Dr. Vishwanath Karad
MIT WORLD PEACE UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

Faculty of Science
School of Computer Science
2020-2021

A
PROJECT REPORT ON

ONLINE EXAMINATION PORTAL

BY
Omkar Chavan(1132190345)
Kiran Labhade(1132190348)
Ganesh Tikar(1132190323)

IN PARTIAL FULFILLMENT OF
MASTERS OF COMPUTER APPLICATIONS

Dr. Vishwanath Karad MIT- World Peace University, Pune.

Faculty of Science
School of Computer Science
Mini Project

CERTIFICATE

This is to certify that Mr. / Ms. /Mrs. OMKAR CHAVAN studying in S.Y MCA in MIT-WPU School of Computer Science has successfully completed the mini project work titled ONLINE EXAMINATION PORTAL in partial fulfillment of requirement for the award of MCA prescribed by the MIT World Peace University, Pune from 01-11-2020 to 20-01-2021.

This project is the record of authentic work carried out by him / her out during the academic year 2020 – 2021.

Dr. Shankar Mali	**Dr. Rajeshree Khande**	**Dr. C. H. Patil**	**Dr. Shubhalaxmi Joshi**
Internal Project Guide	**AHOS**	**Head of School**	**Associate Dean**
Faculty of Science	**School of Computer**	**Faculty of Science**	**Faculty of Science**

Faculty of Science
School of Computer Science
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CERTIFICATE OF COMPLETION

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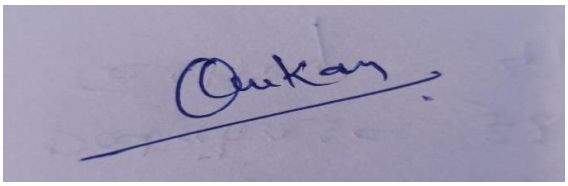

Authorized signature with stamp

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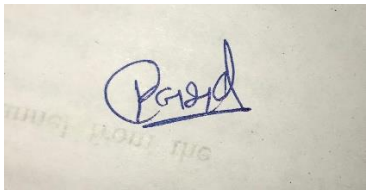

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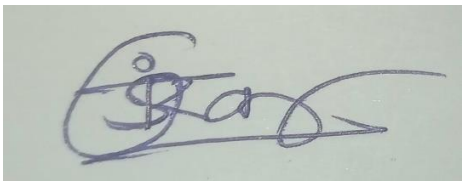
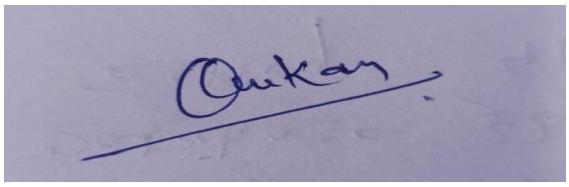


Authorized signature with stamp

DECLARATION

I, Mr. / Ms. / Mrs. OMKAR CHAVAN hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-2021. This project is plagiarism-free and has not been submitted to any other University or Institute towards the award of any degree.

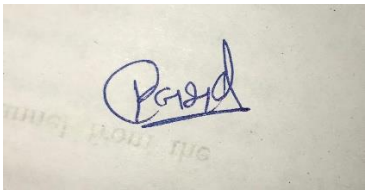


Signature of the student
(Omkar Chavan)
S.Y.MCA

PRN of the student
1132190345

DECLARATION

I, Mr. / Ms. / Mrs. KIRAN LABHADE hereby declare that this project is the record of authentic work carried out by me during the academic year 2020-2021. This project is plagiarism-free and has not been submitted to any other University or Institute towards the award of any degree.



Signature of the student
(Kiran Labhade)
S.Y.MCA
PRN of the student
1132190348

DECLARATION

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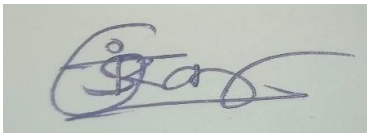


Signature of the student
(Ganesh Tikar)
S.Y.MCA
PRN of the student
1132190323

ACKNOWLEDGEMENT

I wish to express my deep sense of gratitude and honor towards the faculty for giving us a chance and platform to work on such projects.

I wish to thank everyone in the organization that helped me during project development from time to time. I also express my honor and gratitude to **Dr. Shankar Mali** and constant encouragement for completing my project work successfully.

I also express my honor and gratitude to **Dr. Rajeshree Khande** for giving us this opportunity.

I also want to thank **Dr. C. H. Patil** for constant encouragement and help for completing my project work successfully. And last but not the least, I express my gratitude towards **Dr. Shubhalaxmi Joshi**, for always being there as our guide.

INDEX

INTRODUCTION

Online examinations contents providers to focus on creating effective assessment questions and focusing on exam's feedback delivery to students. In the paper we present techniques that are pertinent to the elements of assessment process: answers submission, computerized grading, and feedback after submission.

As the modern organizations are automated and computers are working as per the instructions, it becomes essential for the coordination of human beings, commodity and computers in a modern organization.

The Administrators, Instructor, Students who are attending for online examination can communicate with the system through this project, thus facilitating effective implementation and monitoring of various activities of Online Examinations like conducting Exams as per scheduled basis and delivering result to that particular use or student and the details of students who attempted Online Examination are maintained at administrator.

EXISTING SYSTEM AND NEED OF THE SYSTEM

Existing system is a manual one in which users are maintaining books to store the information like Student Details, Instructor Details, Schedule Details and feedbacks about students who attempted exam as per schedule. It is very difficult to maintain historical data.

The following drawbacks of existing system emphasize the need for computerization:

1. A lot of copies of question papers have to be made
2. A lot of correction work hence delay in giving the results 3. A lot of tabulation work for each subject results

OPERATING ENVIRONMENT

Hardware Requirements:

- Pentium-IV(Processor).
- 256 MB Ram
- 512 KB Cache Memory
- Hard disk 10 GB
- Microsoft Compatible 101 or more Key Board

Software Requirements:

- Operating System: Windows
- Web-Technology: PHP
- Front-End: HTML, CSS, JAVASCRIPT
- Back-End: MySQL
- Web Server: Apache SERVER

DESCRIPTION OF TECHNOLOGY USED

HTML:

Hypertext Mark-up Language (**HTML**) is the standard mark-up language for documents designed to be displayed in a web browser.
It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript and VBScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by *tags*, written using angle brackets.

HTML can embed programs written in a scripting language such as JavaScript which affects the behaviour and content of web pages.
Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

CSS:

Cascading Style Sheets (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colours, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Separation of formatting and content also makes it feasible to present the same mark-up page in different styles for different rendering methods, such as on-screen, in print, by voice (via speechbased browser or screen reader), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

The name *cascading* comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.

PHP:

PHP is a popular general-purpose scripting language that is especially suited to web development. It was originally created by
Danish-Canadian programmer Rasmus Lerdorf in 1994; the
PHP reference implementation is now produced by The PHP Group. PHP originally stood for *Personal Home Page*, but it now stands for the recursive initialism *PHP: Hypertext Pre-processor*.

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of a HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be

used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control. Arbitrary PHP code can also be interpreted and executed via command-line interface (CLI).

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

The PHP language evolved without a written formal specification or standard until 2014, with the original implementation acting as the *de facto* standard which other implementations aimed to follow. Since 2014, work has gone on to create a formal PHP specification.

PROPOSED SYSTEM

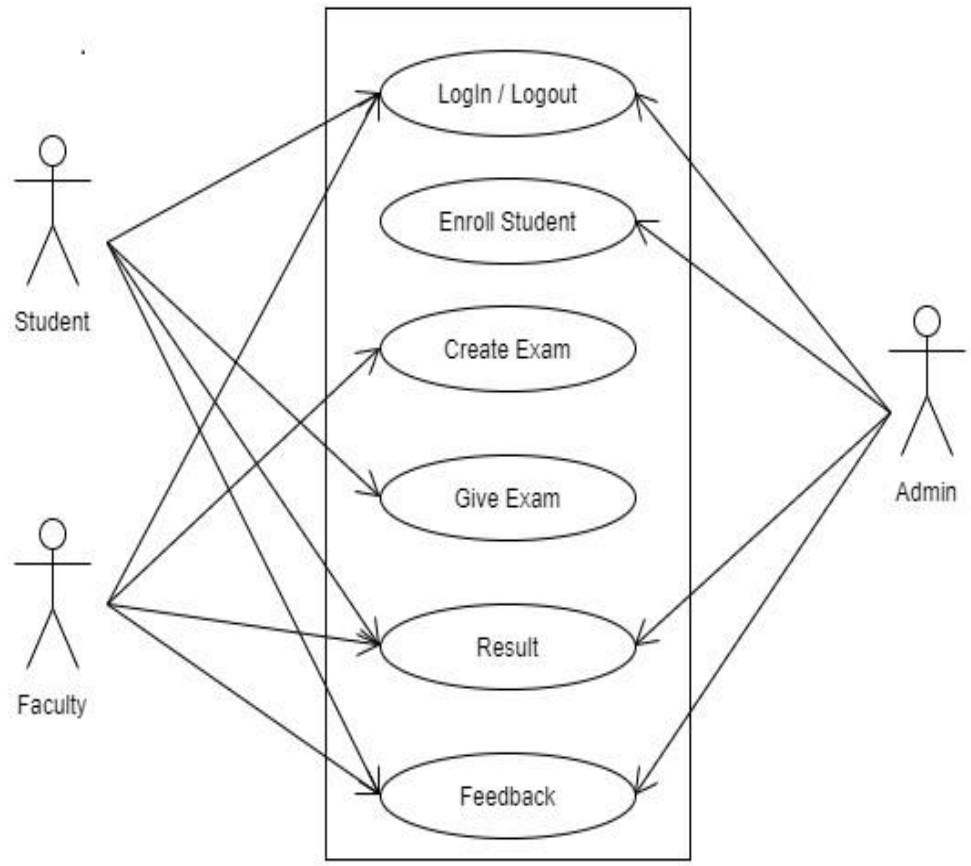
This application is used to conduct online examination. The students can sit at individual terminals and login to write the exam in the given duration. The questions have to be given to the students. This application will perform correction, display the result immediately and also store it in database. This application provides the administrator with a facility to add new exam. This application provides the Instructor add questions to the exam, modify questions in the exam in a particular exam. This application takes care of authentication of the administrator, Instructor as well as the student.

