

A Project Report On

Online Exam Portal

**Submitted in fully completion of requirement For
the award of the degree of Diploma Computer Engineering
Gujarat Technological University**

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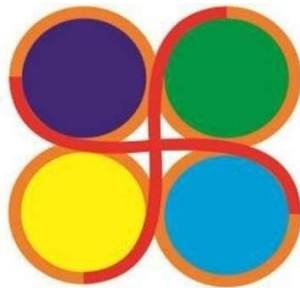
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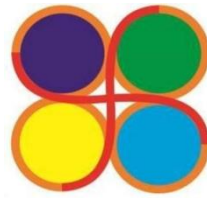
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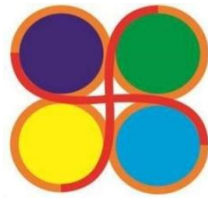
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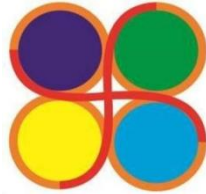
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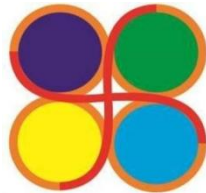
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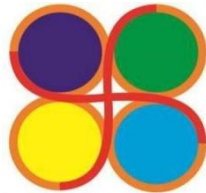
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ACKNOWLEDGEMENT

We hereby declare that the work presented in this project report entitled, “Online Exam Portal” in partial fulfilment for the Diploma in “Computer Engineering”.

Our extreme gratitude to Prof. A. R. Thaker who guided us throughout the project. Without his willing disposition, spirit of accommodation, frankness, timely clarification and above all faith in us, this project could not have been completed in due time.

With Regards,

Jwell Lalakiya

Kaivalya Ahir

Shaival Doshi

Vatsal Bhalani

Pradeep Khuman

ABSTRACT

“Online Exam Portal” is a fully exam-based system in which different users like faculties/teachers, students get a platform to give exams online without coming to schools, colleges or institutes.

In this system faculties/teachers can create their own exams for students along with that they can make batches of students of their respective class which students can see and give the exams.

Student’s parents can also see the results of their child’s exam’s result and can also see the progress bar of the student.

Parents can also see whether their child is giving exams or not. Parents will get notify if their students have not given the exam.

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1. Introduction

1.1 Project Profile

Project Name : Online Exam Portal

Front End : HTML, CSS and JS

Back End : Firebase

Internal Guide : Prof. A. R. Thaker

External Guide : ----

Project Duration : 1 Year

Team Size : 5 Members

1.2 Hardware Requirements

Processor:	Intel-i3 or higher / Recommended Intel-i5
Ram minimum:	4GB or higher / Recommended 8GB
Hard Disk Storage:	20 GB Free Space
User Interfacing Devices	(Keyboard, Mouse)

1.3 Software Requirement

Operating System:	Windows7 or Higher version
Browser:	Any html5 and css3 supported Browser

2.Literature Survey

2.1 Existing System

- There is lack of this type of systems in India and have many limitations and drawbacks. Students and Teachers are not getting proper knowledge of benefits provided by other applications. Thus, they are facing many problems.

2.1.1 Working of Current System

1) Paper Generating

- The function of this module was generating test paper as per questions created by faculties.

2) Test Online

- Student user could use this function of test online to give test assigned by faculties and can view result right after completing exam as restriction provided by faculty.

2.1.2 Shortcoming of current System

1. There are many drawbacks of this manual system also.
2. Paper records are difficult to manage and track.
3. The physical exertion required to retrieve, alter, and re-file the paper records
4. It is almost difficult to back up all information.
5. The current system does not provide accurate information. Sometimes due to the mistakes of the employees the data is lost.
6. The process cannot be centralized, so it becomes very time consuming and cumbersome analysis.
7. One of the major drawbacks of the current system is that it does not support online analysis of crucial data.
8. Problems with duplicate copies of the same records are generally avoided.

NEED FOR THE NEW SYSTEM

- As we have seen in the previous section, there are many drawbacks in the current manual system.
- So, there is a need to develop an application where most of the information can be easily available through a secure interface.
- The purpose of our app is to provide automation in batch making and making an user friendly interface for both teachers and students so that they can create or give exam easily without any need of going to institute for the exams.

2.2 Existing Site Survey

- In the process of developing this website, we have studied following applications. We have searched the sites for how they help teachers and students related to examination. We have taken many ideas from these sites and we have tried our best to incorporate many of these features in our applications.
- There are many applications all over world. We have studied following applications and we have tried to take good features from different existing applications and to incorporate in our system.
- Applications are developed for the whole university or a college. We have studied the departmental information from these applications.

1. Online Exam Builder : [www.onlineexambuilder.com]

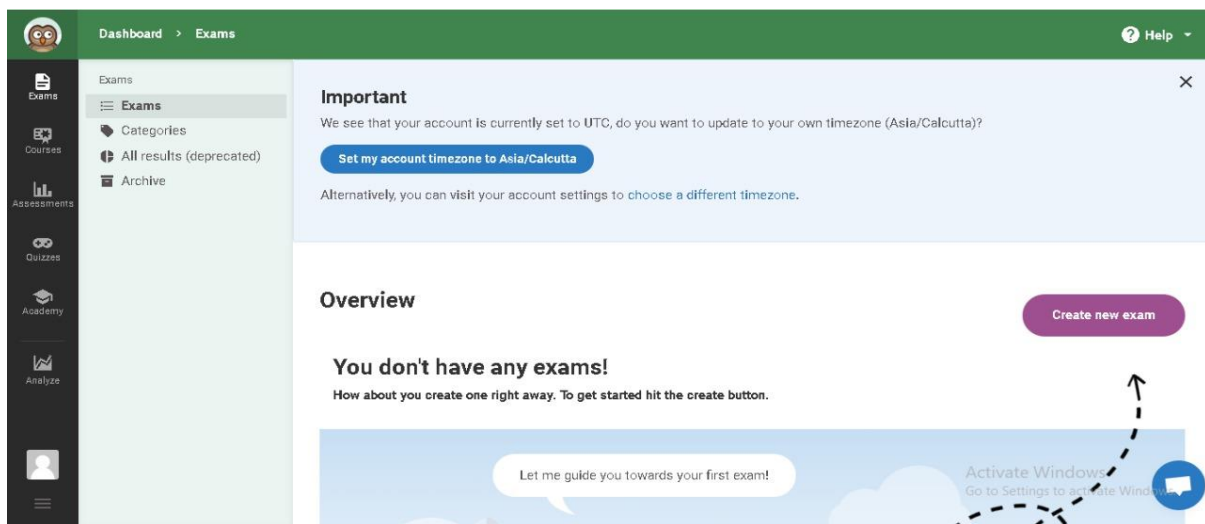


Figure 2.1

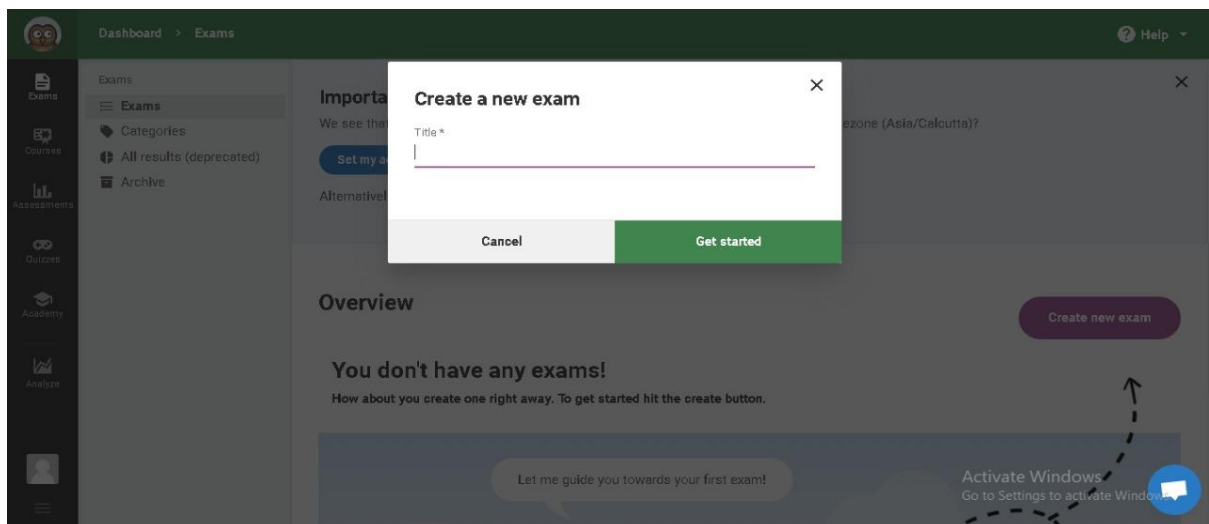


Figure 2.2

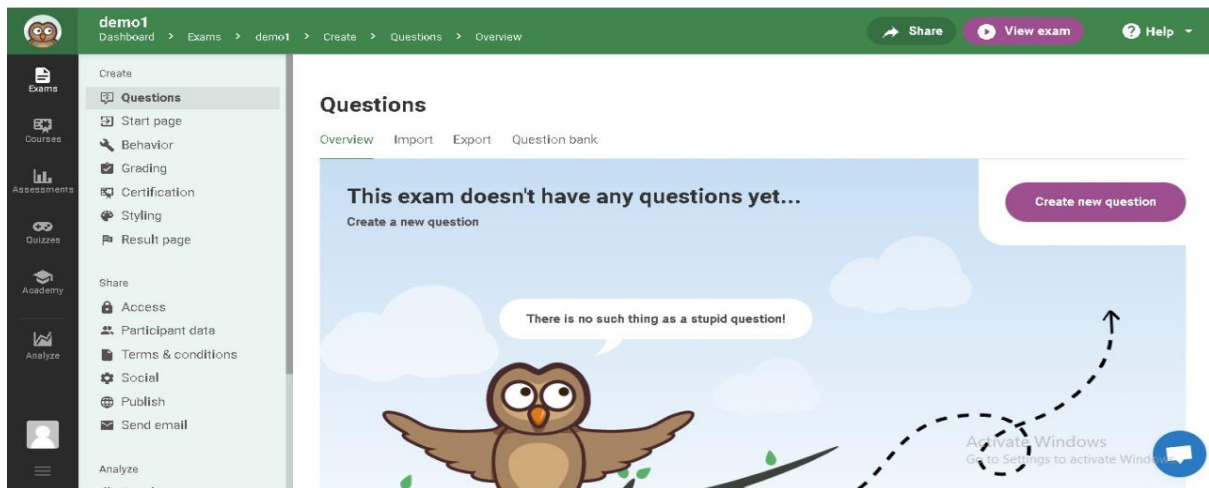


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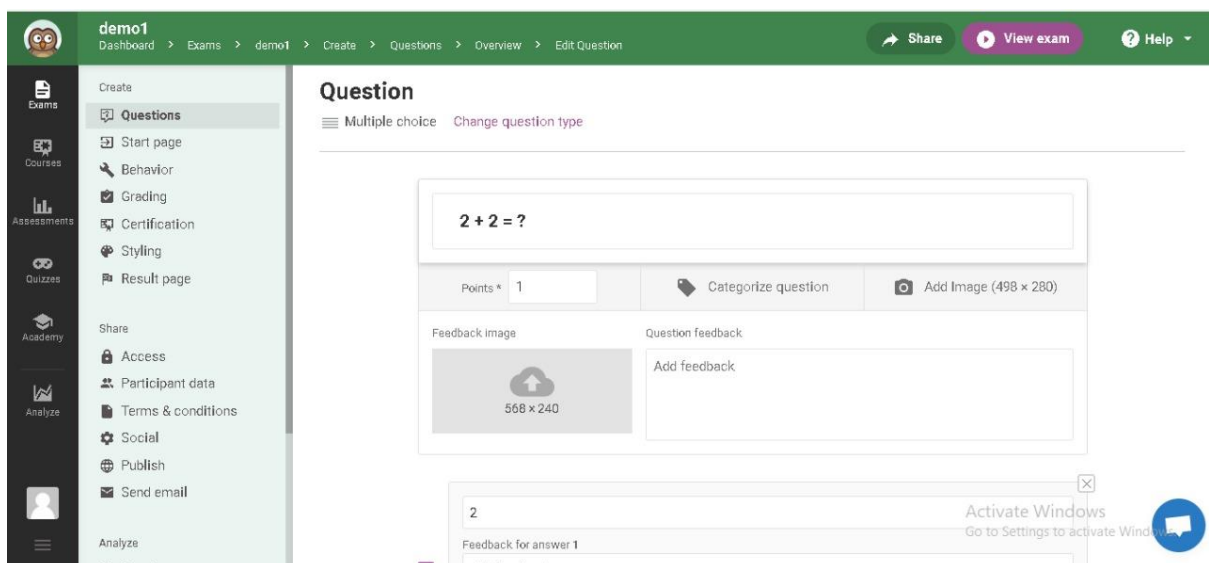


