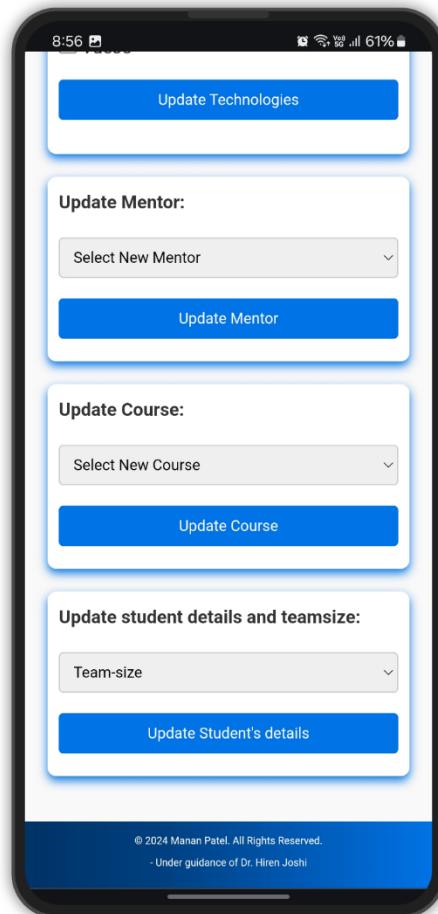
Update Course

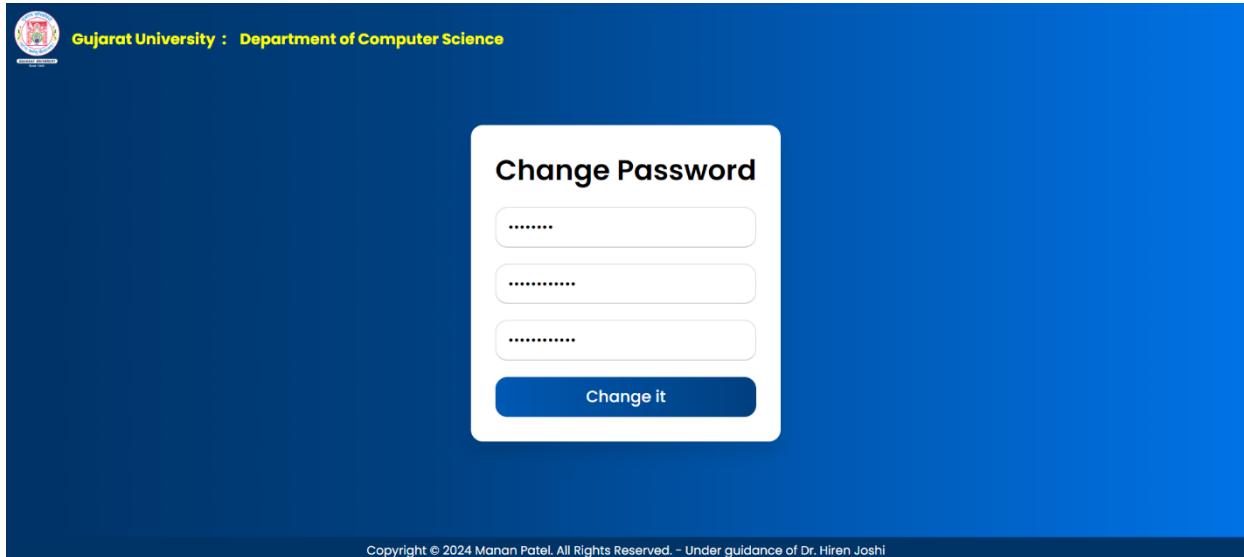
Update student details and teamsize:

Team-size

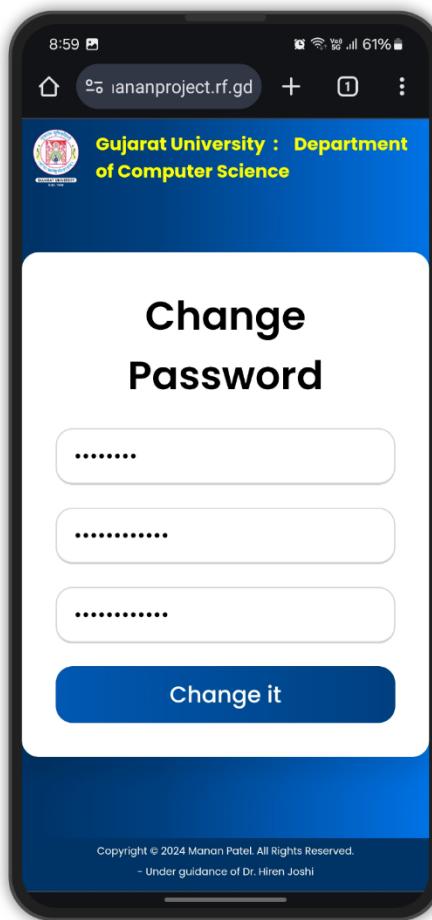
Update Student's details

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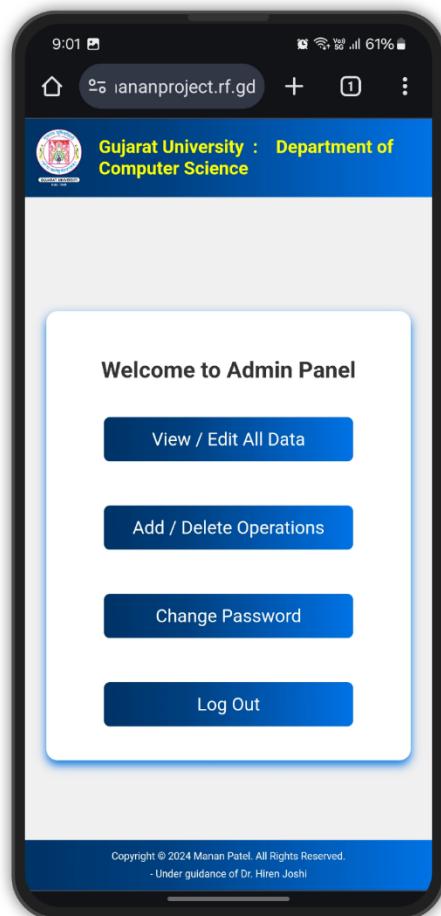
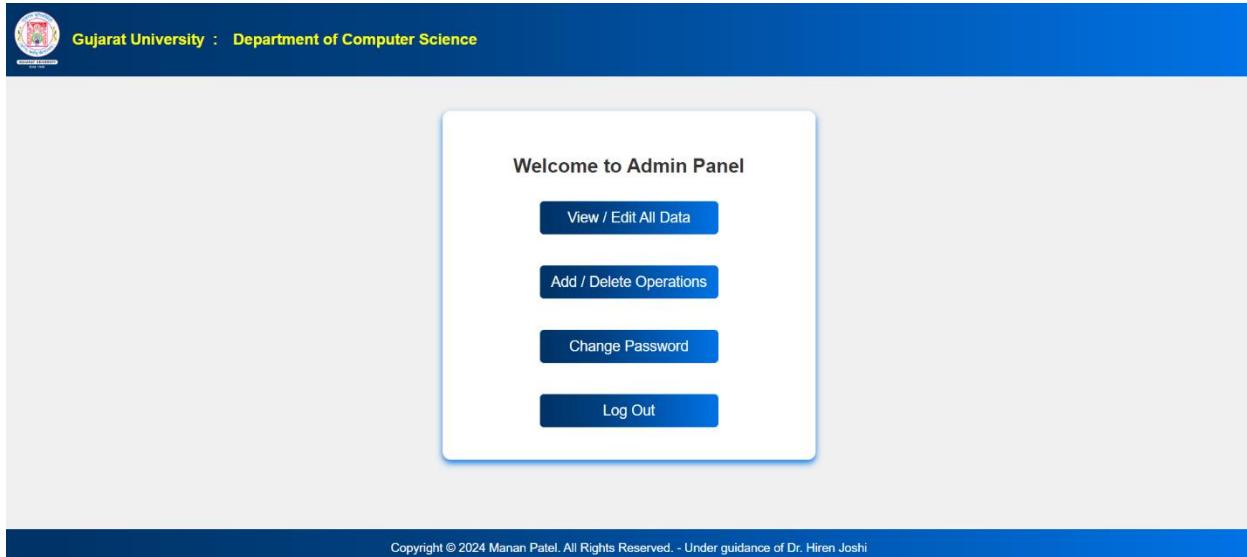