OBJECTIVE OF THE SYSTEM

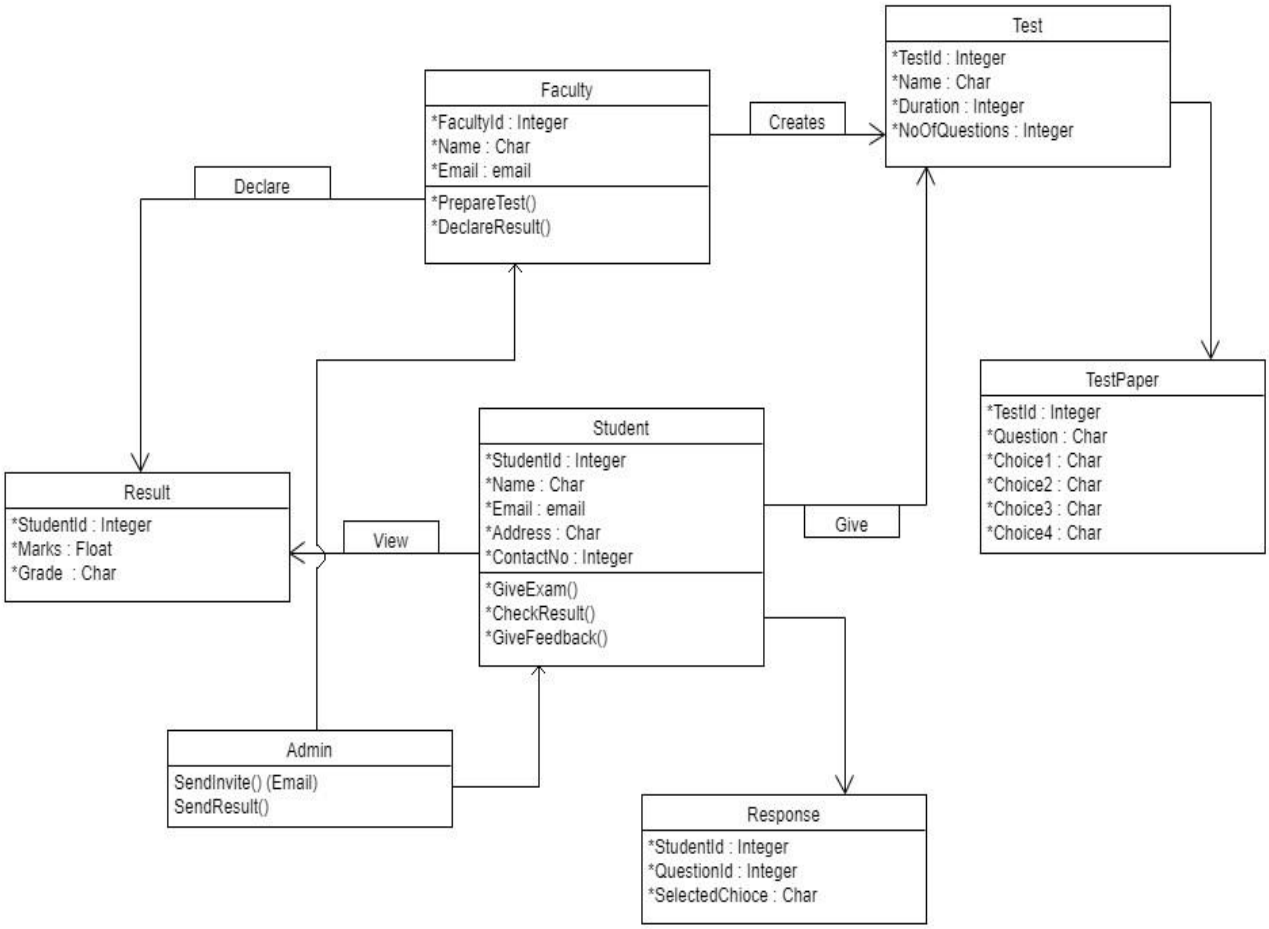
The objective of the Online Examination Tool is to provide better information for the users of this system for better results for their maintenance in student examination schedule details and grading details.

SYSTEM DESIGNING

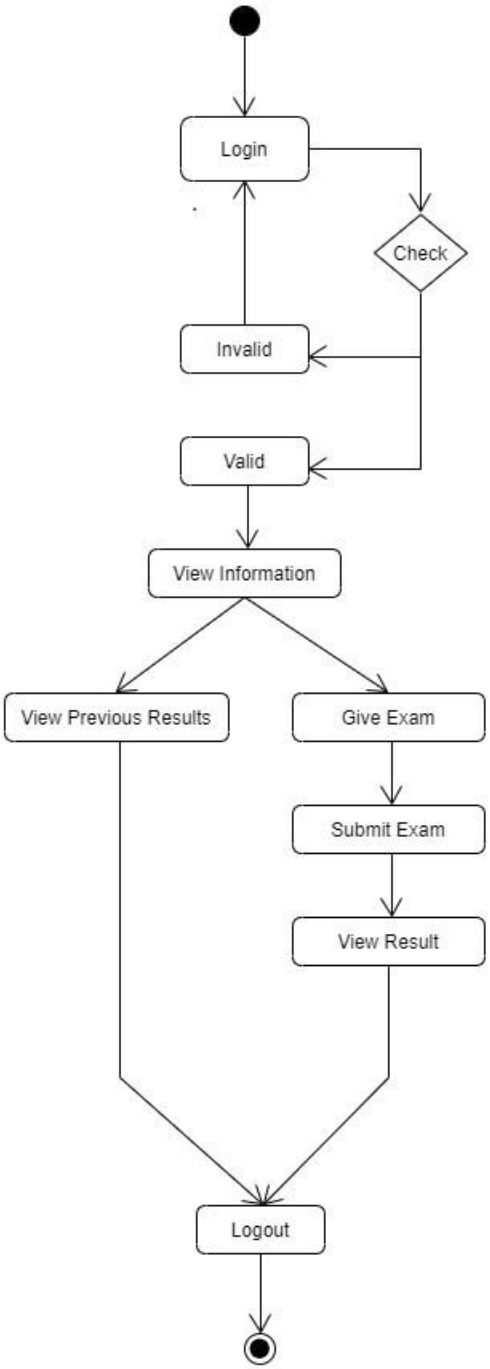
Use Case Diagram:



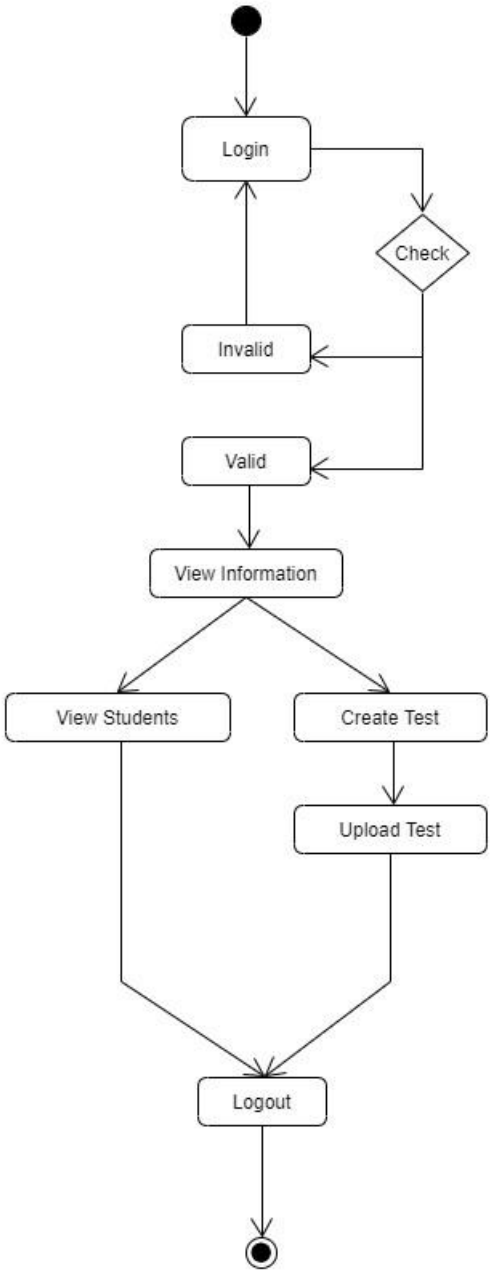
Class Diagram:



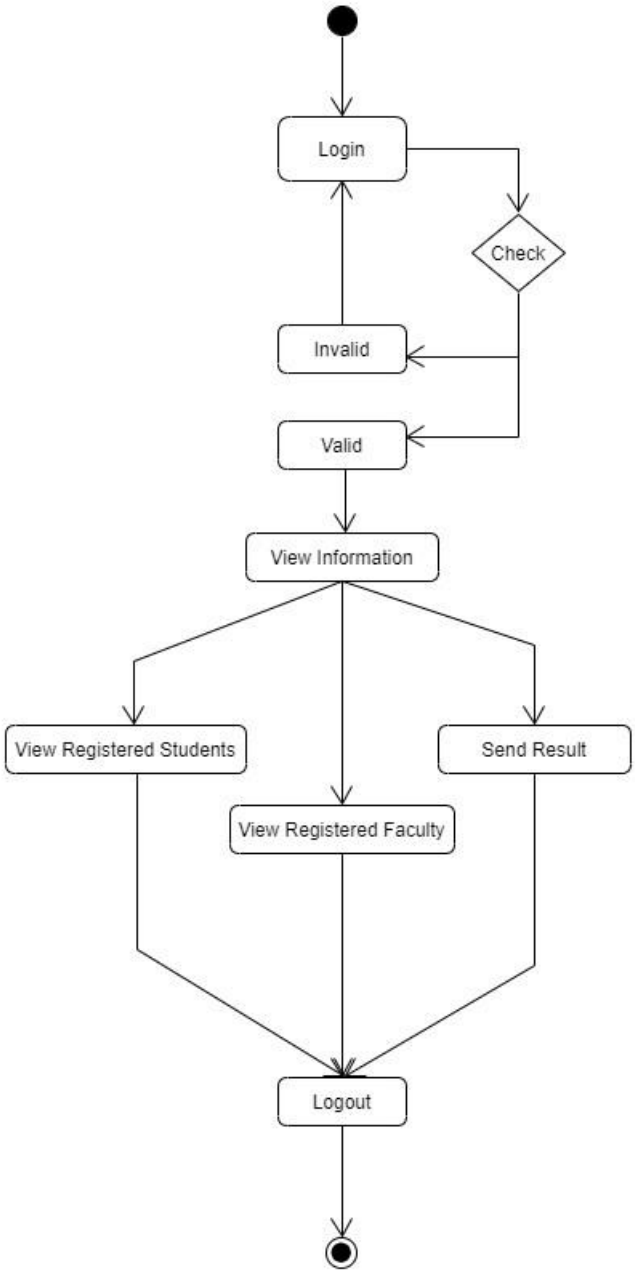
Activity Diagram (Student):



Activity Diagram (Faculty):

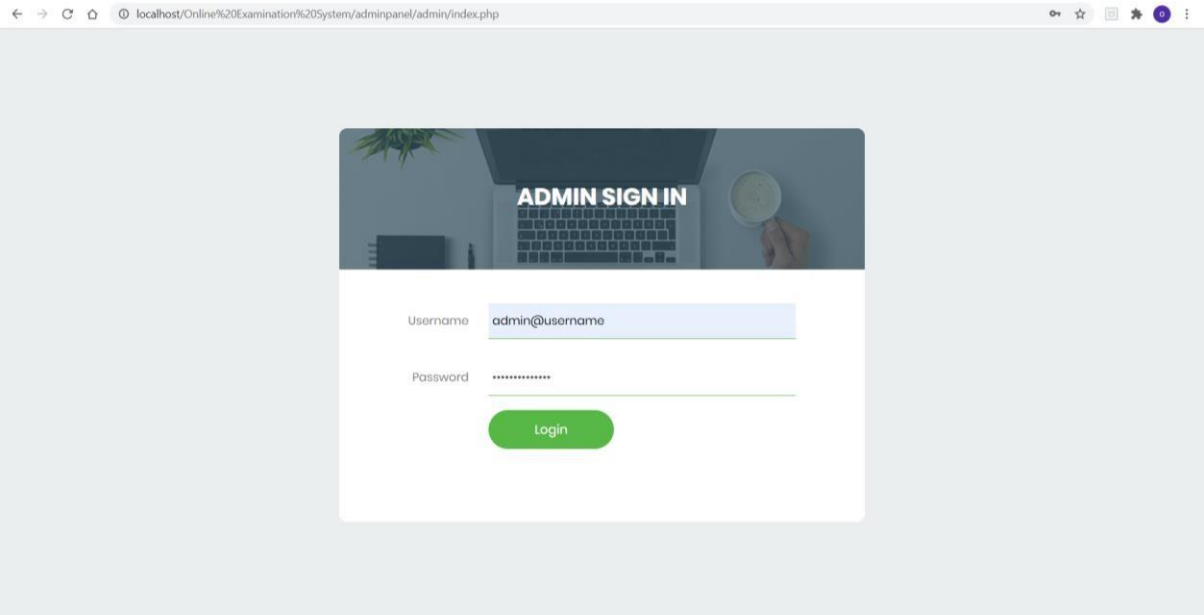


Activity Diagram (Admin):