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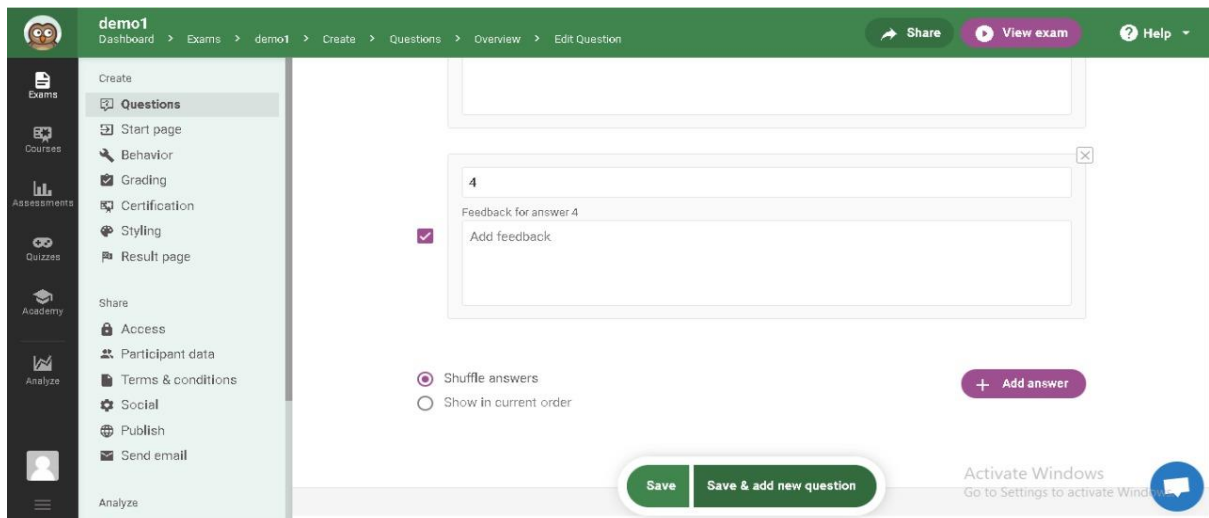


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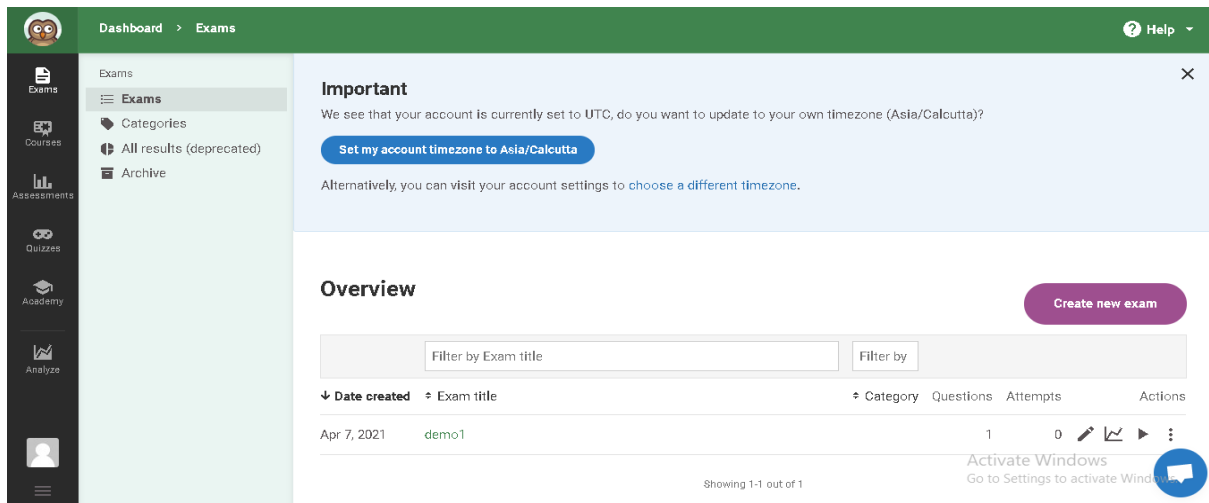


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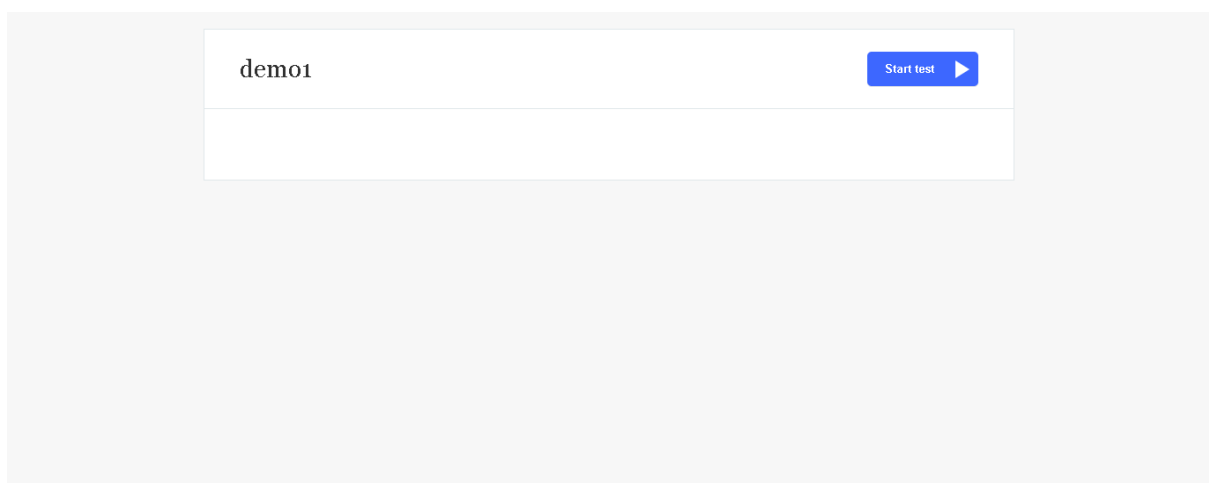


Figure 2.7

Question 1 / 1

$2 + 2 = ?$

☐ 5

☐ 3

☐ 2

☒ 4

1

Figure 2.8

Your score is 100%

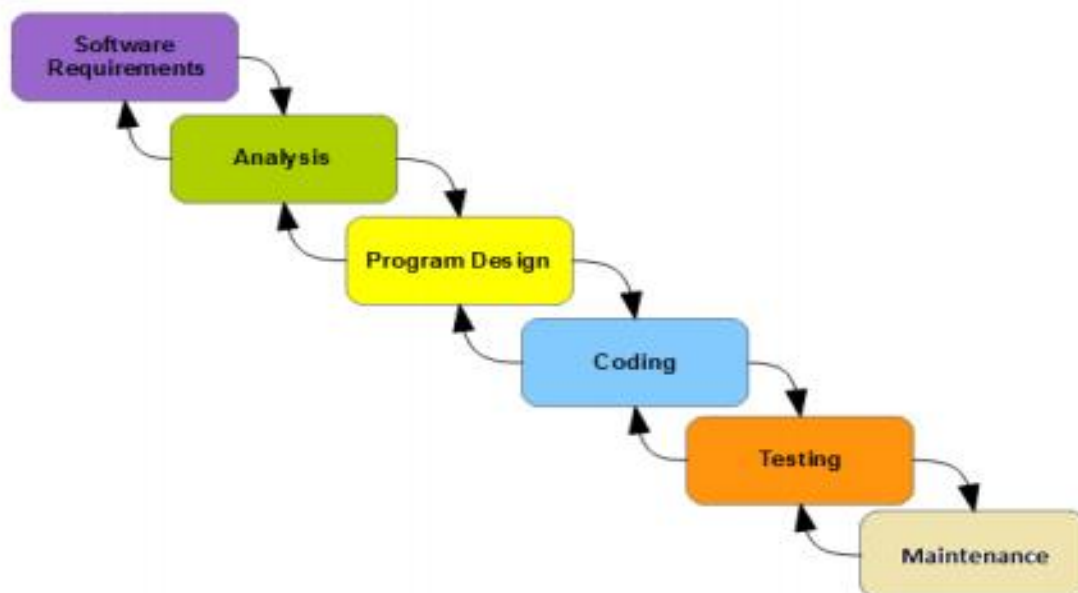
You've completed the exam. You scored 1.00 out of 1.00 points.

Passed

Figure 2.9

2.3 Process Model

- **ITERATIVE WATER FALL MODEL:** - A preliminary study was done for the system and was documented as system Project Proposal which was accepted and further development of the system was done with regards to the detail study and preliminary study.
- There is various software development approaches defined and designed which are used/employed during development process of software, these approaches are also referred as “Software Development Process Models”.
- Each process model follows a particular life cycle in order to ensure success in processes of software development. One such approach/process used in Software Development is “The Iterative Waterfall Model”.
- In “The Iterative Waterfall” approach, the whole process of software development is divided into separate process phases. The phases in Waterfall model are: Requirement Specifications phase, Software Design, Implementation and Testing& Maintenance.
- All these phases are cascaded to each other so that second phase is started as and when defined set of goals are achieved for first phase and it is signed off, so the name “Waterfall Model”.
- Waterfall model has many drawbacks so it is a solution of waterfall model.



Benefits

- Simple and easy flow.
- Each phase lays out its derivable, followed by a validation process.
- Excellent work progress tracking system.
- Simple and feasible.
- Best option for smaller project.

3. Proposed System

3.1 Introduction

- Online Exam Portal or OEP is an online exam builder which allows faculty to create exams to test and assess student's knowledge online.
- OEP is easy and cost-effective solution for online examination.
- OEP will simplify overall examination management and result in generation activity.

3.2 Functionality

1) Login/Registration:

- This module allows the user to login into existing account or create a new account.

2) Create Class:

- This module allows the user to Create a new class.

3) Classes:

- This module fetches the list of classes they are members of.

4) Manage Subject/Faculty:

- This module allows the user to add/delete a subject or another faculty in a batch they created.

5) Create Student Account:

- This module allows the user to create a/multiple student accounts.

6) Add Student Account:

- This module allows the user to add existing student account of same institute in a class.

7) Create Exam:

- This module allows the user to create a new exam which can be answered by student accounts.

8) View Answers:

- This module allows the user to view and inspect answers submitted by student accounts.

9) Result:

- This module allows the user to view exam-wise result of selected student account.

10) Student Performance:

- This module displays statistical analysis of overall performance of selected student account.

11) Manage Student accounts:

- This module allows the user to add/delete/modify student accounts created by them.

12) Generate timetable:

- This module allows the user to schedule an exam and send notification to students of the batch.

13) View Profile:

- This module displays profile information of the user and allows the user to modify it.