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Welcome! Find Records

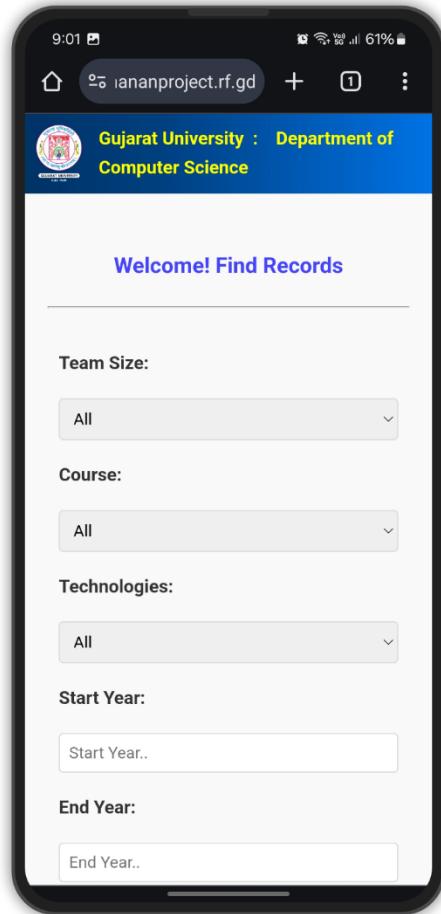
Team Size: All Course: All Technologies: All Start Year: Start Year.. End Year: End Year..

Definition: Search for definitions.. Mentor: All

[Export in PDF](#)

Delete Record: Select Project ID [Delete Record](#)

Project ID	Team Size	Student Name	Roll No.	Course ▲▼	Definition	Technologies	Mentor ▲▼	Year ▲▼
50	2	1. Manan Patel 2. Raman Shah	1. 21 2. 55	PGDCSA	Student Project Information Management	CSS, HTML, Javascript, MySQL, PHP	Dr. Hiren Joshi	2024



Welcome! Find Records

Team Size: Course: Technologies: Start Year: End Year:

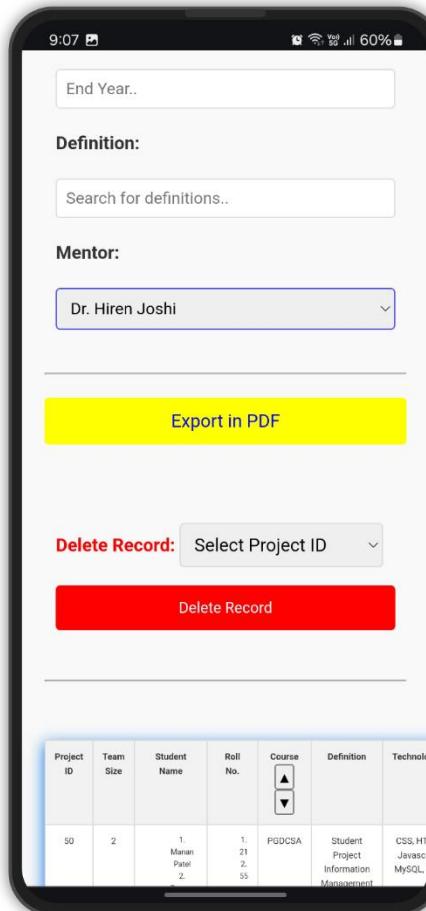
Definition: **Mentor:**

Export in PDF

Delete Record:

Project ID	Team Size	Student Name	Roll No.	Course	Definition	Technologies	Mentor	Year
50	2	1. Manan Patel 2. Raman Shah	1. 21 2. 55	PGDCSA	Student Project Information Management	CSS, HTML, Javascript, MySQL, PHP	Dr. Hiren Joshi	2024
41	2	1. riddhi pednekar 2. hardik patel	1. 19 2. 3	PGDCSA	Library Management System	CSS, HTML, Javascript, MongoDB, PHP	Dr. Hiren Joshi	2024

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☰ Project Report PDF

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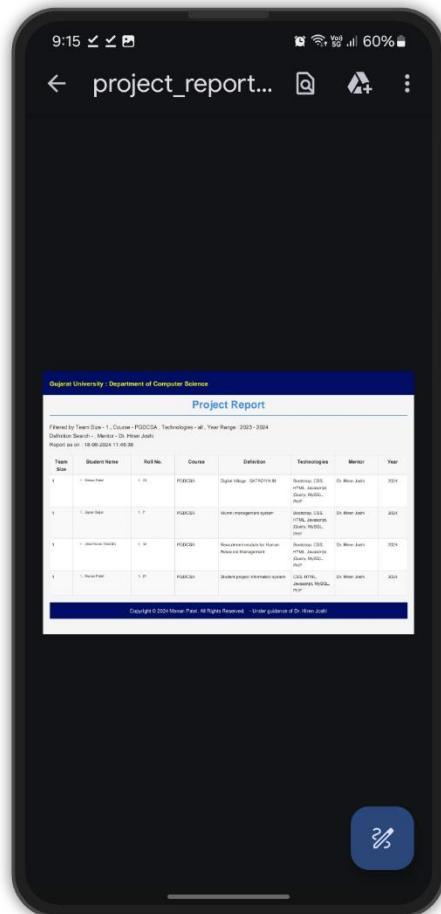
Gujarat University : Department of Computer Science

Project Report

Filtered by Team Size - 1 , Course - PGDCSA , Technologies - all , Year Range : 2023 - 2024
 Definition Search - , Mentor - Dr. Hiren Joshi
 Report as on : 18-08-2024 11:44:26

Team Size	Student Name	Roll No.	Course	Definition	Technologies	Mentor	Year
1	1. Rohan Patel	1. 23	PGDCSA	Digital Village : SATADIYA.IN	Bootstrap, CSS, HTML, Javascript, jQuery, MySQL, PHP	Dr. Hiren Joshi	2024
1	1. Jignal Gajjar	1. 7	PGDCSA	Alumni management system	Bootstrap, CSS, HTML, Javascript, jQuery, MySQL, PHP	Dr. Hiren Joshi	2024
1	1. JINAYBHAI TANDEL	1. 32	PGDCSA	Recruitment module for Human Resource Management	Bootstrap, CSS, HTML, Javascript, jQuery, MySQL, PHP	Dr. Hiren Joshi	2024
1	1. Manan Patel	1. 21	PGDCSA	Student project information system	CSS, HTML, Javascript, MySQL, PHP	Dr. Hiren Joshi	2024

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mananproject.rf.gd says
Are you sure you want to delete?

OK **Cancel**

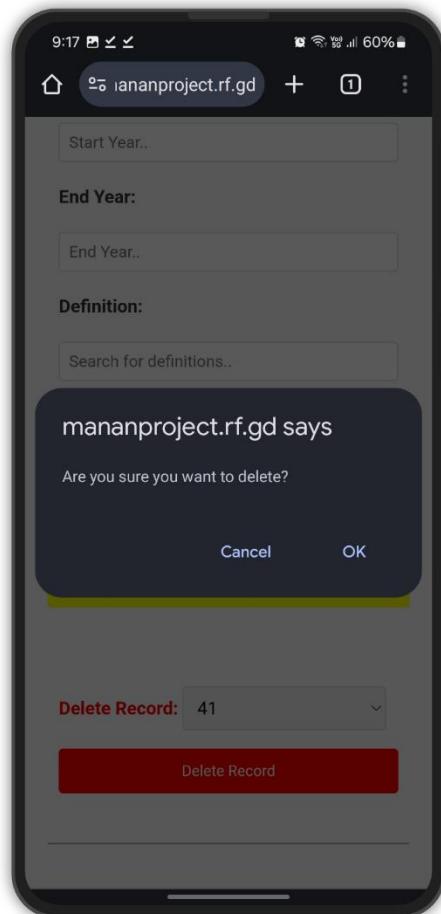
Team Size: All Course: All Technologies: All Start Year: Start Year.. End Year: End Year..