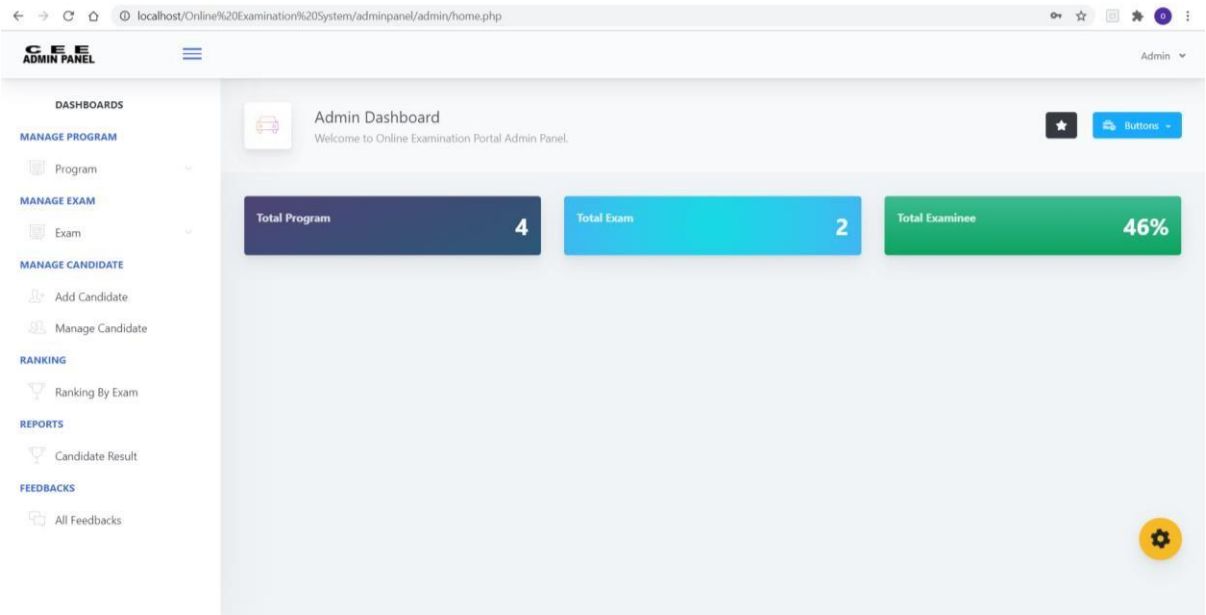


INPUT & OUTPUT SCREENS

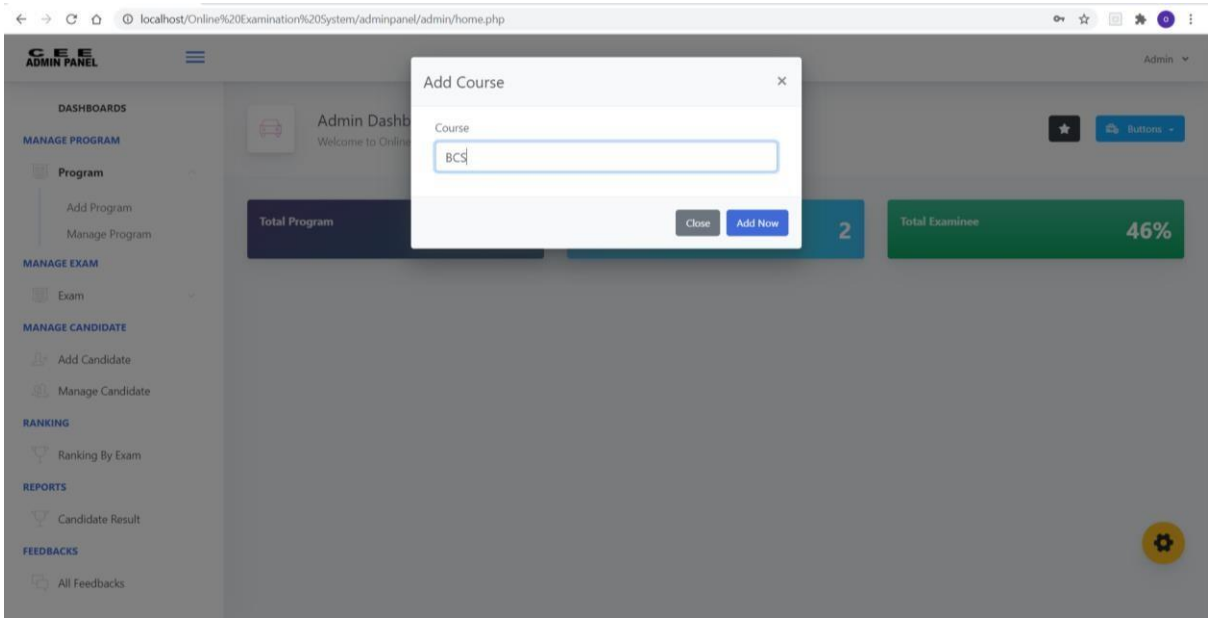
Admin Login:



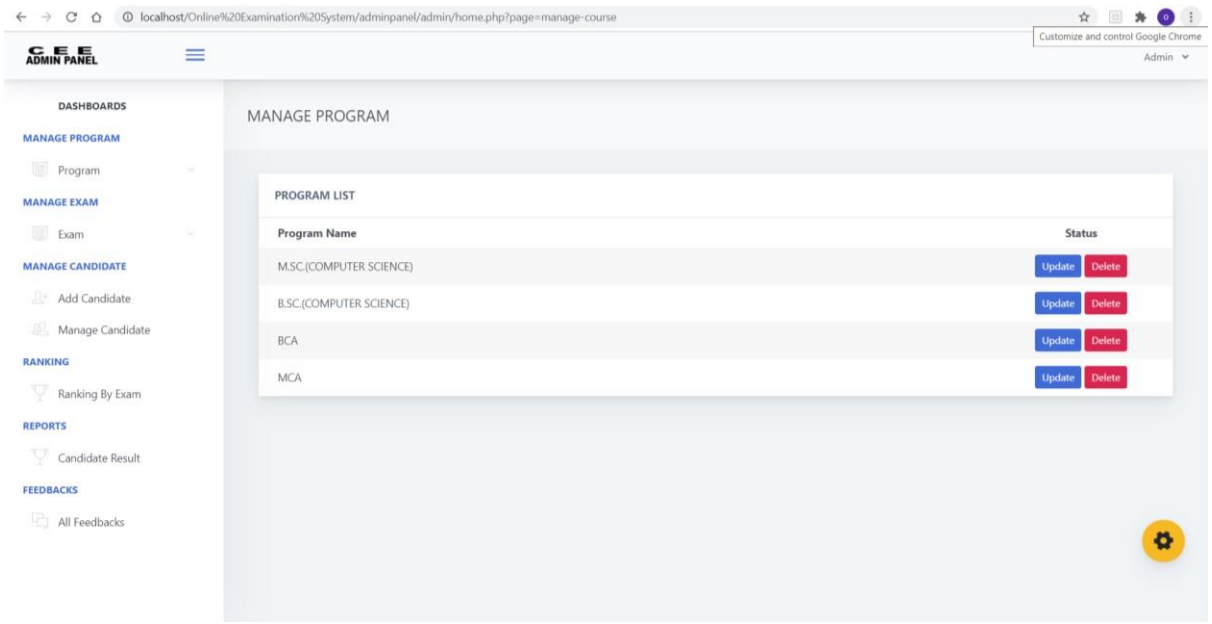
Admin Dashboard:



Add Program:



Manage Program:



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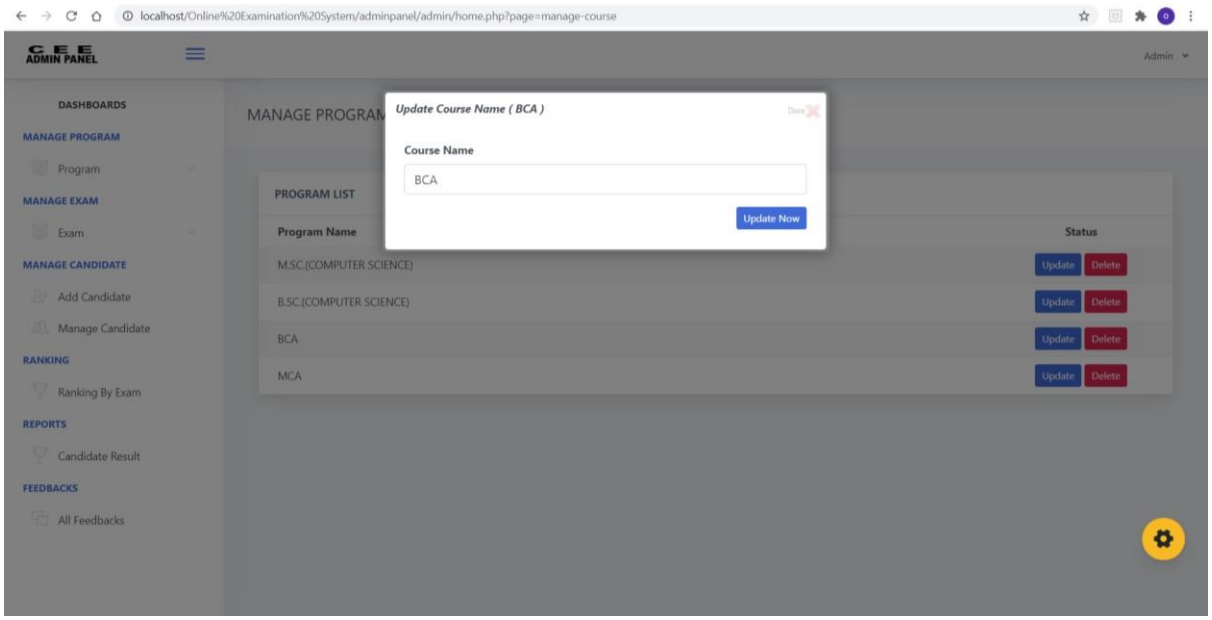
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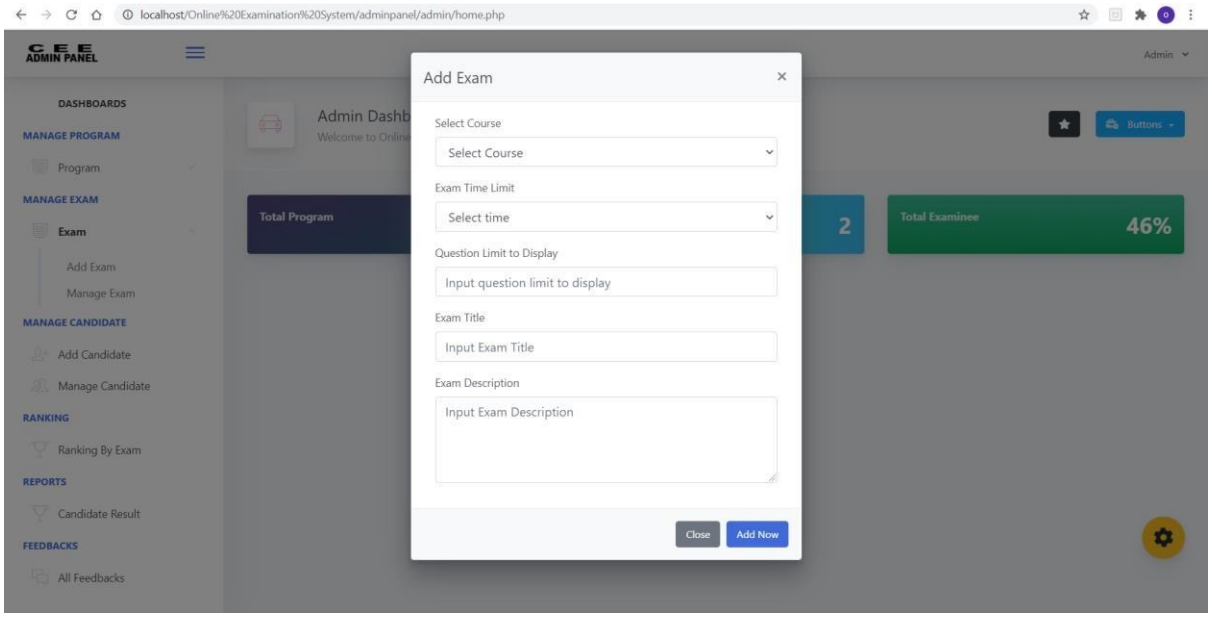
CEE ADMIN PANEL
Admin
DASHBOARDS
MANAGE PROGRAM
Program
MANAGE EXAM
Exam
MANAGE CANDIDATE
Add Candidate
Manage Candidate
RANKING
Ranking By Exam
REPORTS
Candidate Result
FEEDBACKS
All Feedbacks
MANAGE PROGRAM
Update Course Name (BCA)
Course Name
BCA
Update Now
PROGRAM LIST
Program Name
Status
M.SC.(COMPUTER SCIENCE)
B.SC.(COMPUTER SCIENCE)
BCA
MCA
Update
Delete