14) Upcoming Exams:

- This module displays upcoming exams according to the timetable scheduled by faculties.

15) View Performance:

- This module displays statistical analysis of overall performance of the user.

16) Recent Exam result:

- This module displays result of recent exams submitted.

17) Active exam:

- This module displays exams that are currently being conducted.

3.3 Advantage

- Examiners get tired checking huge number of answer sheets, hence the system reduces their workload by automating the manual checking process accurately.
- The system also excludes the effort of recording results and performance of every students manually.
- It removes human errors that commonly occur during manual checking.
- Online examination is future of examination because it is easy to create easy to answer and answers are stored can be viewed anytime anywhere to learn from your mistakes.
- Thus the system excludes human efforts and saves time and resources.

3.4 System Modules

1. Login and Registration

- This module allows faculty to register itself as well as student and login using their credentials.

2. Manage Classes

- This module allows faculty to create and delete classes. Faculty can also add/remove another faculties and students once the class is created.

3. Manage Students

- This module allows faculty to create and delete student accounts (students can't create their own account). Faculty can also modify student details whenever they want.

4. Exam

- This module allows the user to create and delete exams. Faculty are also allowed to schedule exams on specific date and time.
- Using this module student can view upcoming exams and answer currently conducted exams.
- This module will show result of each student exam-wise and also shows full semester analysis.

4. System design

4.1 System Flow Diagram:

- The system flow diagram suggests the flow of the pages of our website. From which page to which page the flow occurs.
- A FSD is a graphic tool which helps in clearly specifying the steps towards a problem solution.

The symbols used are: -



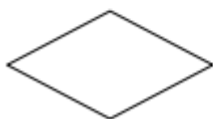
Start/Termination



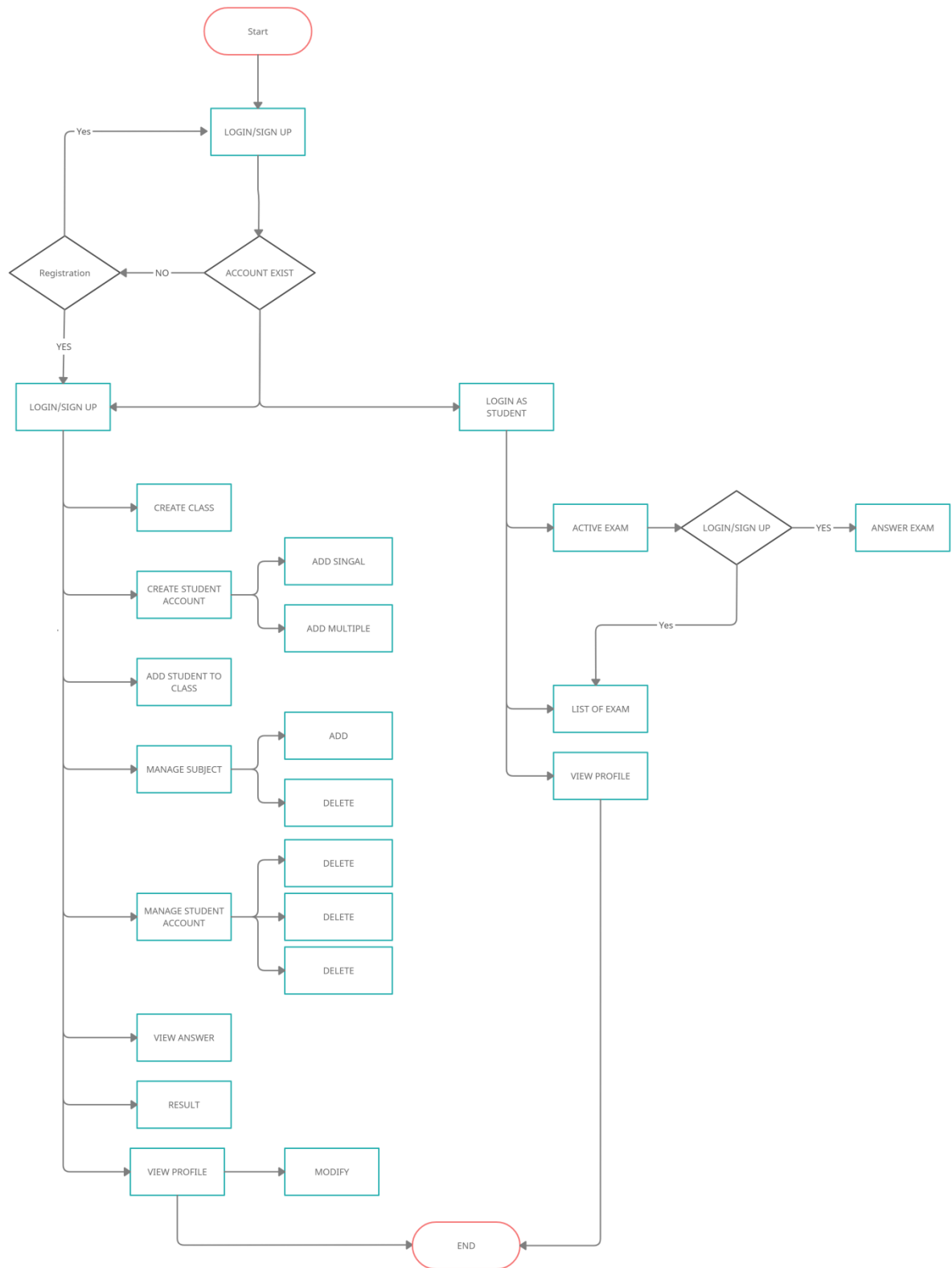
Input/Output



Process



Decision



[Figure 4.1]

4.2 Entity Relationship Diagram (ERD):

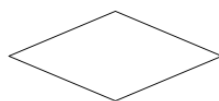
- Entity Relationship Diagram do not depict flow or processing.
- They should not be read the data flow diagrams or flowcharts. Entity Relationship Diagram depicts data at rest, data being stored. They also don't imply how data is implemented, created, modified, used or deleted. ERDs will be easy to read and interpret.
- There are three basic elements in E-R Diagram:
 - 1.Entities
 - 2.Attributes
 - 3.Relationship
- **Data Entity:**
- A Data Entity, which will be referred to as entity flow now on, is the main symbol on an ERD.
- An entity is anything, real or abstract, about which we want to store data.

➤ Relationship:

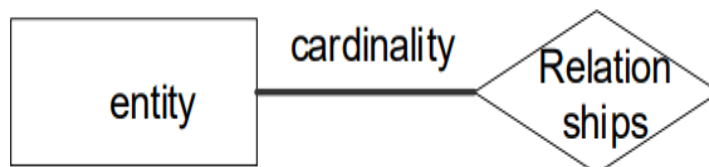
- A relationship is a diamond that contains its name. It touches one relationship-entity and optionally some attribute-entity connectors. It is linked with two entities.
- **Symbols used in E-R diagrams:**



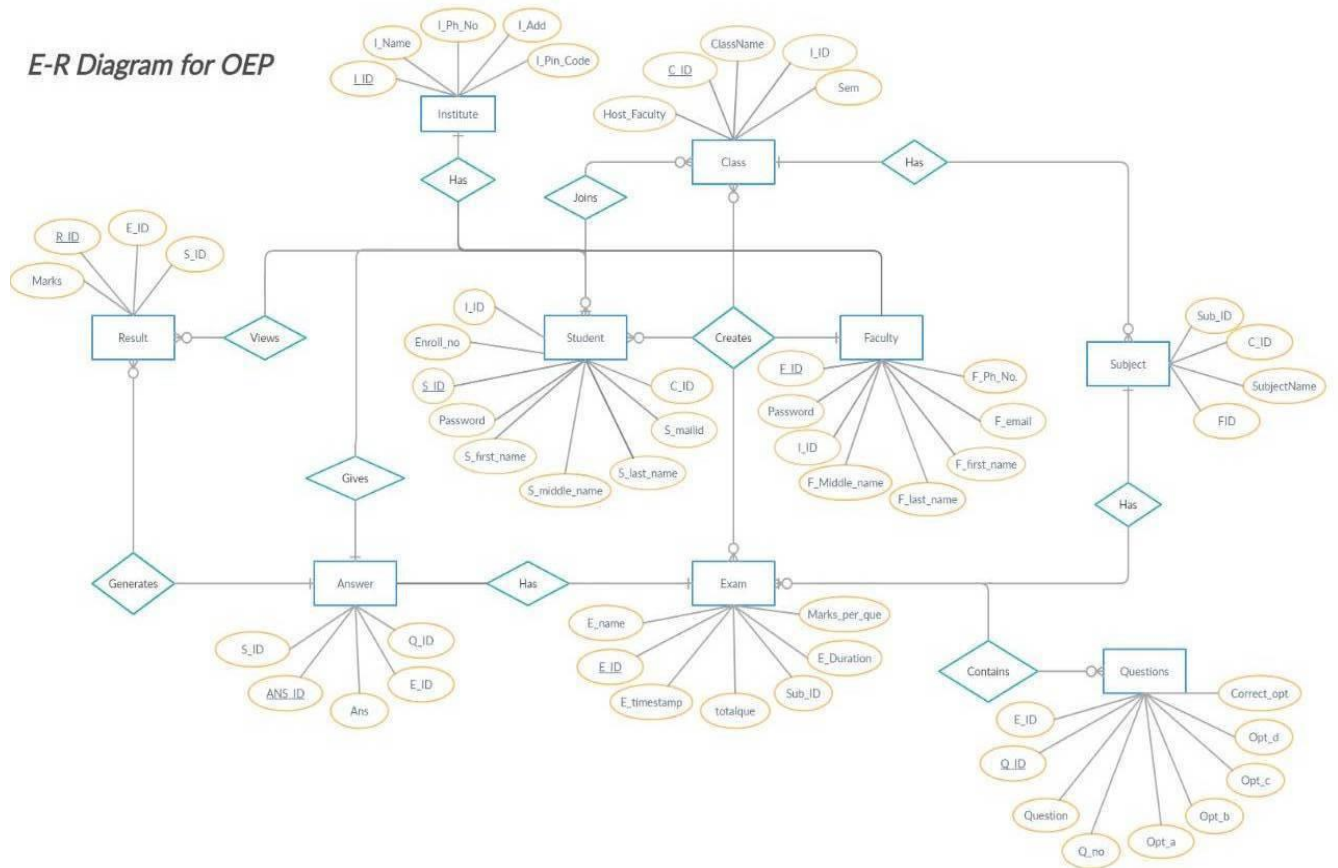
entity



Relation ship



E-R Diagram for OEP

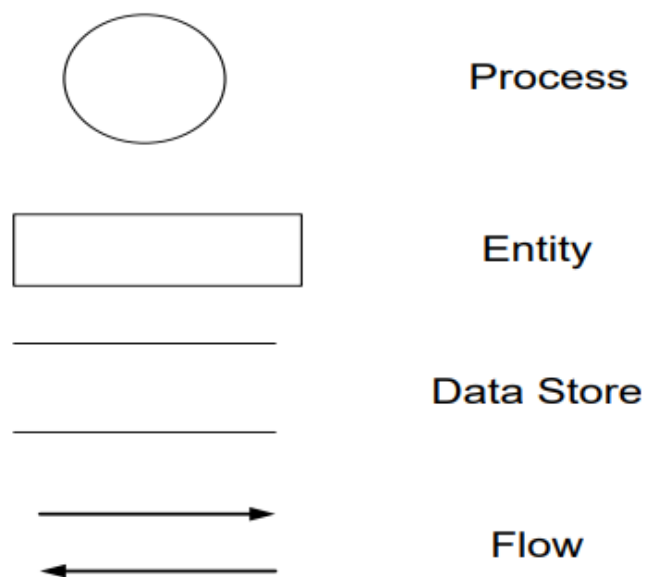


[Figure 4.2]