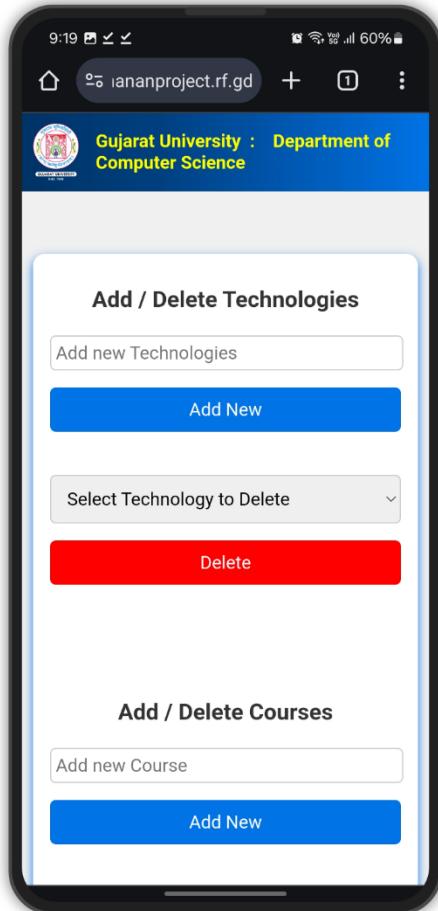
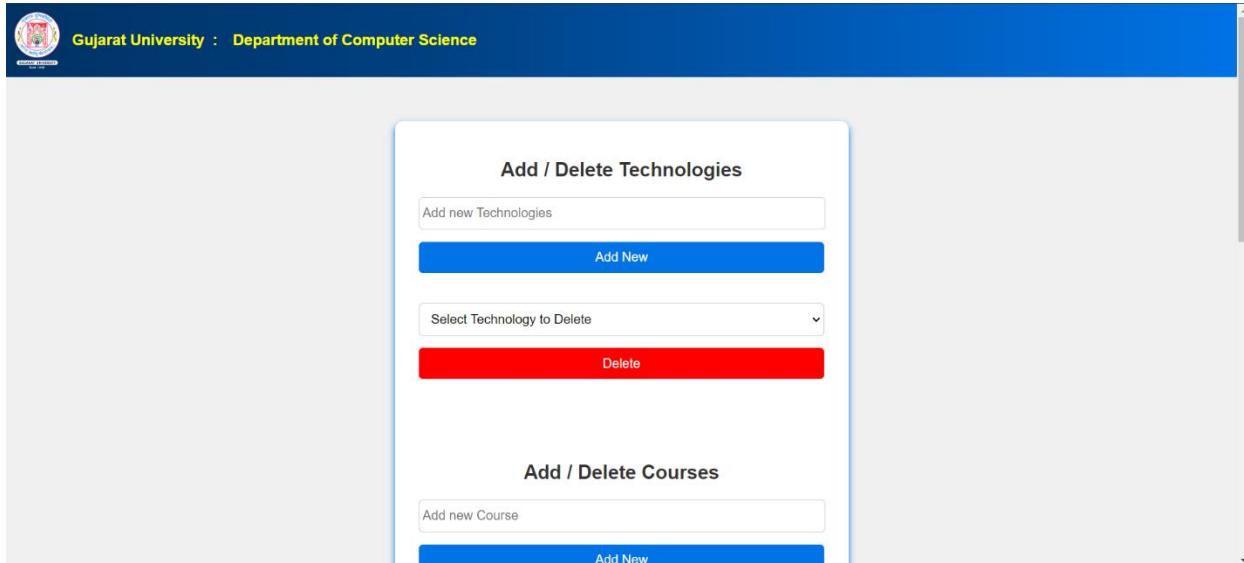
Definition: Search for definitions.. Mentor: All