Add Exam: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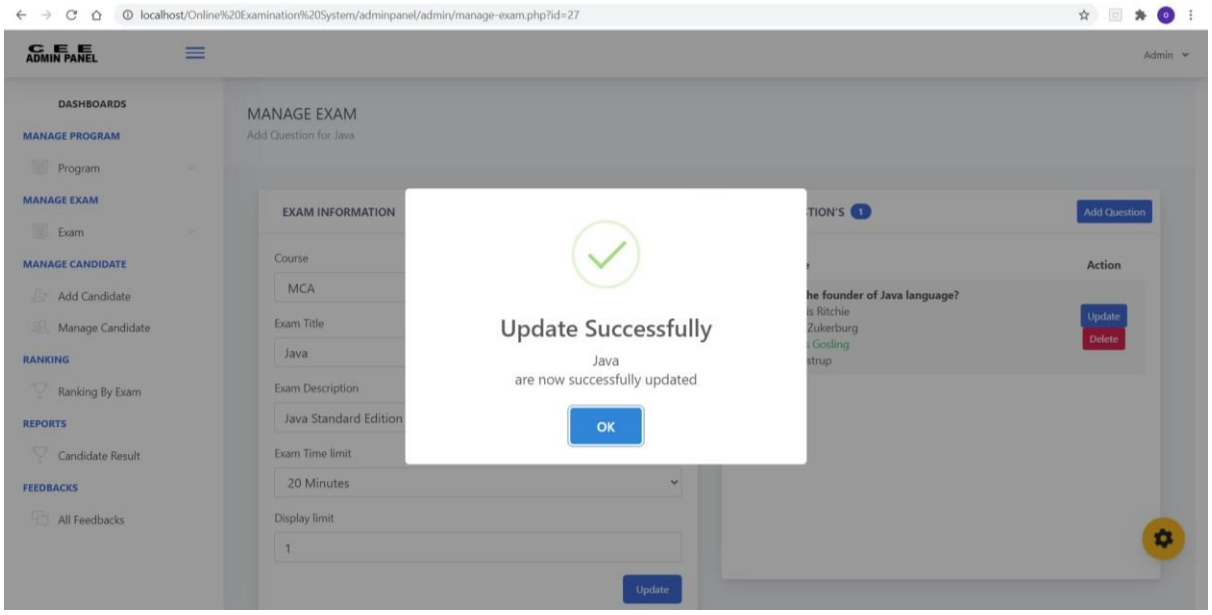
CEE ADMIN PANEL
Admin
DASHBOARDS
MANAGE PROGRAM
Program
MANAGE EXAM
Exam
Add Exam
Manage Exam
MANAGE CANDIDATE
Add Candidate
Manage Candidate
RANKING
Ranking By Exam
REPORTS
Candidate Result
FEEDBACKS
All Feedbacks
Admin Dashb
Welcome to Online
Buttons
Total Program
2
Total Examinee
46%
Add Exam
Select Course
Select Course
Exam Time Limit
Select time
Question Limit to Display
Input question limit to display
Exam Title
Input Exam Title
Exam Description
Input Exam Description
Close
Add Now

Manage Exam:



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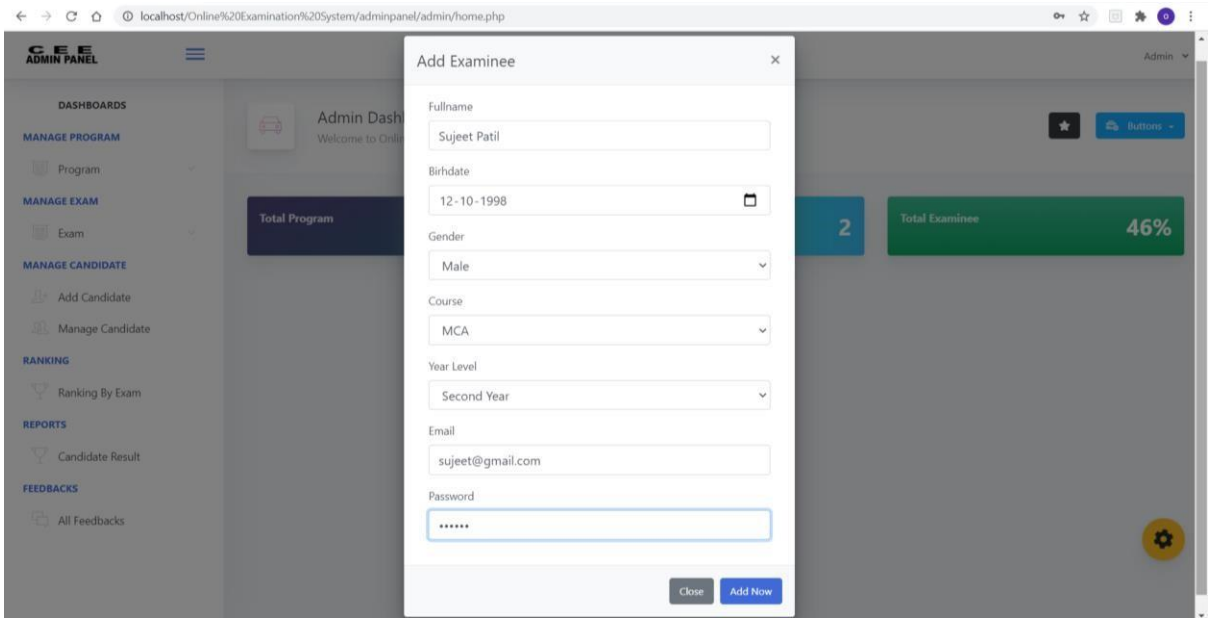

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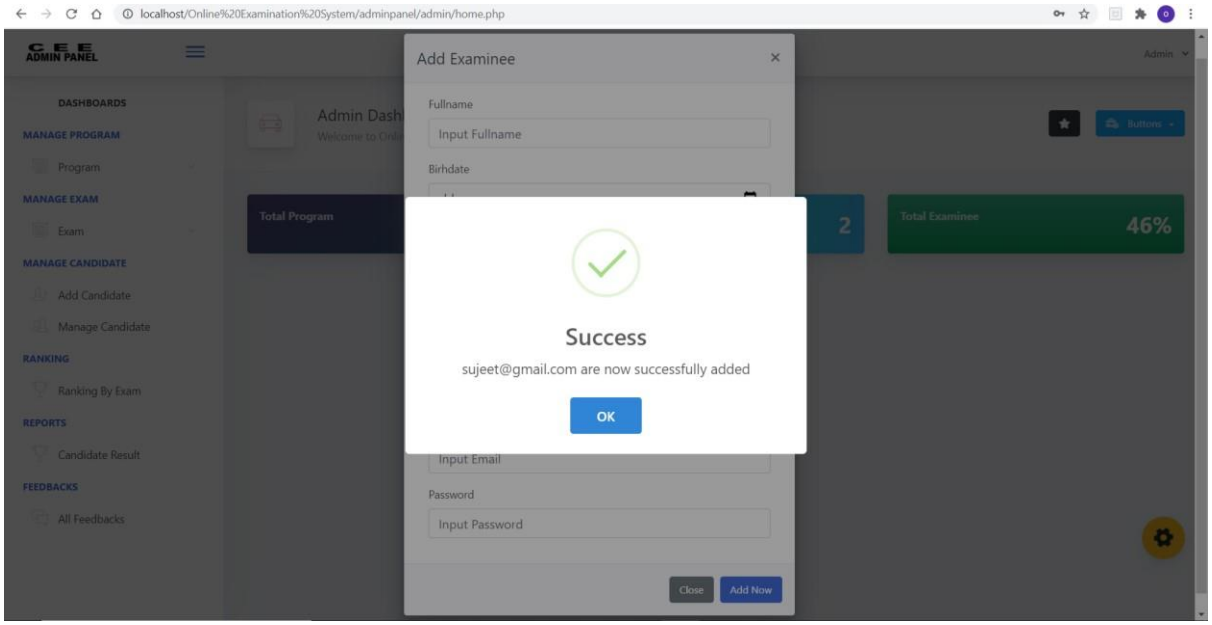

