ABSTRACT

Online Exam System for introduction to management is an application that designed and developed for students and lecturers. The system helps students to take examination online. It helps also lecturers to upload the questions and answers in the database and they can see the students who fail or pass the exam. The software is developed using Java programming language and database. In the software we can register as a user and users are of two categories which are Lecturer and Student. Before using the system both users need to register and after that they must login with their username and password in order to enter the system. The online examination system for introduction to management is constituted of different components for instance login function, insertion of data in the database, extraction of data from the database. The problem with the current system is that students take their exam manually. This outdated system will take long time utilization; the manual procedure used for conducting exam is time consuming process. More time being used for lecturers to bring the questions papers and answer sheets and also more time is needed for students in order to write their exam.

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CHAPTER 1

INTRODUCTION

1.1 ONLINE EXAMINATION SYSTEM

Online Examination System is a technology-driven way to simplify examination activities like defining exam patterns with question banks, defining exam timer, objective/ subjective question sections, conducting exams using the computer or mobile devices in a paperless manner.

Online Examination System is a cost-effective, scalable way to convert traditional pen and paper-based exams to online and paperless mode.

Candidates can appear for the exam using any desktop, laptop, or mobile device with a browser. Exam results can be generated instantly for the objective type of questions.

It can simplify overall examination management and result in generation activity

1.2 SYSTEM OVERVIEW

An online examination system is the complete agenda of an online-based test that has got multiple features and functionalities. The online examination system uses online exam software through which the tests are created, conducted, and also evaluated. This type of examination system has got multiple benefits few of them is that it eliminates the dependency on paper for the questions and answers sheets, and eliminates any sort of manual workload which is too much in the case of an offline test.

1.3 SCOPE OF THE OBJECT

Online examination system can be used in private institutes as well as educational institution. As it is user friendly web base application it can be used anywhere and anytime. Every software may have some cases of bugs, errors, security related problems or system faults**.**

CHAPTER 2

LITERATURE REVIEW

Computerized systems have been increasing in education nowadays. Information Technology plays a very important role in education. Computers have made dramatic changes in the learning system. Information technology enables education institutions to save space and time, and allow the delivery of education services with easiness, anywhere, and anytime. For instance physical libraries are replaced by online libraries available to anyone; anywhere in the world students can interact with lecturers online whether live or via video. With computer software, we can be able to have access to huge databases of information. This gives fundamental change to the education system. Information technology makes the exchanges of information fast and easily. With the growth of IT a lot of data can be found in online library. We don t need to have a physical library in order to read books. Computers are a powerful tool used in all aspects of our studies. We use multimedia technologies to convey ideas, build projects. Information technology enables students to do distance learning, method of learning at a distance instead of learning in a classroom. Communications technologies create possibilities, both individual and institutional, for an unprecedented expansion of homebased learning, much of it part-time. Information technology provides systems that allow students to perform many tasks in an automatic way and not manually. Students can take exam using computerized system; they don’t need paper-based exam. They save time and money when using computer system in their studies.

CHAPTER 3

SYSTEM ANALYSIS

3.1 EXISTING 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.

Disadvantages:

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

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

3.11 Functional Structure

Originally online examination system mostly aims at special courses, which can only assess objective tests and automatically work out results. This examination system can meet smart groups of various question whose advantages include: a. It can separately generate examination paper and automatically generate examination paper A and B, which can be used in online examination and written examination; b. It can manage client-side to design special procedures and ensure the safety of the test questions and test paper; c. It can automatically save the examine answer during the online examination process and guarantee the reliability of the test by lost connection; d. It can analyze examination results and update the difficulty coefficient of examination questions; e. The examine can test themselves at any time after teachers set up the simulation tests, which can realize the basic data, question bank, examination management and other three main functions.

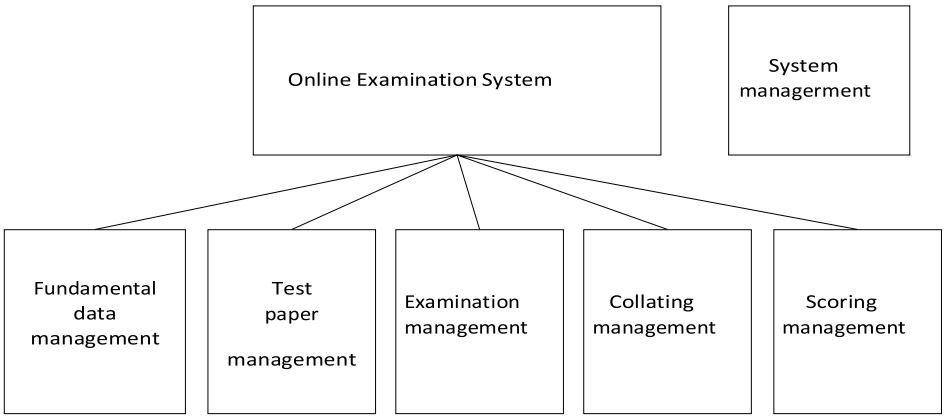


FIG:3.11 FUNCTIONAL FRAMEWORK OF ONLINE EXAMINATION SYSTEM

3.2 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 exams. 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.