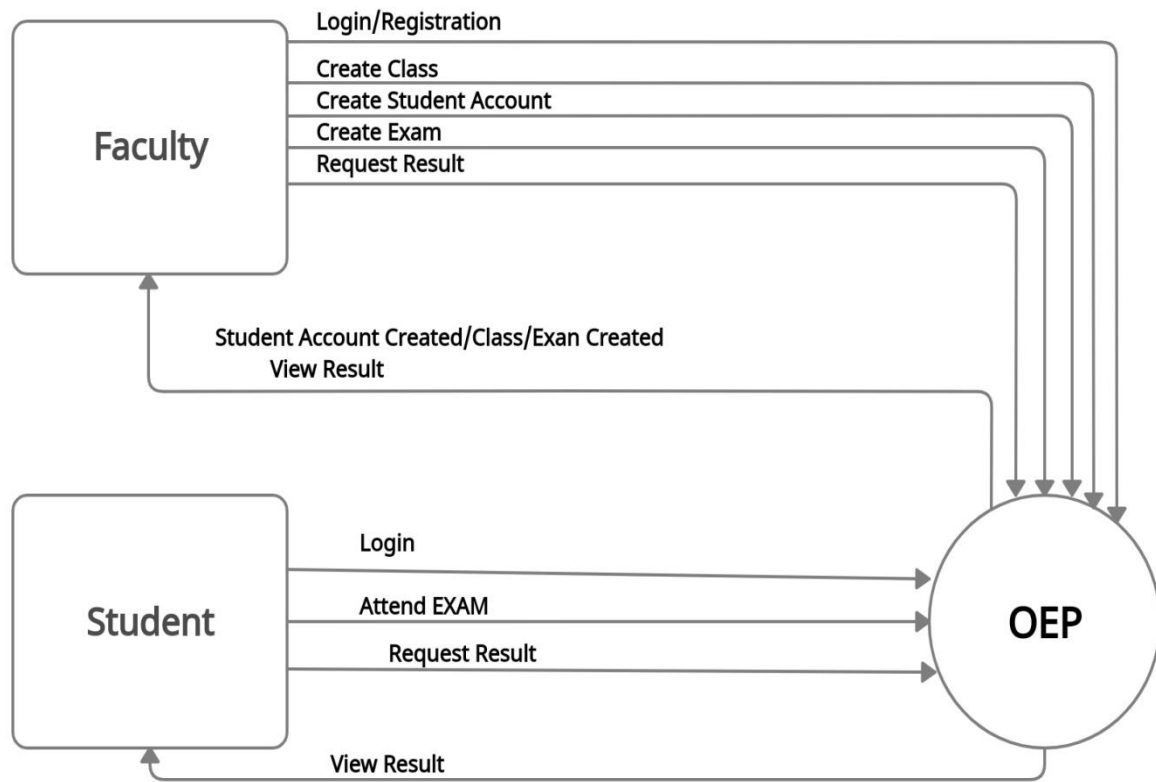
4.3 Data Flow Diagram :

Data Flow Diagram (DFD'S) :

- Diagram is a graphical representation of the flow of data through an information system. It differs from the system flowchart as it shows the flowchart as it shows the flow of data through processes instead of hardware.
- A data flow diagram is logical model of the system and shows the flow of the data and the flow of logic so this all thing describe s what takes place in a proposed system, not how the activities are accomplished.
- DFD consist of a series of symbols joined together by a line. There may be a single DFD for the entire system or it may be exploded into various levels.
- Context Level Diagram
- First Level DFD A Data Flow
- Second Level DFD

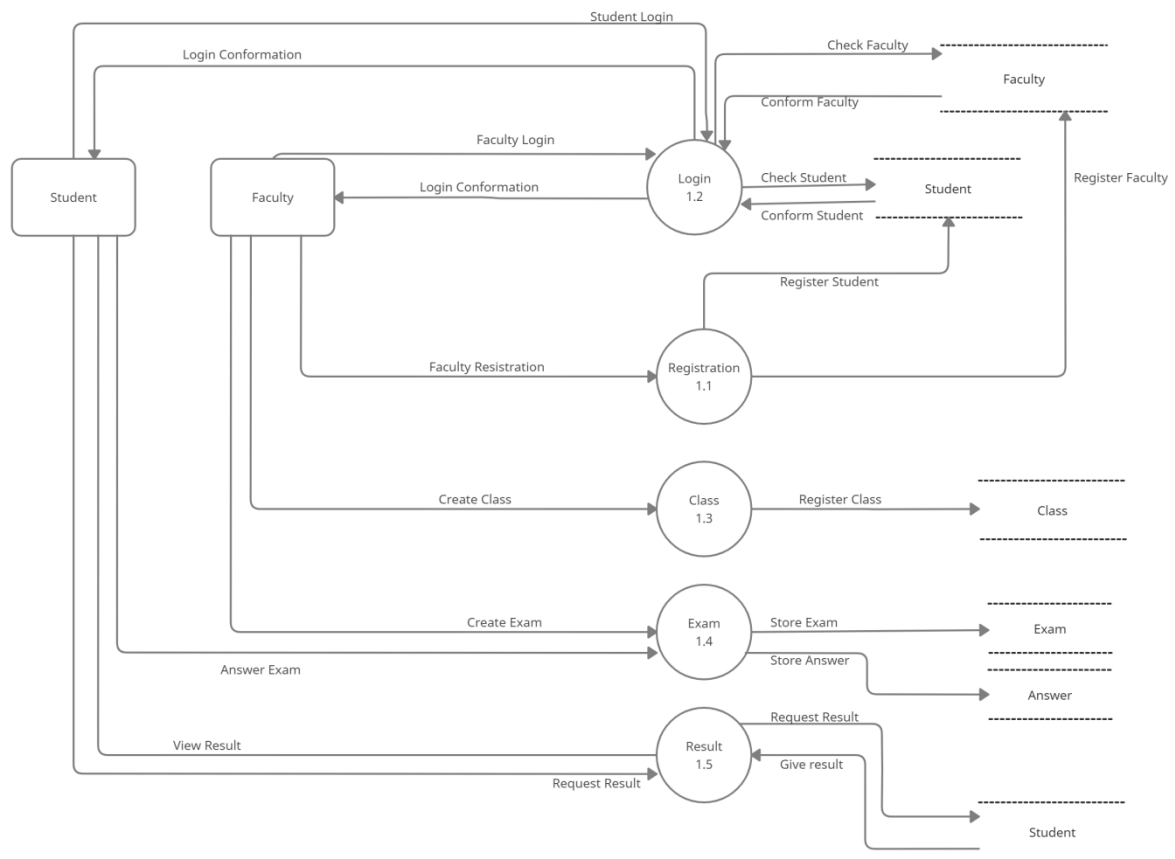


- **Context Level Diagram :**



[Figure 4.3.1 (DFD)LEVEL-0]

- **First Level DFD A Data Flow :**



[Figure 4.3.2 (DFD)LEVEL-1]

4.4 Usecase Diagram

Purpose:

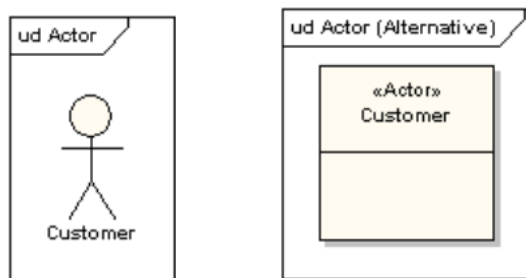
- The purpose of use case diagram is to capture the dynamic aspect of a system. But this definition is too generic to describe the purpose.
- Because other four diagrams (activity, sequence, collaboration and Statechart) are also having the same purpose. So we will look into some specific purpose which will distinguish it from other four diagrams.
- Use case diagrams are used to gather the requirements of a system including internal and external influences. These requirements are mostly design requirements. So when a system is analyzed to gather its functionalities use cases are prepared and actors are identified.
- Now when the initial task is complete use case diagrams are modelled to present the outside view. So in brief, the purposes of use case diagrams can be as follows:
 - Used to gather requirements of a system.
 - Used to get an outside view of a system.
 - Identify external and internal factors influencing the system.
 - Show the interacting among the requirements are actors.

- **Use Case Model :**

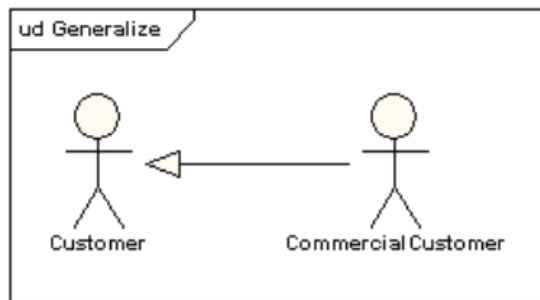
The use case model captures the requirements of a system. Use cases are a means of communicating with users and other stakeholders what the system is intended to do.

- **Actors :**

A use case diagram shows the interaction between the system and entities external to the system. These external entities are referred to as actors. Actors represent roles which may include human users, external hardware or other systems. An actor is usually drawn as a named stick figure, or alternatively as a class rectangle with the «actor» keyword.

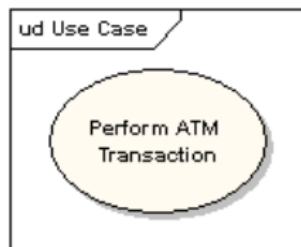


- Actors can generalize other actors as detailed in the following diagram:

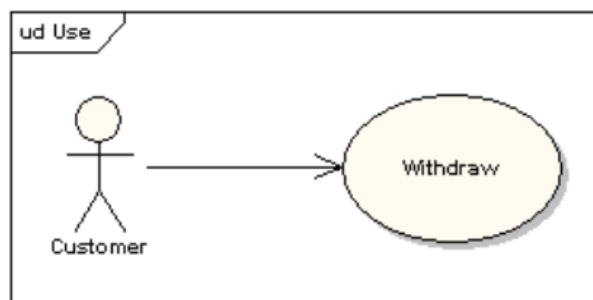


- UseCases

A use case is a single unit of meaningful work. It provides a high-level view of behavior observable to someone or something outside the system. The notation for a use case is an ellipse.