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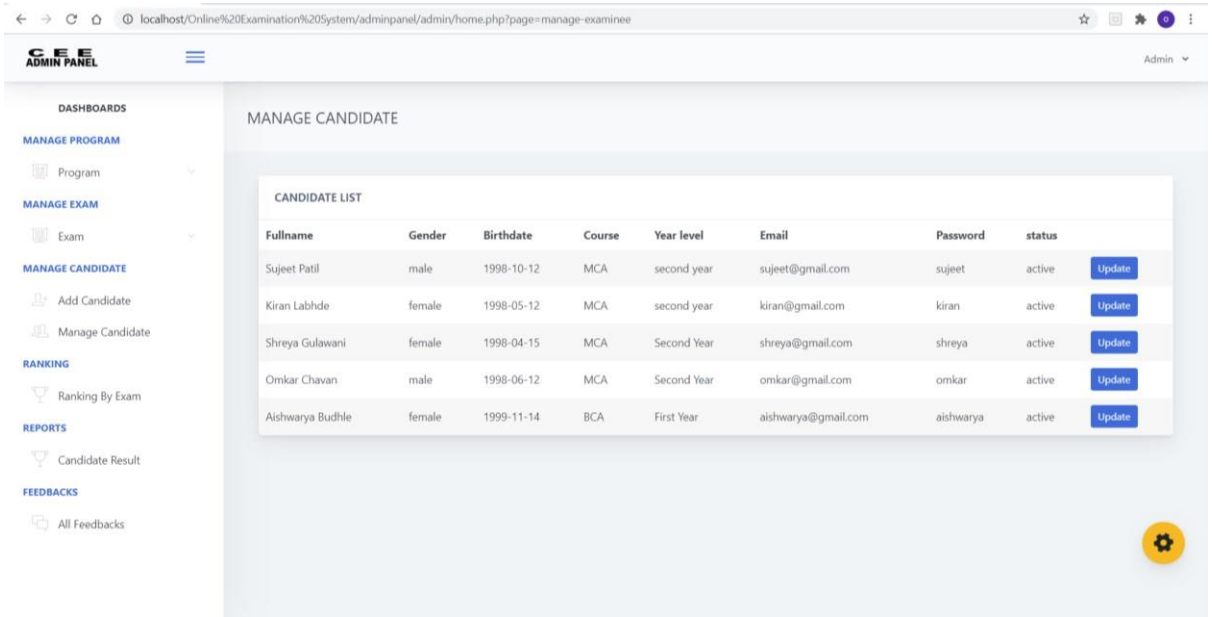
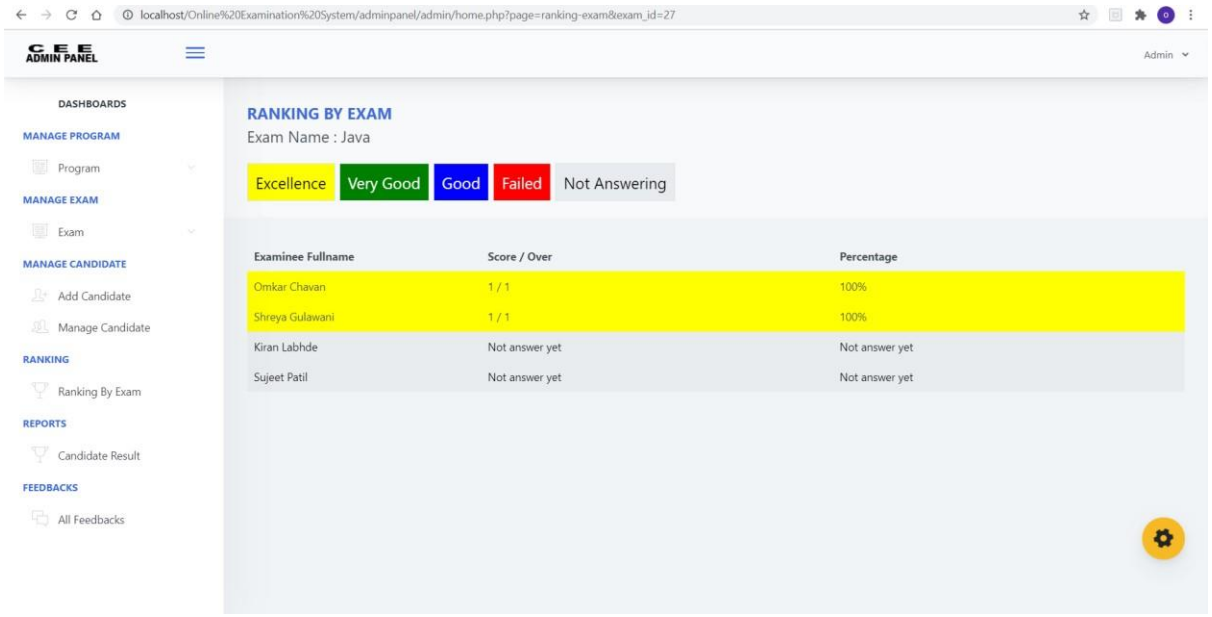


Ranking by Exam:



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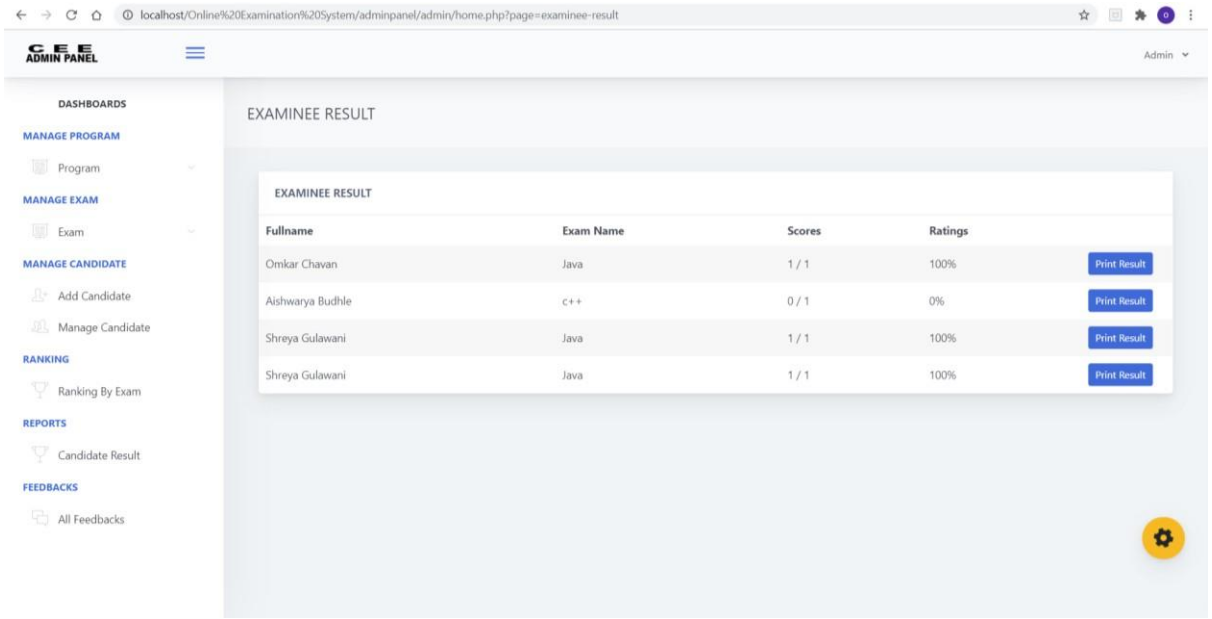

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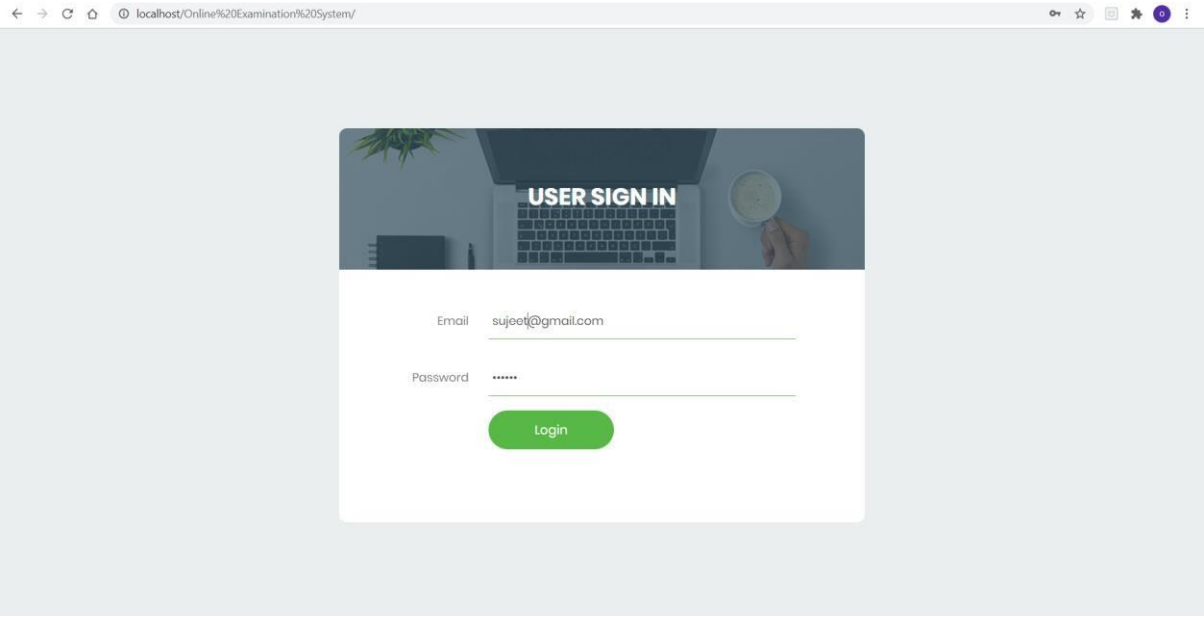
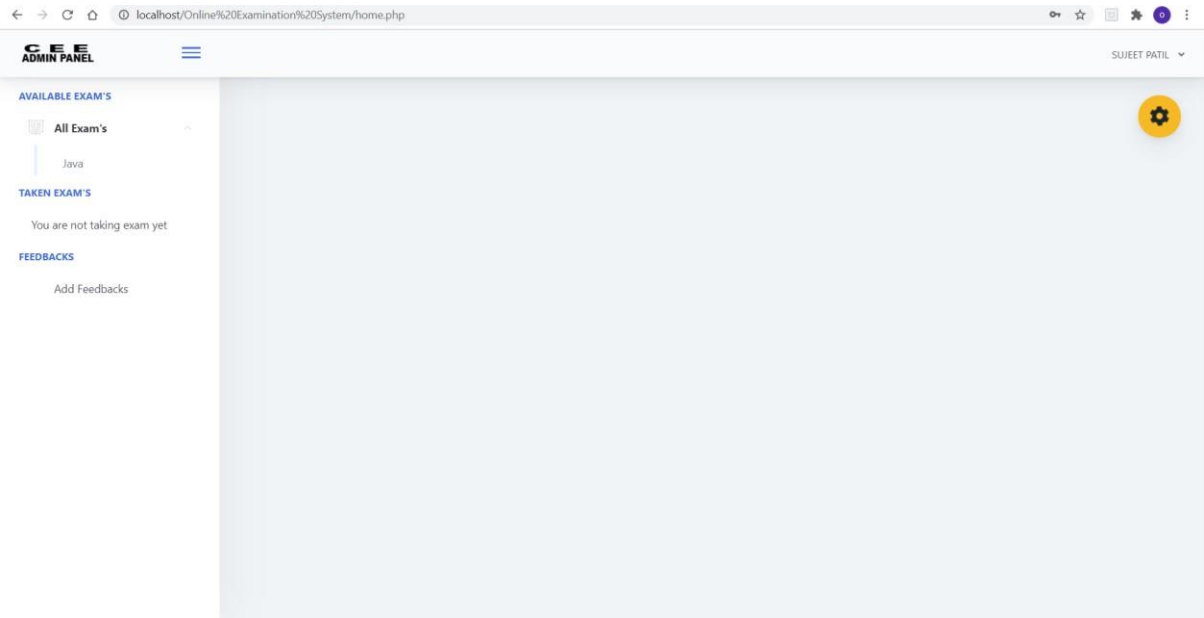


User Dashboard:



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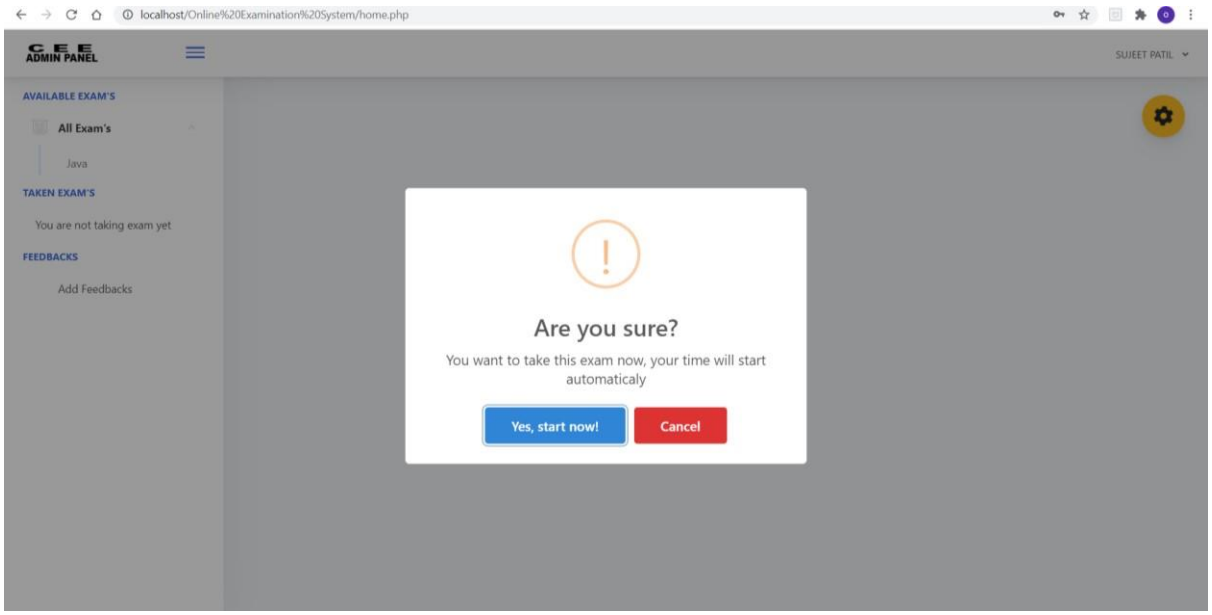
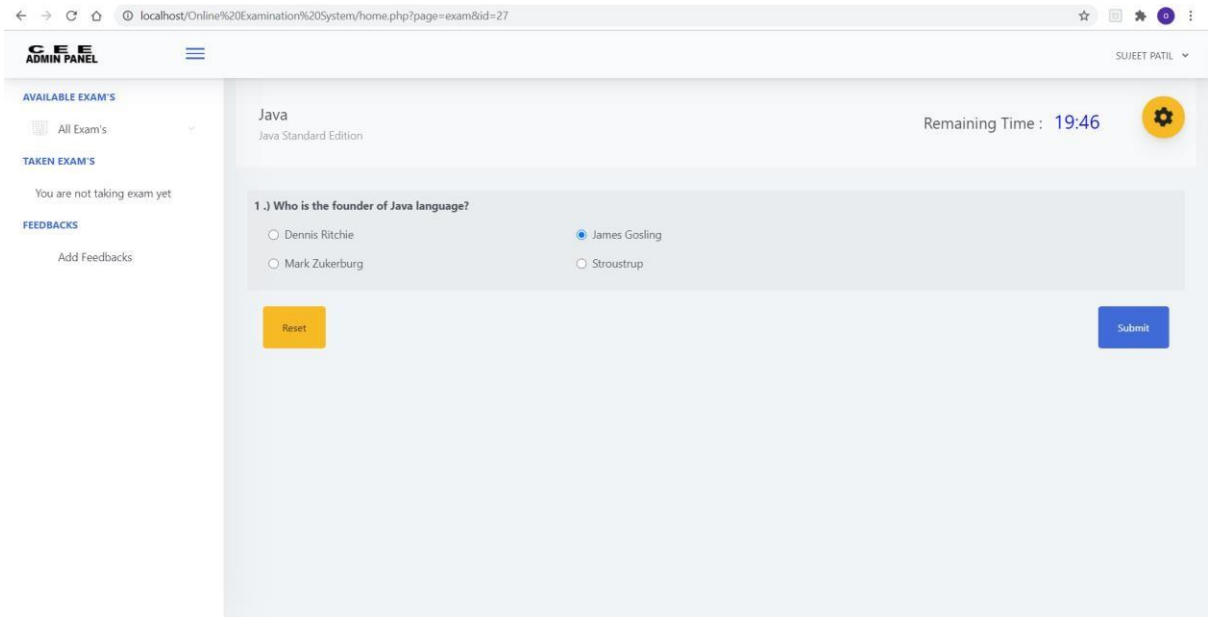
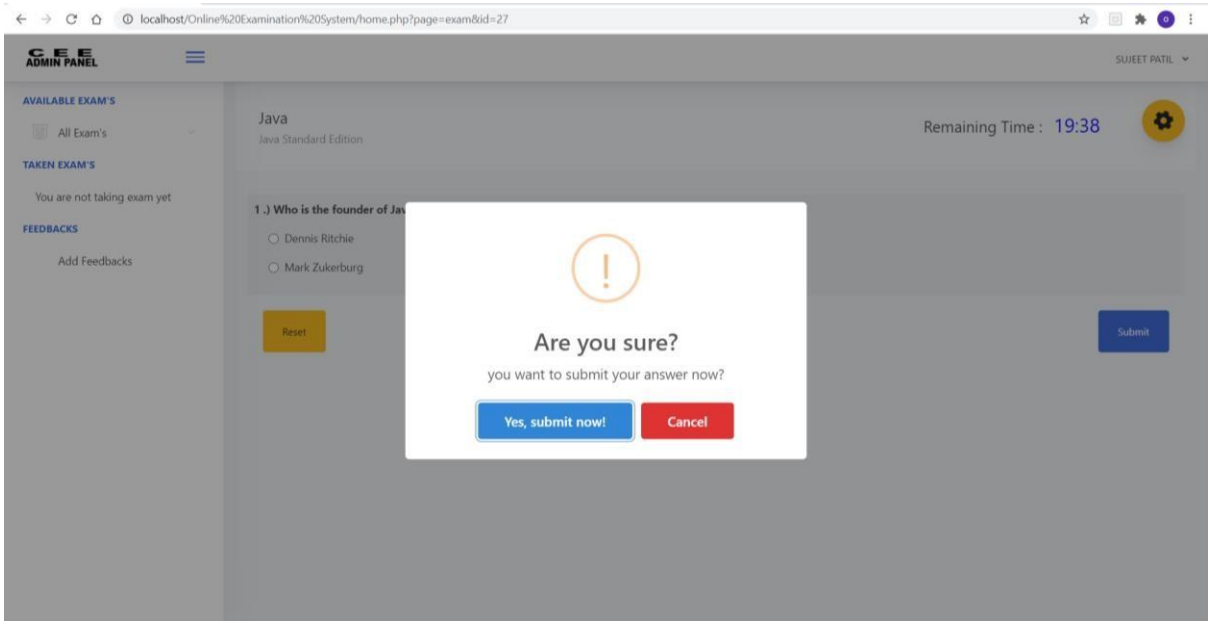


Student attempting an Exam:



Submit Alert Message for Student:



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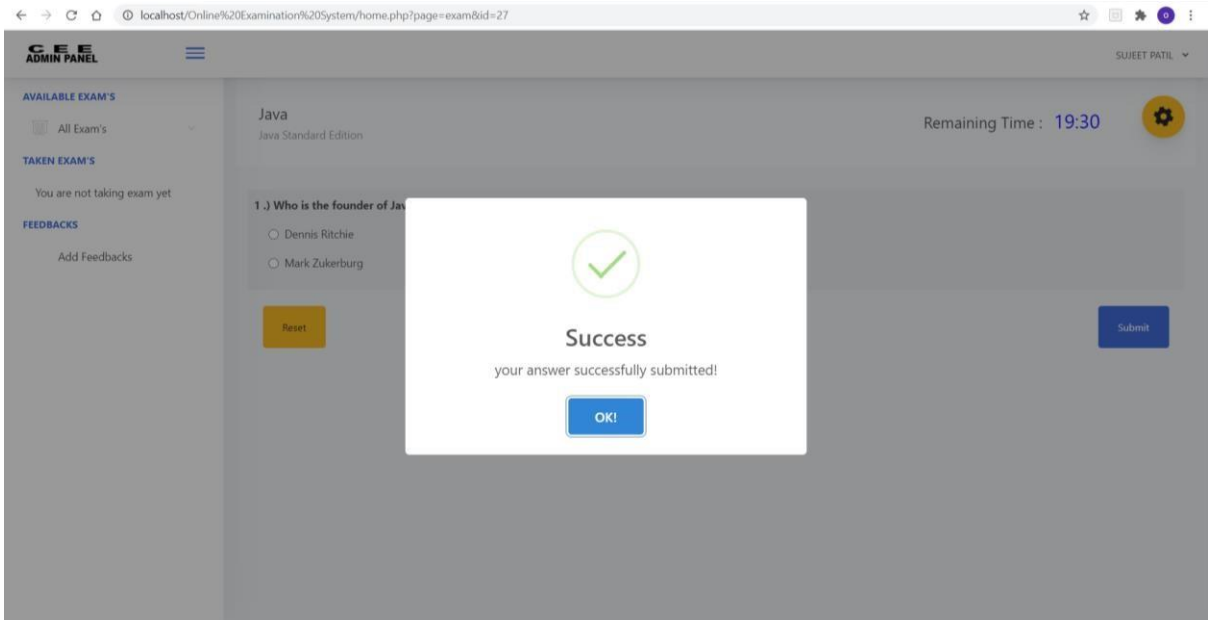
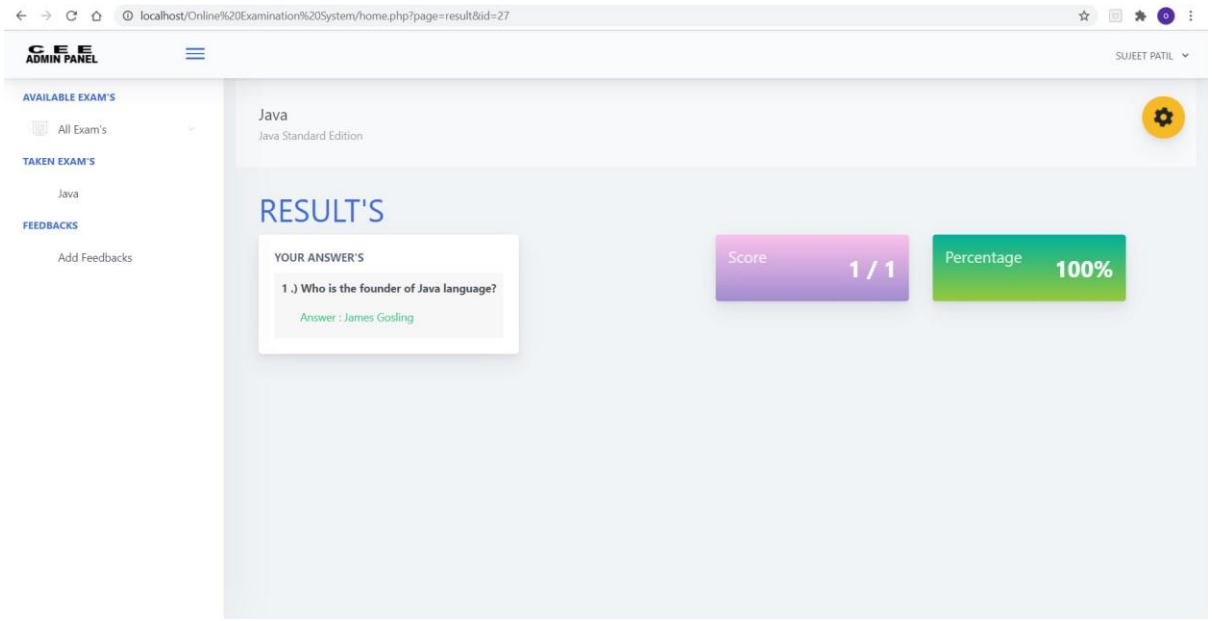
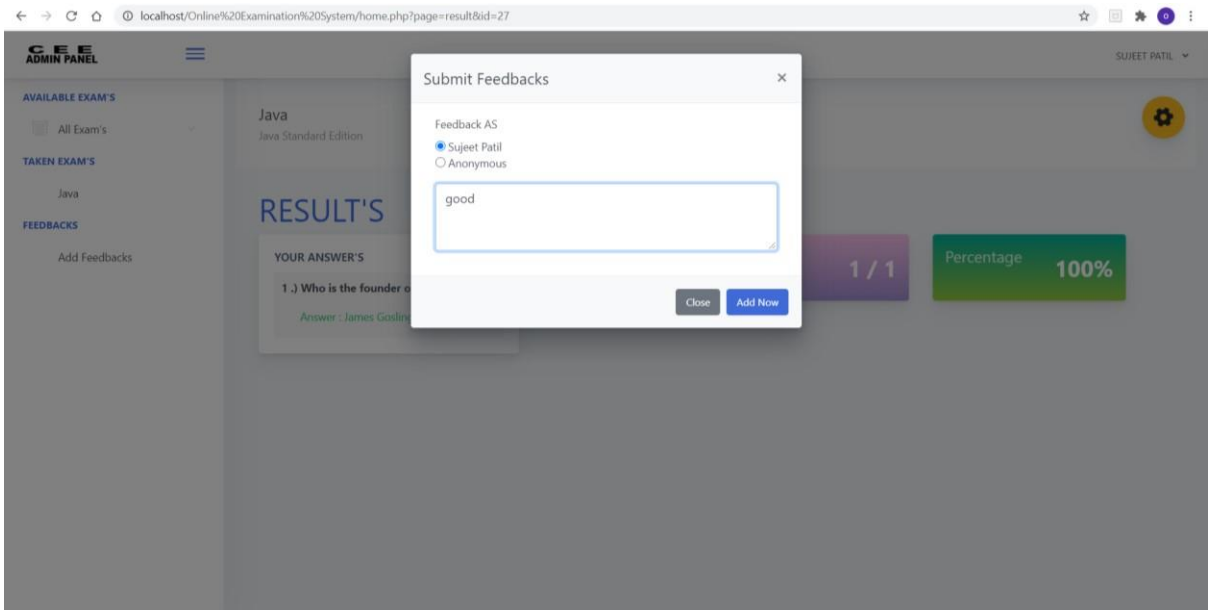
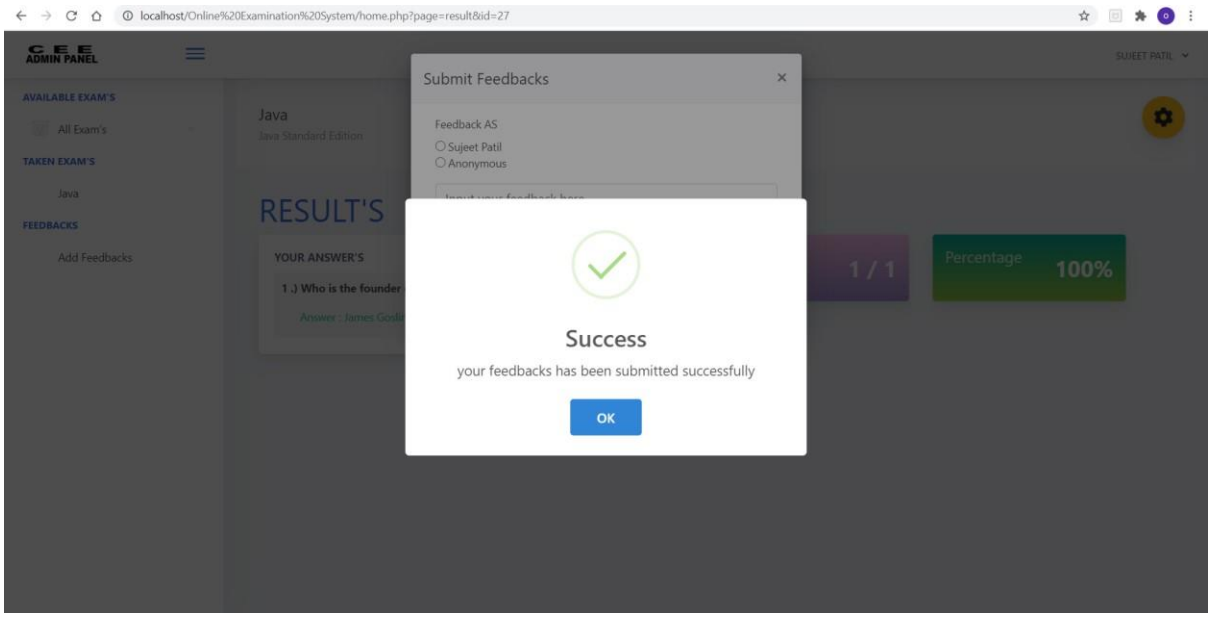


Result:



Student Feedback:




localhost/Online%20Examination%20System/home.php?page=result&id=27
CEE
ADMIN PANEL
SUJEET PATIL
AVAILABLE EXAM'S
All Exam's
TAKEN EXAM'S
Java
FEEDBACKS
Add Feedbacks
Java
Java Standard Edition
RESULT'S
YOUR ANSWER'S
1 .) Who is the founder
Answer : James Gosli
1 / 1
Percentage
100%
Submit Feedbacks
Feedback AS
Sujeet Patil
Anonymous
Success
your feedbacks has been submitted successfully
OK

DATABASE CONNECTIVITY

admin_acc:

Sr.No	Name	Type
1	admin_id	int(11)
2	admin_user	varchar(1000)
3	admin_pass	varchar(1000)

course_tbl:

Sr.No.	Name	Type
1	cou_id	int(11)
2	cou_name	varchar(1000)
3	cou_created	Timestamp

exam_answers:

Sr.No.	Name	Type
1	exam_id	int(11)
2	quest_id	int(11)
3	exam_ans	varchar(1000)
4	exam_status	varchar(1000)
5	exam_created	timestamp

exam_tbl:

Sr.No.	Name	Type
1	ex_id	int(11)
2	cou_id	int(11)
3	ex_title	varchar(1000)
4	ex_time_limit	varchar(1000)
5	ex_questlimit_display	int(11)
6	ex_description	varchar(1000)
7	exam_created	Timestamp

exam_que_tbl:

Sr.No.	Name	Type
1	eqt_id	int(11)
2	exam_id	int(11)
3	exam_question	varchar(1000)
4	exam_ch1	varchar(1000)
5	exam_ch2	varchar(1000)
6	exam_ch3	varchar(1000)
7	exam_ch4	varchar(1000)
8	exam_status	varchar(1000)
9	exam_created	Timestamp

exam_attempt:

Sr.No.	Name	Type
1	examat_id	int(11)
2	exmne_id	int(11)
3	exam_id	int(11)
4	examat_status	varchar(1000)

feedbacks_table:

Sr.No.	Name	Type
1	fb_id	int(11)
2	exmne_id	int(11)
3	fb_exmne_as	varchar(1000)
4	fb_feedbacks	varchar(1000)
5	fb_date	varchar(1000)

TESTING

- **Testing and Characteristics of Testing**

After the implementation phase, the testing phase begins. Testing of software is critical, since testing determines the correctness, completeness and quality of the software being developed. Its main objective is to detect errors in the software.

The activities involved in testing phase basically evaluate the capability of the developed system and ensure that the system meets the desired requirements. It should be noted that testing is fruitful only if it is performed in the correct manner. Through effective software testing, the software can be examined for correctness, comprehensiveness, consistency and adherence to standards. This helps in delivering high-quality software products and lowering maintenance' costs, thus leading to more contented users.

Software testing is closely related to the terms verification and validation. Verification refers to the process of ensuring that the software is developed according to its specifications. For verification, techniques like reviews, analysis, inspections and walkthroughs are commonly used. While validation refers to the process of checking that the developed software meets the requirements specified by the user. **Verification** and **Validation** can be summarized thus as given here.

Verification: Is the software being developed in the right way

Validation: Is the right software being developed?

Software testing is performed either manually or by using automated tools to make sure that the software is functioning in accordance with the user requirements.

Various advantages associated with testing are listed below.

- It removes errors, which prevent software from producing outputs according to user requirements.
- It removes errors that lead to software failure.

- It ensures that the software conforms to business as well as user's needs.
- It ensures that the software is developed according to user requirements.
- It improves the quality of the software by removing maximum possible errors from it.

Characteristics of Testing:

There are several tests (such as unit and integration) used for testing the software. Each test has its own characteristics.
The following points, however, should be noted.

- **High probability of detecting errors**: To detect maximum errors, the tester should understand the software thoroughly and try to find the possible ways in which the software can fail. For example, in a program to divide two numbers, the possible way in which the program can fail is when 2 and 0 are given as inputs and 2 is to be divided by 0. In this

  case, a set of tests should be developed that can demonstrate an error in the division operator.

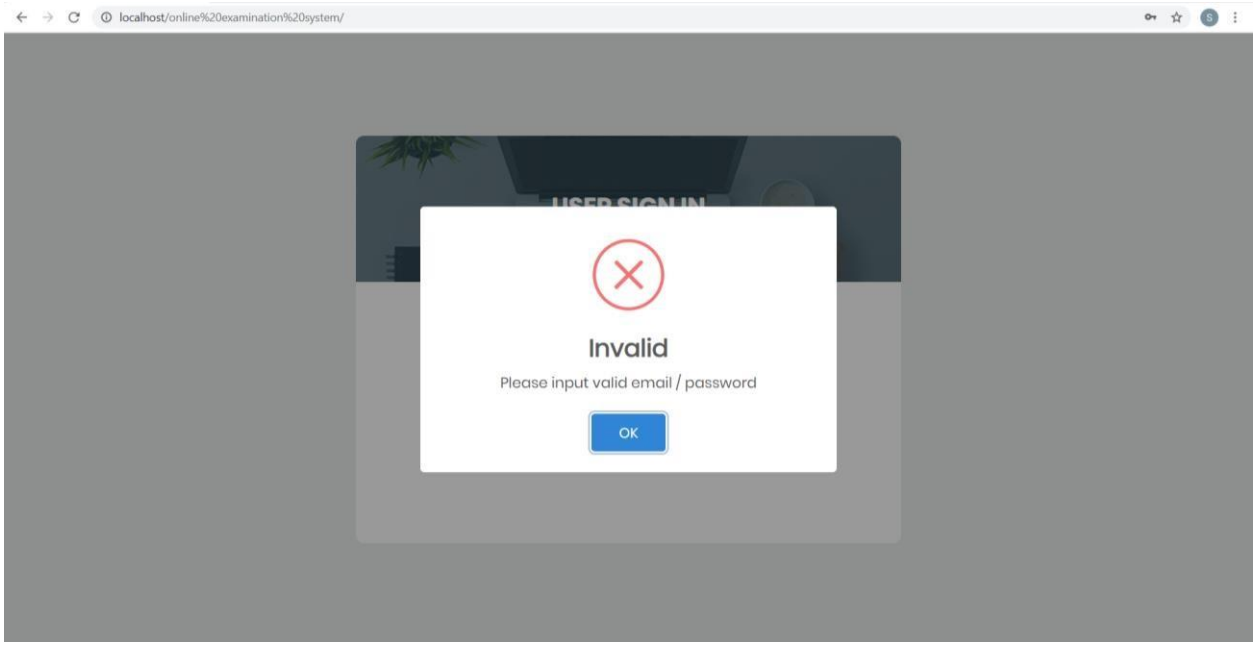
- **No redundancy:** Resources and testing time are limited in software development process. Thus, it is not beneficial to develop several tests, which have the same intended purpose. Every test should have a distinct purpose.