Export in PDF

Delete Record: 50 **Delete Record**

Project ID	Team Size	Student Name	Roll No.	Course ▲▼	Definition	Technologies	Mentor ▲▼	Year ▲▼
50	2	1. Manan Patel 2. Raman Shah	1. 21 2. 55	PGDCSA	Student Project Information Management	CSS, HTML, Javascript, MySQL, PHP	Dr. Hiren Joshi	2024
41	2	1. hardik patel 2. riddhi pednekar	1. 3 2. 19	PGDCSA	Library Management System	CSS, HTML, Javascript, MongoDB, PHP	Dr. Hiren Joshi	2024





Add / Delete Courses

Add new Course

Add New

Select Course to Delete

Delete

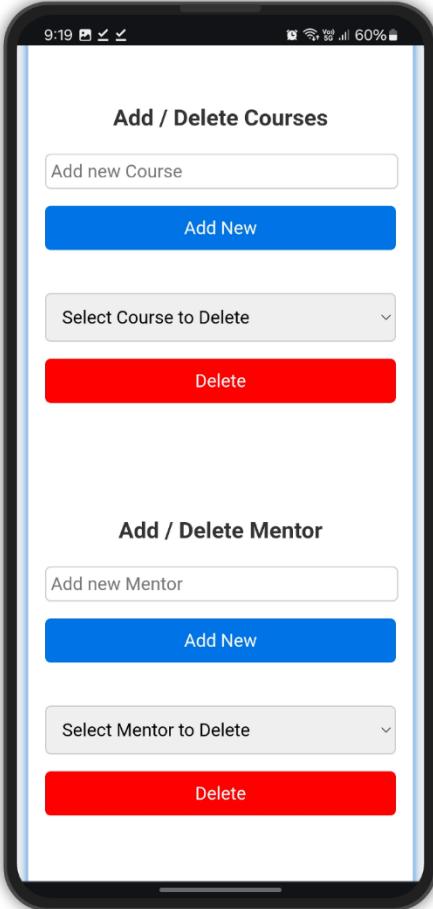
Add / Delete Mentor

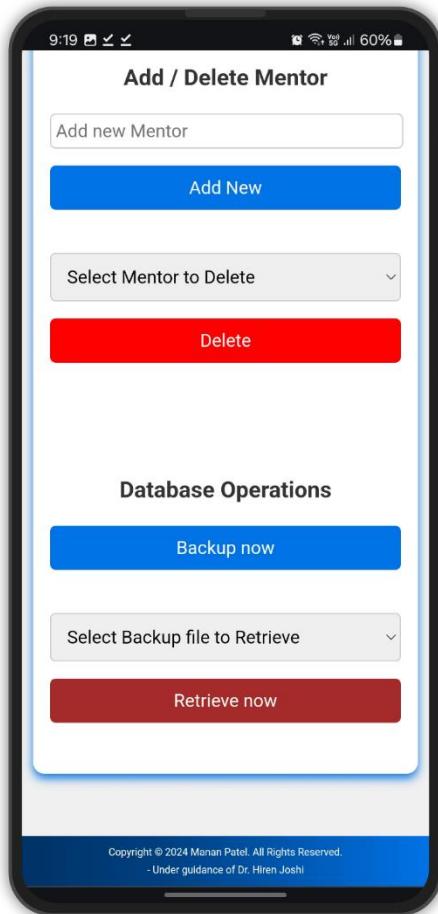
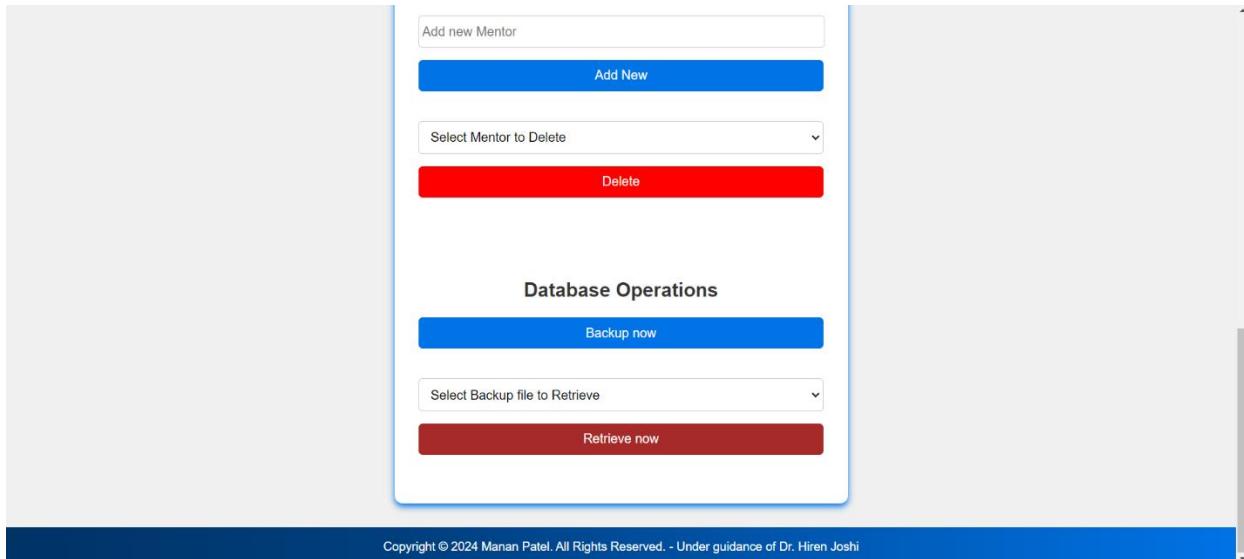
Add new Mentor

Add New

Select Mentor to Delete

Delete





Add new Mentor

Add New

Select Mentor to Delete

Delete

Database Operations

Backup now

backup-18-08-2024-09-26-46.sql

Select Backup file to Retrieve

- backup-18-08-2024-09-26-46.sql
- backup-18-08-2024-09-26-42.sql
- backup-18-08-2024-09-26-07.sql

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Test Cases

Software testing is only activity aimed at evaluating capability of a system and determining that it meets its required results.

- ❖ Objectives:
 - Finding undiscovered errors
 - Checking whether the application is working as expected without any errors or bugs (Functionality)
 - Checking whether the performance of the application is as expected and meet the need.

Test case ID	1
Test case Name	Validation for “Email ID”
Input data	No email ID entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	2
Test case Name	Validation for “Email ID”
Input data	Entered email id not in format
Expected output	Message: “Please enter valid email in format”
Actual output	As Expected

Test case ID	3
Test case Name	Validation for “password”
Input data	Only multiple spaces entered
Expected output	Message: “password cannot contain only spaces”
Actual output	As Expected

Test case ID	4
Test case Name	Validation for “password”
Input data	Space between password
Expected output	Message: “password cannot contain spaces”
Actual output	As Expected

Test case ID	5
Test case Name	Validation for “password”
Input data	Confirm password incorrect
Expected output	Message: “confirm password not match”
Actual output	As Expected

Test case ID	6
Test case Name	Validation for “change password”
Input data	Old password wrong
Expected output	Message: “old password is wrong”
Actual output	As Expected

Test case ID	7
Test case Name	Validation for “change password”
Input data	New password same as old password
Expected output	Message: “new password cannot be same as old password”
Actual output	As Expected

Test case ID	8
Test case Name	Validation for “view / edit project data”
Input data	Click button of view data without inputting data
Expected output	Message: “You have not inserted any data”
Actual output	As Expected