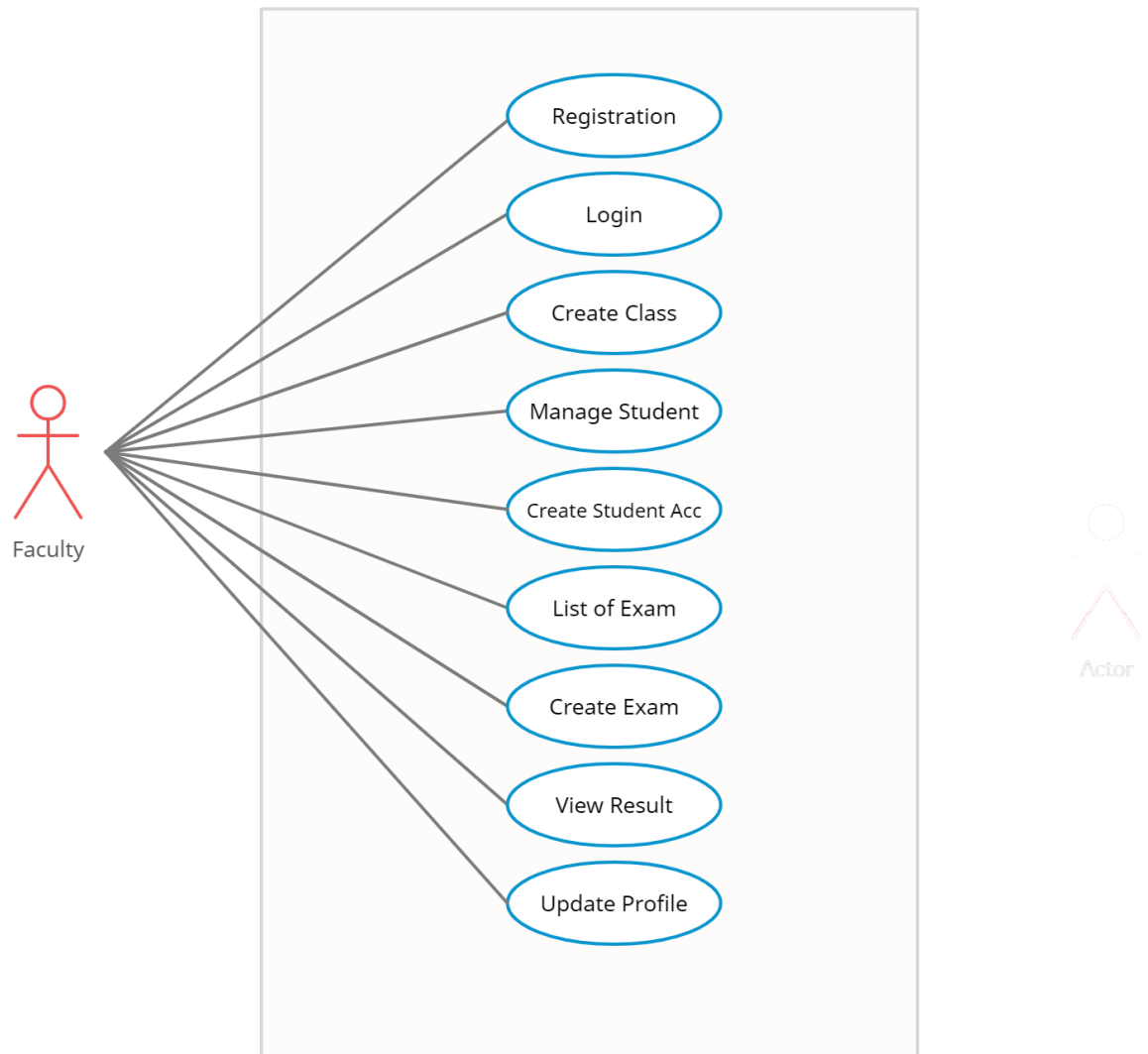


The notation for using a use case is a connecting line with an optional arrowhead showing the direction of control. The following diagram indicates that the actor "Customer" uses the "Withdraw" use case.



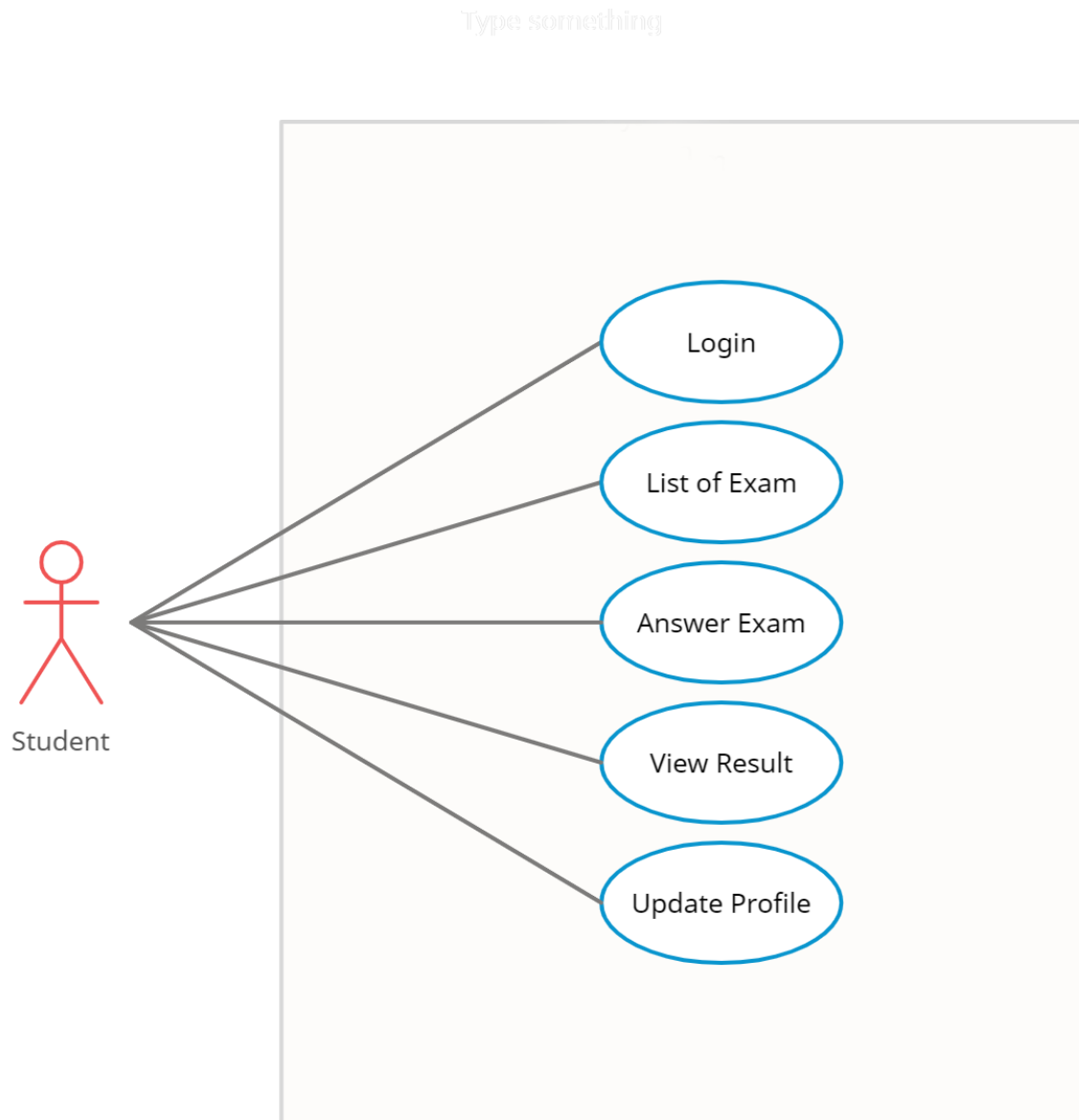
- The uses connector can optionally have multiplicity values at each end, as in the following diagram, which shows a customer may only have one withdrawal session at a time, but a bank may have any number of customers making withdrawals concurrently.

- **Faculty :**



[Figure 4.4.1]

- **Student :**



[Figure 4.4.2]

4.5 Data Dictionary

1. Institute

Primary Key: I_ID

Foreign Key: ---

Table Description: Institute table stores institute related data

Field_Name	Data Types	Length	Constraints	Description
I_ID	Number	20	Primary Key	Unique id is given to each Institute
I_Name	Varchar	50	Not null	Name of the institute
I_Ph_No	Number	10	Not null	Contact number of the institute
I_Add	Varchar	100	Not null	Address of the institute
I_Pin_code	Number	8	Not null	Pin code of institute

4.5.1

2. Faculty

Primary Key: F_ID

Foreign Key: I_ID

Table Description: Faculty Table stores faculty registration data

Field_Name	Data Types	Length	Constraints	Description
F_ID	Number	20	Primary Key	Unique id is given to each faculty
Password	varchar	8	Not null	Login password
I_ID	Number	20	Foreign key	Reference from institute table
F_First_Name	varchar	20	Not null	First name of faculty
F_Last_Name	Varchar	20	Not null	Last name of faculty
F_Email	Varchar	50	Unique	Email id of faculty
F_Middle_Name	varchar	20	Not null	Middle name of faculty
F_Phone_No	Number	10	Not null	Phone number of faculty

4.5.2

3. Student

Primary Key: S_ID

Foreign Key: C_ID, F_ID

Table Description: Student table stores Student Registration Data

Field_Name	Data Types	Length	Constraints	Description
S_ID	Number	20	Primary Key	Unique id is given to each student
Password	Varchar	20	Not null	Login password
Enroll_No.	Number	15	Unique	Unique enrollment number for each student
S_First_Name	Varchar	20	Not null	First Name of Student
S_Middle_Name	Varchar	20	Not null	Middle Name of Student
S_Last_Name	Varchar	20	Not null	Last Name of Student
S_Email	Varchar	50	Not null	E-mail of Student
C_ID	Number	20	Foreign Key	Reference of Class table
F_ID	Number	20	Foreign Key	Reference of Class table
I_ID	Number	20	Foreign key	Reference from institute table

4.5.3

4. Class

Primary Key: C_ID

Foreign Key: I_ID, Host Faculty

Table Description: Class table stores class related data created by faculty

Field_Name	Data Types	Length	Constraints	Description
C_ID	Number	20	Primary Key	Unique id is given to each class
Semester	Number	1		Semester of class
C_Name	Varchar	20	Not null	Name of Class
Host Faculty	Varchar	20	Foreign Key	Creator of class
I_ID	Number	20	Foreign Key	Reference of Class table

4.5.4

5. Exam

Primary Key: E_ID

Foreign Key: Sub_ID

Table Description: Exam table stores Exam related data added by faculty

Field_Name	Data Types	Length	Constraints	Description
E_ID	Number	20	Primary Key	Unique id is given to each exam
E_Name	Varchar	15	Not null	Name of exam
E_Timestamp	Date		Not null	Time of exam
Totalque	Number	3	Not null	Total number of question in exam
Sub_ID	Number	20	Foreign Key	Reference of Class table
E_Duration	Date		Not null	Due date of the exam
Marksperque	Number	10	Not null	Marks per questions

4.5.5

6. Question

Primary Key: Q_ID

Foreign Key: EID

Table Description: Question Table stores question related data which is entered by faculty

Field_Name	Data Types	Length	Constraints	Description
Q_ID	Number	20	Primary Key	Unique id is given to each question
Question	Varchar	500	Not null	Question
Correct_Opt	Varchar	100	Not null	Correct option if the question
Q_no	Number	4	Not null	Question number
Opt_A	Varchar	100	Unique	Option A of the
Opt_B	Varchar	100	Unique	Option B of the question
Opt_C	Varchar	100	Unique	Option C of the question
Opt_D	Varchar	100	Unique	Option D of the question
E_ID	Number	20	Foreign Key	Reference of Exam table

4.5.6

7. Answer

Primary Key: ANS_ID

Foreign Key: E_ID, Q_ID

Table Description: Answer table Stores answers given by students

Field_Name	Data Types	Length	Constraints	Description
Ans_ID	Number	20	Primary Key	Unique id is given to each Answer
Ans	Varchar	500	Not null	Answer of the question
S_ID	Number	20	Foreign key	Reference from Student table
E_ID	Number	20	Foreign Key	Reference from Exam table
Q_ID	Number	20	Foreign key	Reference from Question table

4.5.7

8. Result

Primary Key: R_ID

Foreign Key: S_ID, E_ID,

Table Description: Result table stores result of exam given by students

Field_Name	Data Types	Length	Constraints	Description
R_ID	Number	20	Primary Key	Unique id is given to each Result
Marks	Number	4	Not null	Result of the exam
S_ID	Number	20	Foreign key	Reference from Student table
E_ID	Number	20	Foreign Key	Reference from Exam table