- **Choose the most appropriate test**: There can be different tests that have the same intent but due to certain limitations such as time and resource constraint, only few of them are used. In such a case, the tests, which are likely to find more number of errors, should be considered.

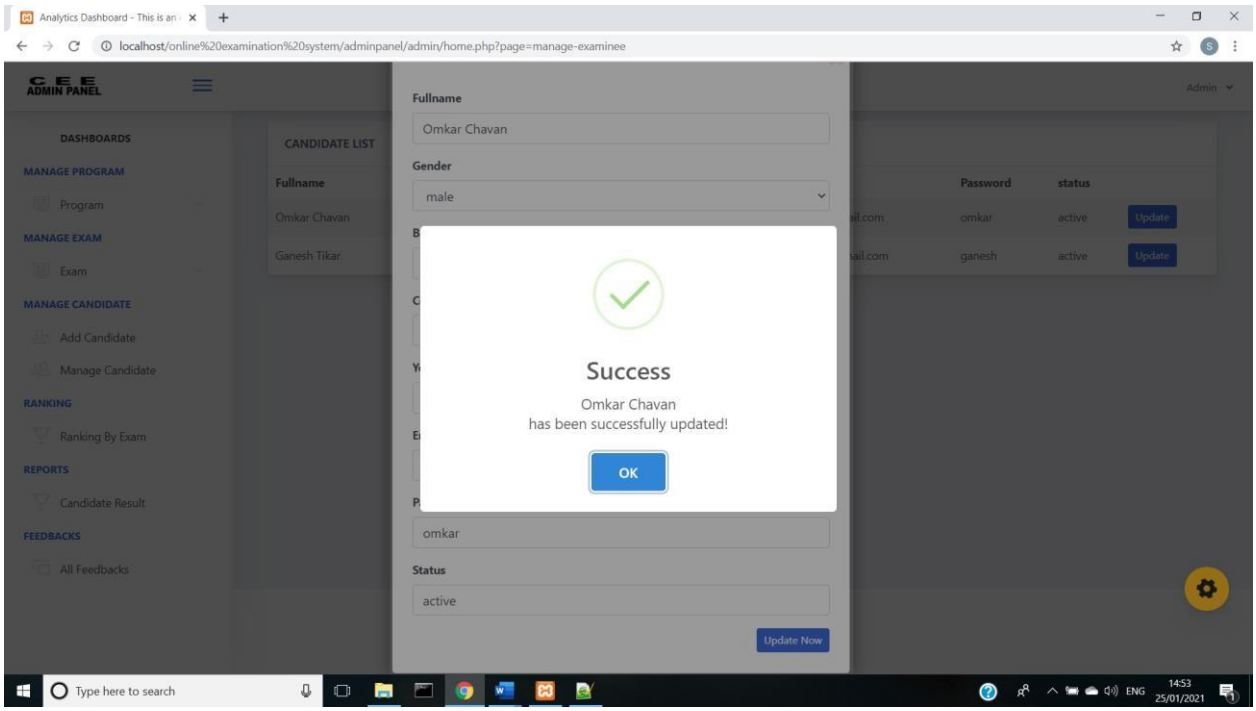
- **Moderate**: A test is considered good if it is neither too simp1e, nor too complex. Many tests can be combined to form one test case. However, this can increase the complexity and leave many errors undetected. Hence, all tests should be performed separately.

TEST CASES:

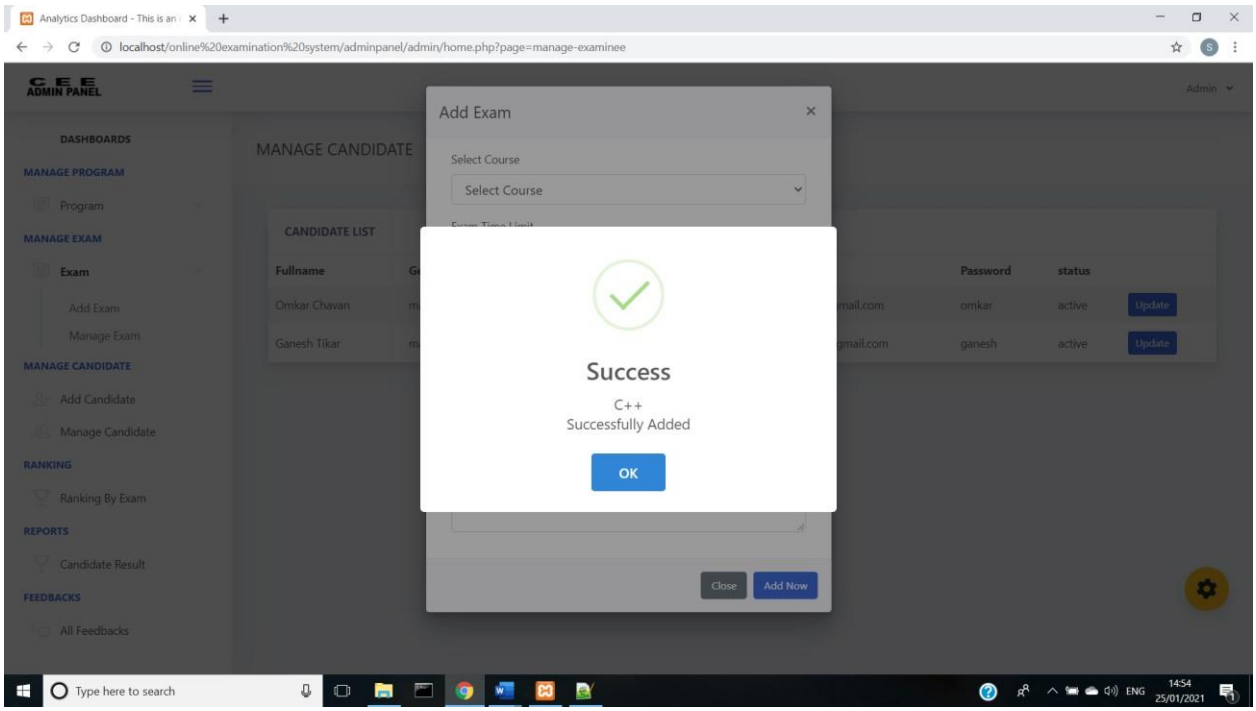
When user/admin hits wrong username or password:



When Admin updates a candidate’s details successfully:



When Admin adds an exam successfully:



LIMITATIONS & DRAWBACKS

LIMITATIONS:

- Camera and mic are unavailable in our project.
- In case questions or answers need to be in graphics, current System has no provision.
- Student only can see their result. Top score is not displayed

DRAWBACKS:

No matter if the system is available to you online and all the opportunities are given to you, there still will always be something which will not be according to someone else's need. Some of the drawbacks of the system are as follows:

- Cannot accommodate all exam modes
- Susceptible to fraud

PROPOSED ENHANCEMENTS

For future enhancements:

- Provide a Camera and Mic to the system
- Can accommodate descriptive exam

CONCLUSIONS

There are merits and demerits of an online examination system, as mentioned above.

While technology continues to simplify processes for educational institutions, educationists and students, it has limitations. However, choosing the right online examination platform can help you avert such drawbacks.

An easy-to-use, robust, secure examination platform with all the latest AI-based anti-cheating measures enables you to get credible results quicker.

BIBLIOGRAPHY

https://www.javatpoint.com

https://www.w3schools.com
https://html.com

ANNEXURE(WEEKLY REPORT)

Week 1: Start date and End Date : 16th November- 23rd November

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)
  We planned on deciding the overall flow of the project. How our interface should look. We also planned to research about all the other online exam websites that are available on the internet.
- Outcome of the week
  We have a clear idea of how our project will be working. We have started working on the front end of our website.
  We are done with two digrams that are activity diagram and class diagram.
- Skill Gained
  We now have a definite idea of what functions our project will perform
  Basic work flow is decided.
- Major Challenges
  We faced problems while deciding looks of website our project as there was difference of opinions.
- Plan for the Next week
  The majority of our plan for the next week consists of completing front end of our website and start the backend functions using php simultaneously

Week 2 : Start date and End Date : 25th November-1st December

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)

  To focus on website's first page
  Changes in diagram as we discussed last week

- Outcome of the week

  Frontend development is started but screen are not ready to show
  Database development is also started
  Changes in Diagram are done.

- Skill Gained

  This is our first time for developing java website so we are doing everything is new for us all Database designing.

- Major Challenges

  As we decide last week that we will work on first page of our website that is login page but in searching of unique idea we spend our so much time and this time we were so confused and as a result we are still facing issues to conclude our first page

- Plan for the Next week
  Front-end Development
  Login Screen

  Database designing

Week 3 : Start date and End Date : 1st December- 8th December

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)

We planned on deciding the overall flow of the project. How our interface should look. We also planned to research about all the other online exam websites that are available on the internet.

- Outcome of the week

  Activity – 1. Teacher 2. Student 3.Admin
  Changes are done as per instructions
  Database Tables are created
  LogIn Page Done

- Skill Gained
  We have gained the skill of designing the web pages.
- Major Challenges

We faced problems while deciding looks of website our project as there was difference of opinions.

- Plan for the Next week

The majority of our plan for the next week consists of completing front end of our website and start the backend functions using java simultaneously

Week 4 : Start date and End Date : 9th December- 14th December

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)

We planned last week to complete frontend designing of our project and starts with backend in java.

- Outcome of the week

We are still working on frontend screens.

- Skill Gained –

  Now, we have best hands on the uml diagram tools for designing purpose and database designing
  Also, it is practice to do our frontend designing part.

- Major Challenges -

We faced problems while adding the answers to questions to the database as we were entering wrong location for the uploaded data.

- Plan for the Next week -

The majority of our plan for the next week consists of completing front end of our website and start the backend functions using java simultaneously

Week 5 : Start date and End Date : 14th Decmber- 22nd December

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)

  As our database was not connected to the project that we connect it to the project.

  Documentation was expected.

- Outcome of the week

  Documentation if half done.

- Skill Gained –

  MYSQL databse connection techniques

  For documentation we collect information from various sites

- Major Challenges -

  We were not having idea how to connect databse to the project

  So tried to learn those.

- Plan for the Next week -

  We will be completing our whole documatation

Week 6 : Start date and End Date : 22nd December - 29th December

Project Title: Online Exam Portal

Team detail

Roll No	Name
209	Omkar Chavan
231	Kiran Labhade
252	Ganesh Tikar

- Plan for the week (Last Week)

  As our database was not connected to the project that we connect it to the project and we are unable to give a demo of our project.
  Documentation was expected.
- Outcome of the week
  We are done with frontend, designing of backend and database connectivity part.
- Skill Gained –

  We have gained the knowledge of validation of the data .

  We checked test cases of the project.

- Major Challenges -

  We checked our complete website once again if we might forget something.

  Doing things from beginning was a bit hard.

- Plan for the Next week -

  Finish the project and documentation