Test case ID	9
Test case Name	Validation for “first name” & “surname” & “roll no”
Input data	No data entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	10
Test case Name	Validation for “first name” & “surname”
Input data	Only spaces entered
Expected output	Message: “cannot contains only spaces”
Actual output	As Expected

Test case ID	11
Test case Name	Validation for “first name” & “surname”
Input data	Digit entered
Expected output	Message: “only contains alphabets”
Actual output	As Expected

Test case ID	12
Test case Name	Validation for “project definition”
Input data	No project definition entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	13
Test case Name	Validation for “project definition”
Input data	Only spaces entered
Expected output	Message: “cannot contains only spaces”
Actual output	As Expected

Test case ID	14
Test case Name	Validation for “technologies”
Input data	No technologies selected
Expected output	Message: “Please select at least one technologies”
Actual output	As Expected

Test case ID	15
Test case Name	Validation for “course”
Input data	No course selected
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	16
Test case Name	Validation for “mentor”
Input data	No mentor selected
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	17
Test case Name	Insert Button validation
Input data	After submitting click again to insert button
Expected output	Message: “You already inserted data”
Actual output	As Expected

Test case ID	18
Test case Name	Validation for “delete record”
Input data	Delete a record
Expected output	Message: “are you sure you want to delete?”
Actual output	As Expected

Test case ID	19
Test case Name	Validation for “Add technologies”
Input data	No technologies entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	20
Test case Name	Validation for “Add technologies”
Input data	Only spaces entered
Expected output	Message: “cannot contain only spaces”
Actual output	As Expected

Test case ID	21
Test case Name	Validation for “delete technologies”
Input data	No technologies selected
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	22
Test case Name	Validation for “delete technologies”
Input data	delete technologies
Expected output	Message: “are you sure you want to delete?”
Actual output	As Expected

Test case ID	23
Test case Name	Validation for “Add courses”
Input data	No courses entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	24
Test case Name	Validation for “Add courses”
Input data	Only spaces entered
Expected output	Message: “cannot contain only spaces”
Actual output	As Expected

Test case ID	25
Test case Name	Validation for “delete courses”
Input data	No courses selected
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	26
Test case Name	Validation for “delete courses”
Input data	delete courses
Expected output	Message: “are you sure you want to delete?”
Actual output	As Expected

Test case ID	27
Test case Name	Validation for “Add mentors”
Input data	No mentors entered
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	28
Test case Name	Validation for “Add mentors”
Input data	Only spaces entered
Expected output	Message: “cannot contain only spaces”
Actual output	As Expected

Test case ID	29
Test case Name	Validation for “delete mentors”
Input data	No mentors selected
Expected output	Message: “Please fill out this field”
Actual output	As Expected

Test case ID	30
Test case Name	Validation for “delete mentors”
Input data	delete mentors
Expected output	Message: “are you sure you want to delete?”
Actual output	As Expected

Security Features

1 User Authentication and Authorization:

- Users are required to register and create accounts with secure passwords.
- User roles are defined (Student and Admin) to control access and permissions.
- Admin users have additional privileges for system management.

2 Data Encryption and Privacy:

- User data is encrypted to ensure confidentiality.
- Sensitive information, such as passwords and payment details, is securely stored and transmitted.

3 Access Control:

- Access to sensitive features and data is restricted based on user roles.
- Authorization mechanisms prevent unauthorized actions within the system.

4 Data Validation and Sanitization:

- Input data is validated and sanitized to prevent injection attacks and data manipulation.

5 Secure Communication:

- Communication channels are secured using encryption (e.g., HTTPS) to prevent data interception.

6 User Activity Loggings:

- User activities and interactions are logged for auditing and tracking purposes.

Future Enhancement

- 1 Students can add multiple projects**
- 2 One project belongs to multiple mentors**
- 3 Special mentors' login – so that mentors can view their project information**

Bibliography

1. www.mananproject.rf.gd hosted project link