4.5.8

9. Subject

Primary Key: R_ID

Foreign Key: S_ID, E_ID,

Table Description: Subject Table stores Subject Details Created by Class Host

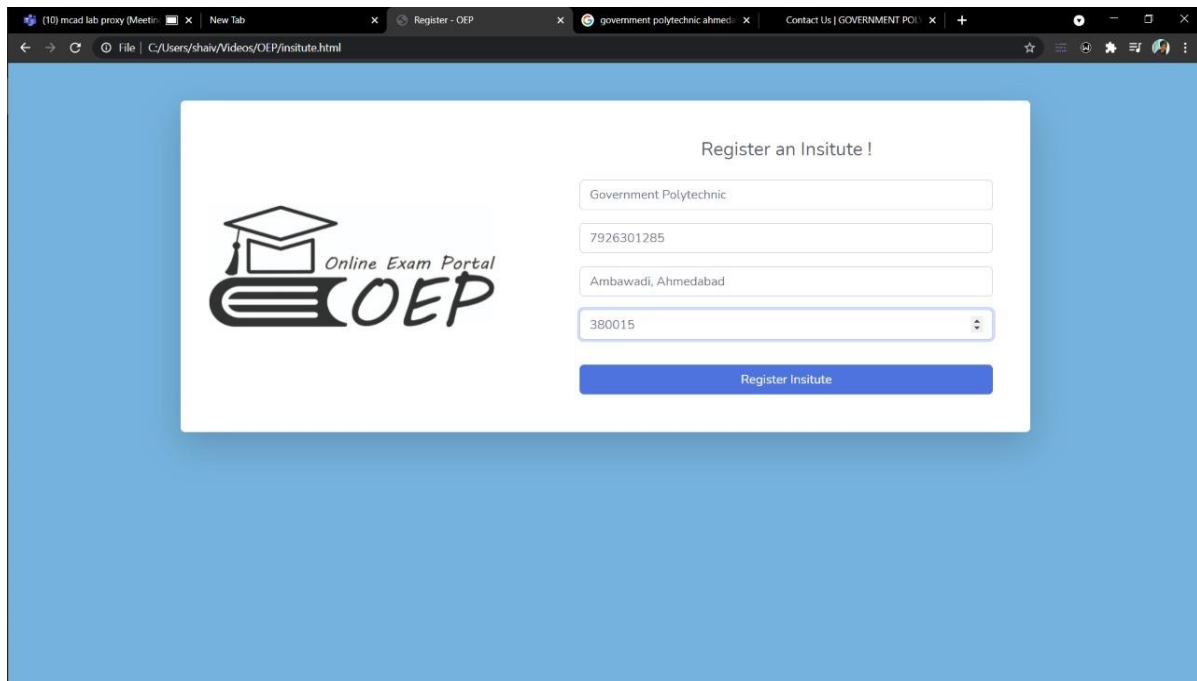
Field_Name	Data Types	Length	Constraints	Description
Sub_ID	Number	20	Primary Key	Unique id is given to each Subject
C_ID	Number	20	Foreign key	Reference from Class table
SubjectName	VarChar	20	Not null	Name of Subject
F_ID	Number	20	Foreign Key	Reference from Faculty table

4.5.9

4.6 System Design

Institute Registration :

This Page is used to Register a New Institute on our Website.

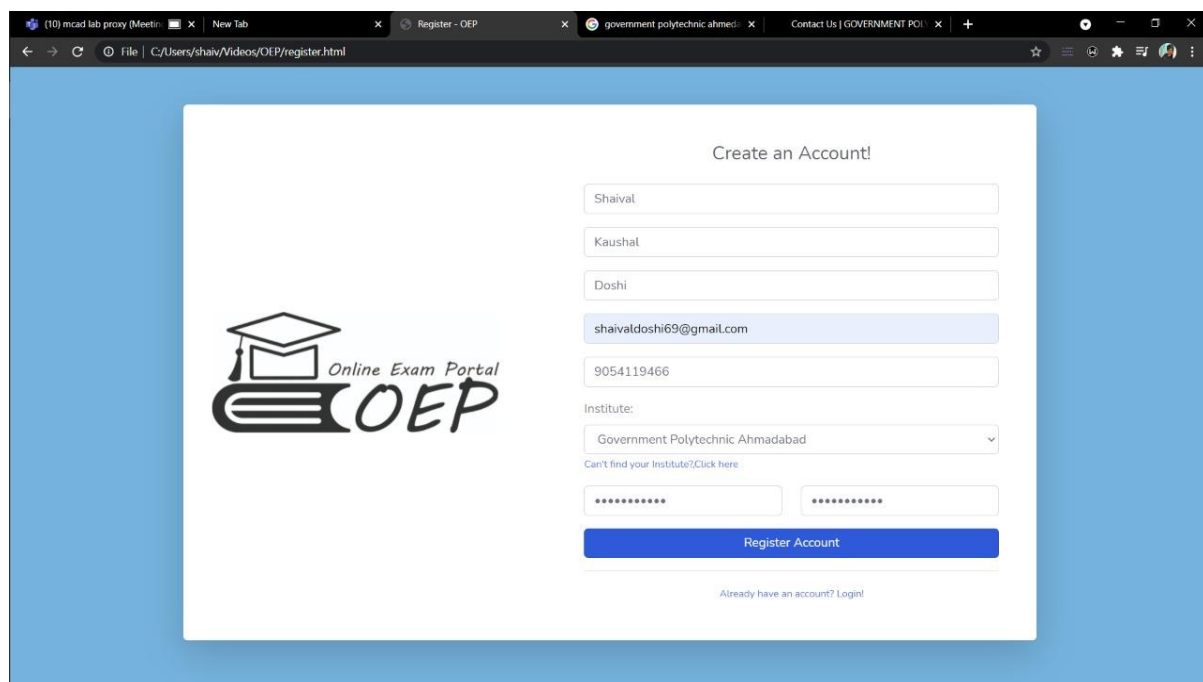


The screenshot shows a web browser window with multiple tabs. The active tab is titled "Register - OEP" and shows the URL "C:/Users/shaiv/Videos/OEP/institute.html". The page content features a white registration form on a blue background. On the left of the form is the "Online Exam Portal OEP" logo, which includes a graduation cap icon. The form is titled "Register an Insitute !" and contains four input fields: "Government Polytechnic", "7926301285", "Ambawadi, Ahmedabad", and "380015". A blue "Register Insitute" button is positioned at the bottom of the form.

[Figure 4.6.1]

Faculty- Registration

This Page is used to Register a New Faculty on our Website.

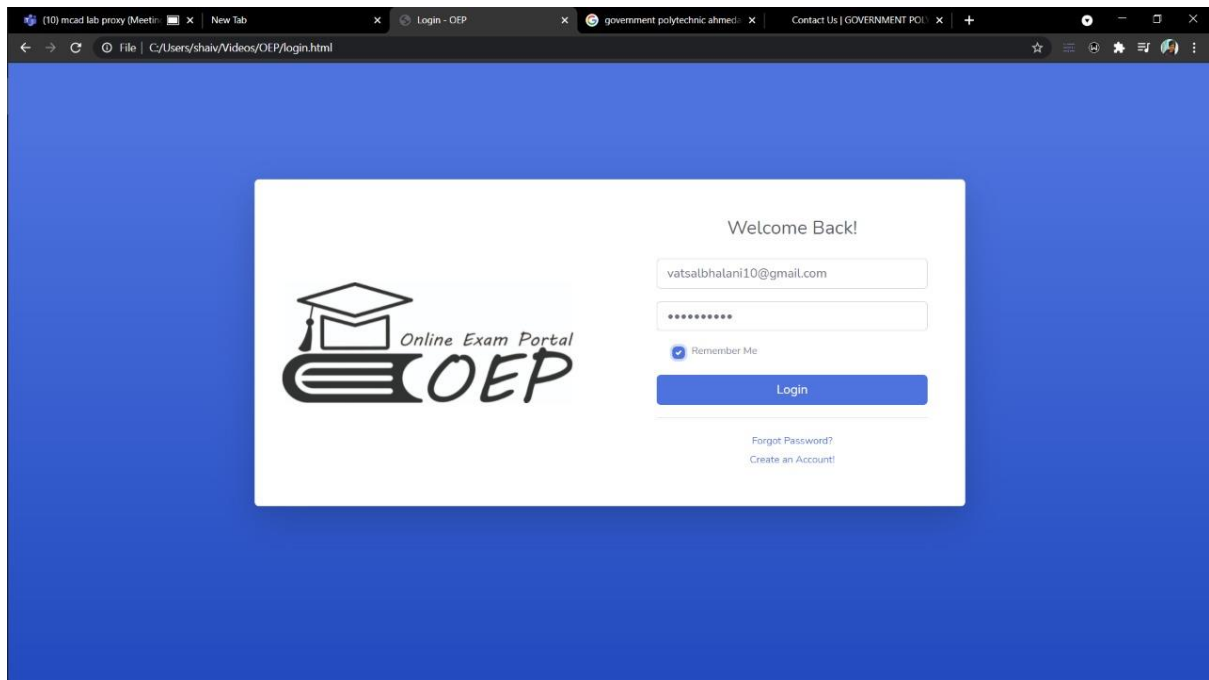


The screenshot shows a web browser window with multiple tabs. The active tab is titled "Register - OEP" and shows the URL "C:/Users/shaiv/Videos/OEP/register.html". The page content features a white registration form on a blue background. On the left of the form is the "Online Exam Portal OEP" logo, which includes a graduation cap icon. The form is titled "Create an Account!" and contains several input fields: "Shaival", "Kaushal", "Doshi", "shaivaldoshi69@gmail.com", and "9054119466". There is a dropdown menu for "Institute:" with "Government Polytechnic Ahmadabad" selected. Below this is a link "Can't find your Institute? Click here:". There are two password input fields, each with a masked "*****" value. A blue "Register Account" button is at the bottom of the form. At the very bottom of the form, there is a link "Already have an account? Login!".

[Figure 4.6.2]

Faculty- Login

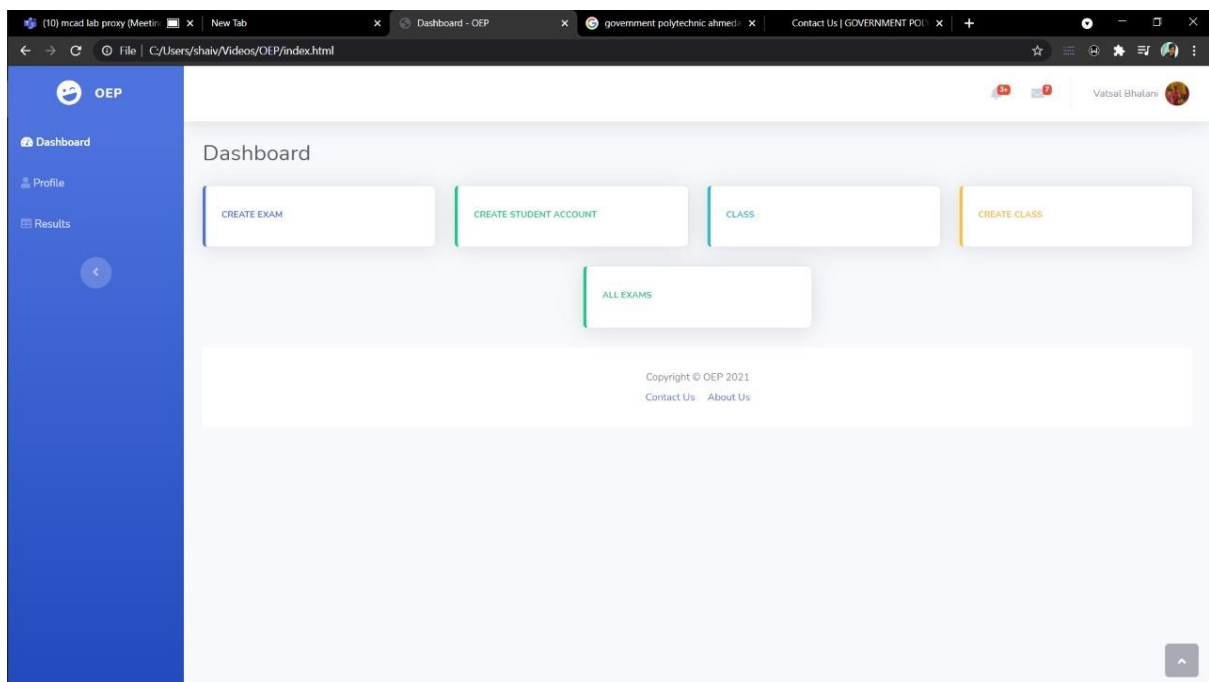
This Page is used to Login on our Website.



[Figure 4.6.3]

Faculty- Dashboard

This Page represents Dashboard for faculties on our website.



[Figure 4.6.4]

Faculty- Profile

This Page Shows or allows to update Faculty Details.

The screenshot shows a web browser window with multiple tabs. The active tab is 'Profile - OEP'. The URL bar shows 'C:/Users/shaiv/Videos/OEP/profile.html'. The page has a blue sidebar on the left with 'OEP' logo and links for 'Dashboard', 'Profile', and 'Results'. The main content area is titled 'Profile'. It features a circular profile picture of a man in a red shirt with a 'Change Photo' button below it. To the right is a 'User Settings' form with fields for Display Name (Vatsal Bhalani), Email Address (vatsalbhalani10@gmail.com), First Name (Vatsal), Middle Name (Kalpeshbhai), Last Name (Bhalani), Mobile Number (9054119466), and Institute (Government Polytechnic Ahmadabad). There is a 'Save Settings' button. Below this is a 'Change Password' section with fields for Old Password, New Password, and Confirm Password, and a 'Change Password' button. The footer shows 'Copyright © OEP 2021'.

[Figure 4.6.5]

Faculty- Create Class

This Page allows the faculty to create a new class on our website.

The screenshot shows a web browser window with multiple tabs. The active tab is 'Create Class - OEP'. The URL bar shows 'C:/Users/shaiv/Videos/OEP/CreateClass.html'. The page has a blue sidebar on the left with 'OEP' logo and links for 'Dashboard', 'Profile', and 'Results'. The main content area is titled 'Create Class'. It contains two input fields: 'Class Name :' with the value 'NMA' and 'Sem :' with the value '6'. Below these fields is a blue 'Create' button. The footer shows 'Copyright © OEP 2021' and links for 'Contact Us' and 'About Us'.

[Figure 4.6.6]

Faculty- Create Student

This page allows faculty to create link that creates bulk student accounts.

Dashboard

Profile

Results

Create Student Account

Range

From :
18617030701

To :
186170307010

Sem :
6

Password :

Create Link

file:///C:/Users/shaiv/Videos/OEPtable2.html?from=18617030701&to=186170307010&pass=vatsal1234&faculty_id=

[Figure 4.6.7]

Faculty- Add Student Data

This page is a link created by faculty and allows students to enter their details.

Enroll No	First Name	Middle Name	Last Name	Email	
186170307001	Shaival	Kaushalbhair	Doshi	shaivaldoshi569@gmail.co	Submit
186170307002					Submit
186170307003	Jwell	Alpeshbhai	Lalakiya	jwelllalakiya@gmail.com	Submit
186170307004	Pradeep		Khuman	pradeepkhuman@gmail.coi	Submit
186170307005					Submit
186170307006					Submit
186170307007					Submit
186170307008					Submit
186170307009					Submit
186170307010					Submit

[Figure 4.6.8]

Faculty- Add Student

This page allows faculty to add existing students in a existing class.

Import Student :

From :

186170307001

To :

186170307001

Get Details

Total Students : 1

Enroll No	Name
186170307001	Shaival Doshi

Save

[Figure 4.6.9]

Faculty- Add subject

This page allows to add a new subject into a existing class.

Add Subject!

Subject Name :

AJAVA

Select Faculty:

Vatsal Bhalani (vatsalbhalani10@gmail.com)

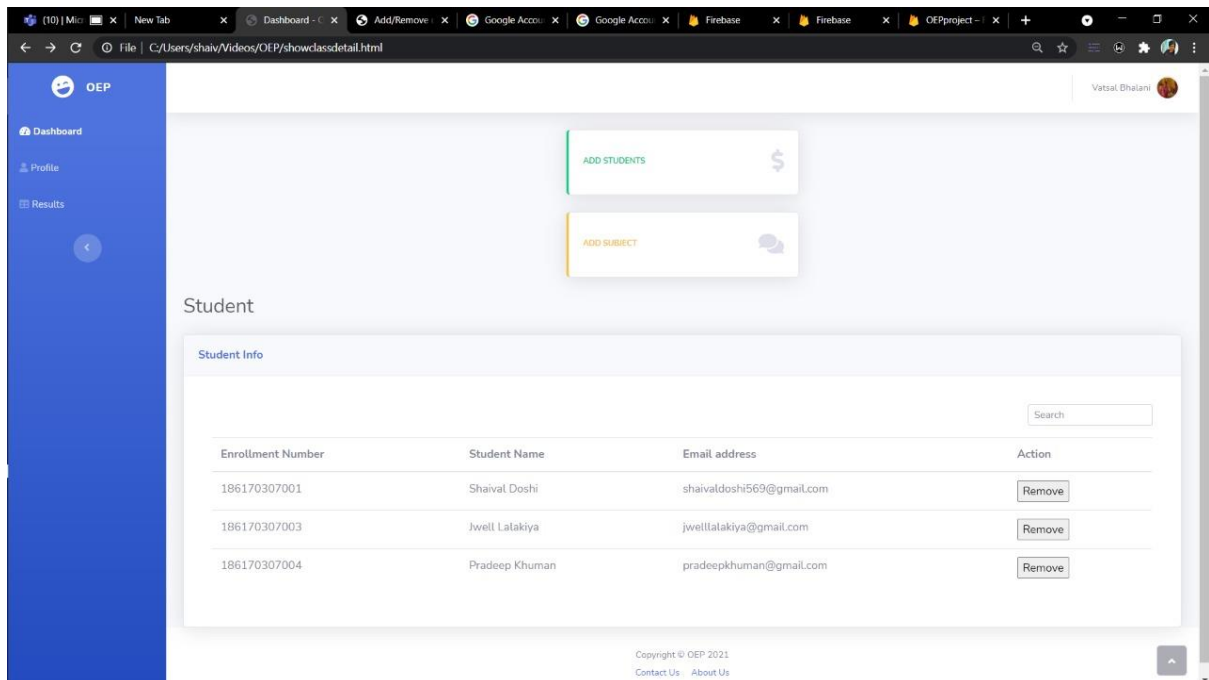
Next

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[Figure 4.6.10]

Faculty-View Student

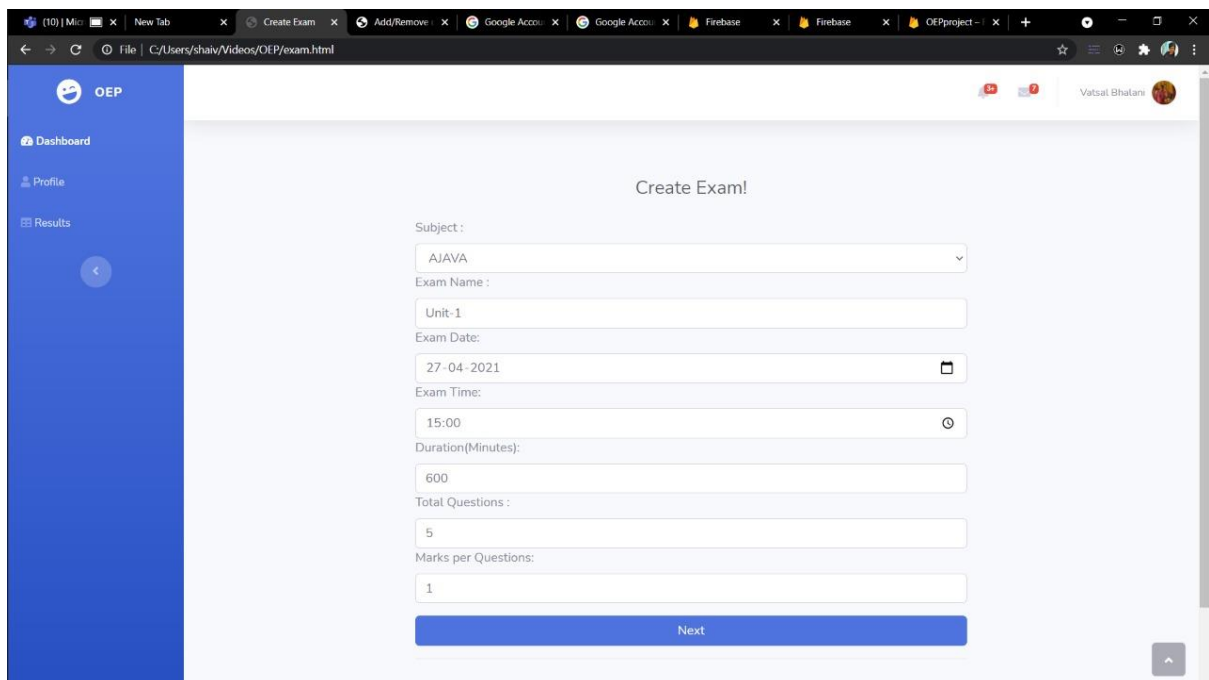
This page shows or allows faculty to delete already enrolled students in a particular class.



[Figure 4.6.11]

Faculty- Create Exam

This page allows faculty to create a new exam.



[Figure 4.6.12]

Faculty- Create Questions

This page is followed up after create exam to enter details of questions.

The screenshot shows a web browser window with the URL `C:/Users/shaiv/Videos/OEP/question.html`. The page has a blue sidebar with 'Profile' and 'Results' links. The main content area is titled 'Add Question!'. It contains the following fields:

- Question Number:
- Question:
- Option A:
- Option B:
- Option C:
- Option D:
- correct Option:
-

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[Figure 4.6.13]

Faculty- Result

This page displays class wise result of exams.

The screenshot shows a web browser window with the URL `C:/Users/shaiv/Videos/OEP/fresult.html`. The page has a blue sidebar with 'Dashboard', 'Profile', and 'Results' links. The main content area is titled 'Exams'. It features a 'SELECT CLASS' button and a table with exam results.

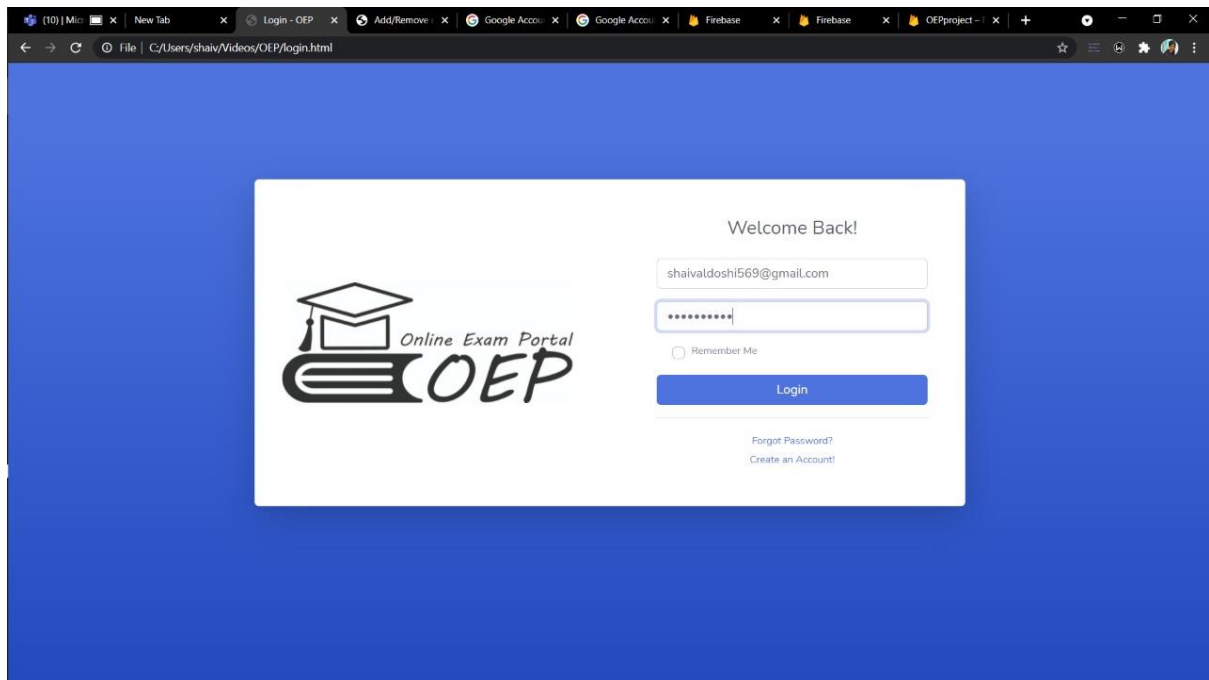
Exam Name	Subject	Date	Total Marks	Marks Gained
Unit-1	AJAVA	Apr 27 2021	5	

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[Figure 4.6.14]

Student- Login

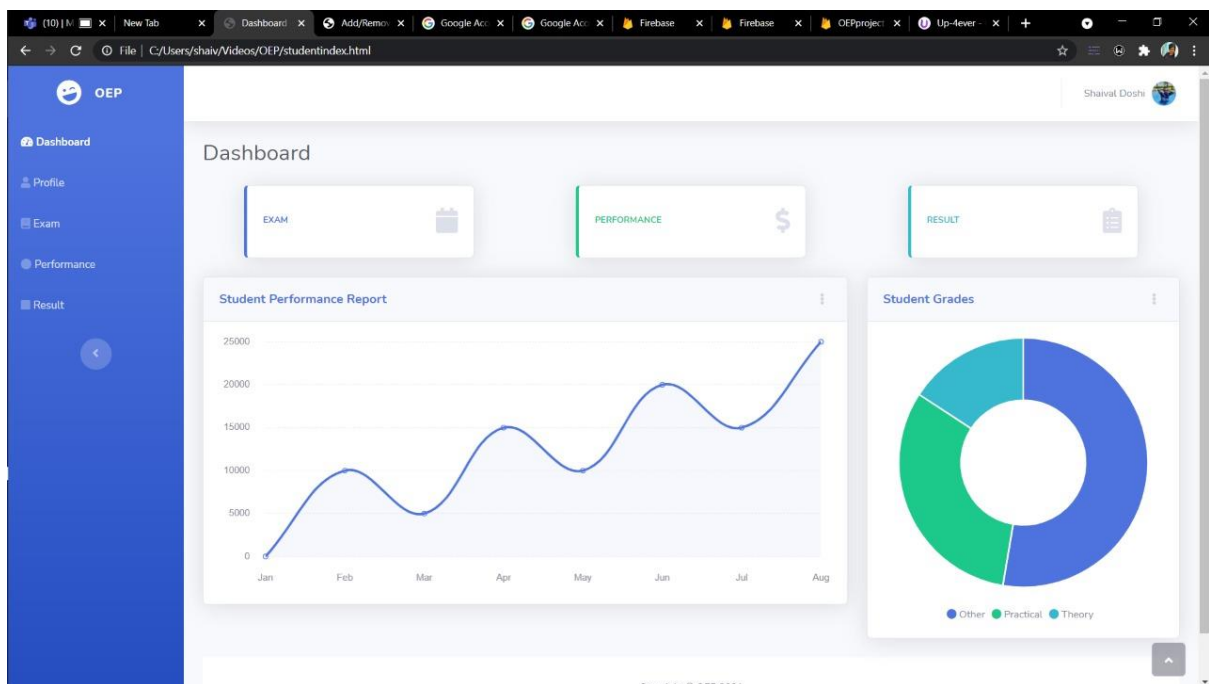
This Page is used to Login on our Website.



[Figure 4.6.15]

Student- Home Page

This Page is Dashboard for students on ouw website.



[Figure 4.6.16]

Student- Profile & Settings

This Page Shows or allows to update Student Details.

The screenshot shows the 'Profile' page of the OEP portal. On the left is a blue sidebar with navigation links: Dashboard, Profile, Exam, Performance, and Result. The main content area is titled 'Profile' and features a circular profile picture of a student with a 'Change Photo' button below it. To the right of the profile picture is the 'User Settings' form. This form contains two columns of input fields: 'Display Name' (Shival Doshi), 'Email Address' (shaivaldoshi569@gmail.com), 'First Name' (Shival), 'Middle Name' (Kaushtbhai), 'Last Name' (Doshi), 'Enrollment Number' (196170307001), 'Institute' (Government Polytechnic Ahmadabad), and 'Class Name' (NMA). Below these fields are 'Save Settings' and 'Change Password' buttons. The 'Change Password' section includes fields for 'Old Password', 'New Password', and 'Confirm Password'. At the bottom of the page, there is a copyright notice: 'Copyright © OEP 2021'.

[Figure 4.6.17]

Student- View Exam

This page shows exams conducted.

The screenshot shows the 'Exams' page of the OEP portal. On the left is a blue sidebar with navigation links: Dashboard, Profile, Exam, Performance, and Result. The main content area is titled 'Exams' and features an 'Exam Info' section. This section contains a search bar and a table with the following data:

Exam Name	Subject	Duration	Marks	Date	Time	
Unit-1	AJAVA	600 Minutes	5	Apr 27 2021	3:00:00 PM	Start

At the bottom of the page, there is a copyright notice: 'Copyright © OEP 2021' and links for 'Contact Us' and 'About Us'.

[Figure 4.6.18]

Student-Answer Exam

This page is used to answer exam.

8h 54m 40s

Answer Question!

Question No:1

How many types of applets are there?

☐ 1

☒ 2

☐ 3

☐ 4

NEXT

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[Figure 4.6.19]

Student-View Exam Result

This page displays result of each exam after exam time is over.

Exams

Exam Info

Search

Exam Name	Subject	Date	Total Marks	Marks Gained
Unit-1	AJAVA	Apr 27 2021	5	5

Show Details

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[Figure 4.6.20]

Student-View Detailed Result

This page shows result of each question.

The screenshot displays the 'Exams' section of the OEP application. A sidebar on the left contains navigation links: Dashboard, Profile, Exam, Performance, and Result. The main content area is titled 'Exams' and contains an 'Exam Info' section with a table of results.

Q No.	Question	Your Answer	Status
1	How many types of applets are there?	B (2)	✓
2	How to set the back ground of a applet window?	A (void setBackground(Color colname))	✓
3	How To output a string to an Applet.	A (void drawString(String message, int x,int y))	✓
4	How To obtain the directory of the current browsers page.	B (URL.getDocumentBase())	✓
5	How To Display the status message in the status bar of applet window.	B (void showStatus(String status))	✓

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[Figure 4.6.22]

About Us

The screenshot displays the 'About Us' page of the OEP application. The page features a section titled 'Our team' with five team members, each represented by a profile picture, name, title, and social media links.

Name	Title
Kaivalya Ahir	CEO - FOUNDER
Jwell Lalakiya	CTO - FOUNDER
Shaival Doshi	CEO - FOUNDER
Vatsal Bhalani	COO - FOUNDER
Pradeep Khuman	CMO - FOUNDER

[Figure 4.6.21]

5. Testing

5.0 Testing

Various parameters like implementation environment, program modules and coding standards are explained in previous chapter while this chapter is aimed to provide brief account of testing the software. There are two principal motives of testing the software

1. To rectify the error in execution
2. To check the viability of software

The testing ensures that the software is according to the required specification standards and performs the task meant for it. The testing is done by us in house employee that act as novice user and test the application with all possible way to find the bugs and error as well as check validation.

5.1 Testing Plan:

Testing is carried out at the following three stages:

- Design
- Implementation
- Coding

5.1.1 Design Testing:

The design errors are to be rectified at the initial stage. Such errors are very difficult to repair after the execution of software.

5.1.2 Implementation Testing:

The errors occurred at this stage can't be overlooked because such errors do not allow the further process.

5.1.3 Coding Testing:

The coding procedure plays significant role in software designing. The improper coding of any software can generate inconsistent results. Such errors may occur due to incorrect syntax or false logic. If the errors at coding stage remain unnoticed may give rise to grave failure of the system

5.3 Testing Method

5.3.1 Unit Testing

The unit testing is meant for testing smallest unit of software. There are two approaches namely bottom-up and top-down. In bottom up approach the last module is tested and then moving towards the first module while top down approach reverses the action. In present work we opt for the first one. The bottom up approach for the current project is carried out as shown in.

5.3.2 Integration Testing

The integration testing is meant to test all the modules simultaneously because it is possible that all the modules may function correctly when tested individually. But they may not work altogether and may lead to unexpected outcome.

5.3.3 Validation Testing

After the integration testing software is completely assembled as a package, interfacing error have been uncovered and corrected, and then validation testing may begin. Validation can be defined in many ways but a simple definition is what a validation succeeds when software functions in a manner that can be reasonably accepted by the user.

5.3.4 Storage Testing

The database of the system has to be stored on the hard disk. So the storage capacity of the hard disk should be enough to store all the data required for the efficient running of the system.

5.4 Test Cases

5.4.1 Purpose

The purpose of this application is to reduce overhead in paper work and all the records are maintained such that the user as well as administrator can easily segment them into desired properties so it is easy for any novice user to have access to the application. Another purpose is to make record of papers in database so it can be referred in future.

5.4.2 Test Cases

1. Registration

Test case	Test Data	Test Result	Test Report
Blank name, Email,password	Name:- Email:- Password:-	Invalid	Please enter Details
Valid name,email, password	Name:- test Email:- test@gmail.com Password:-test123	Valid	Dashboard

2. Login

Test case	Test Data	Test Result	Test Report
Blank Email,password	Email:- Password:-	Invalid	Please enter Details
Valid Email, password	Email:- test@gmail.com Password:-test123	Valid	Dashboard

3. Add institute

Test case	Test Data	Test Result	Test Report
Blank Institute name, Address,	Name:- Email:- Password:-	Invalid	Please enter Details
Valid name,email, password	Name:- test Email:- test@gmail.com Password:-test123	Valid	Successfully added

4 Add students(import)

Test case	Test Data	Test Result	Test Report
Blank from To	From:- To:-	Invalid	Please enter Details
Valid name,email, password	From:1 To:-10	Valid	Added

5. Create Class

Test case	Test Data	Test Result	Test Report
Blank Classname,Sem	Classname:- Sem:-	Invalid	Please enter Details
Valid Classname,sem	Classname:- A Sem:-5	Valid	Successful

6. Add subject

Test case	Test Data	Test Result	Test Report
Blank Subject name, Faculty	Subject name:- Faculty:-	Invalid	Please enter Details
Valid Subject name, Faculty	Subject name:- java Faculty:- keval	Valid	ADDED

7. Create single student account

Test case	Test Data	Test Result	Test Report
Blank Enrollment,fml name ,email>Password	Enrollment:- Firstname: Middlename: Lastname: Email: Password:-	Invalid	Please enter Details
Valid Enrollment,fml name ,email>Password	Enrollment:-7049 Firstname:vasu Middlename:d Lastname:patel Email:ab@gmail.com Password:-***	Valid	Account created

8. Answer exam

Test case	Test Data	Test Result	Test Report
Blank options	Option A:- Option B:- Option C:- Option D :-	Invalid	Please enter Details
Selected option	Option B selected	Valid	Next question

6. Conclusion And Future Scope

6.1 Limitation of our Project

- For now, faculties can only add 100 students in one class.
- Student requires more than 1 login credentials if he/she is in more than 1 institute.
- Faculties can only take MCQ based examinations.

6.2 Conclusion

- Online examination system is a user-friendly system, which is very easy and convenient to use. The system is complete in the sense that it is operational and it is tested by entering data and getting the reports in proper order. But there is always a scope for improvement and enhancement. During the development of this, coding standards are followed for easy maintainability and extensibility.

6.3 Future Scope

- Reduce errors due to human intervention.
- We also aim to Bring changes into our application according to user feedback or advices.
- Make an easy android application for faculty.
- Add more automation to our application.

7. Reference and bibliography

7.1 Reference

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