3. 3. REQUIREMENTS SPECIFICATION:

3. 3. 1. Hardware Requirements:

These prerequisites are known as (computer) System requirements and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: Minimum and recommended.

- Processor : i5 or Ryzen 5 and above
- RAM : 16 GB and above
- Solid Disk : 500 GB and above

3. 3. 2. Software Requirements:

A software requirement specification is a description of a software system to be developed, It lays out functional and non-functional requirements and may include a set of use cases that describe user interaction that the software must provide.

1. Technology : Xampp, Myphpadmin
2. Database : MySQL and PHP.
3. Operating Systems : Windows 11 -64 bit and above.

3.4 LANGUAGE SPECIFICATION

PHP:

PHP happens a server-side create writing language that is to say generally used for netting development but concedes the possibility also exists secondhand for other purposes. It's used to form active Web sites, or pages that update and show information in visible form fashionable reaction to consumer's actions. A netting attendant accompanying a PHP meat killer module interprets PHP secret language system and produces the following central page of the website: Instead of communicating with an external file to handle information in visible form, PHP commands may be introduced straightforwardly into an HTML source document. PHP is freely available on almost all web servers, as well as as a standalone shell on almost every operating system and platform. There are four main advantages to PHP: accessibility, compatibility, simplicity, and extensive community support. There are no limits on who can use PHP because it is an open-source project. Programmers that want to use PHP can do so by downloading the free scripts. In PHP, session support refers to a mechanism for preserving data over many requests. This allows you to create more customized applications and make your website more appealing. PHP is produced to function healthily with the computer network, therefore features such as accessing the GET and POST methods, as well as working with HTML and URLs, are included. As a result, creating a website becomes a lot more concise and straightforward.

MYSQL:

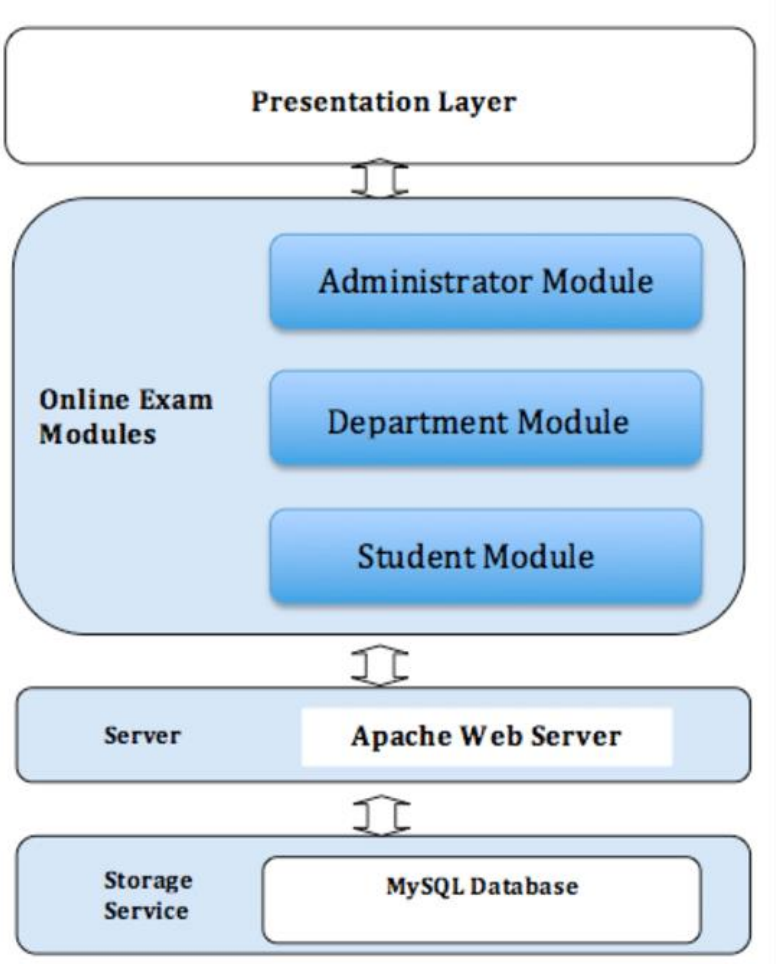
Mysql is a database management software solution (RDBMS) structured query language that is free and open-source (SQL). Rather than storing all of the the data in one single repository, a relational database stores it in discrete tables. MySQL is available on almost every platform, including Linux, UNIX, and windows. Mysql is most usually associated with web-based applications, however, it can be used in a variety of settings. Mysql is a simple database to work with. You can develop and interact with MySQL with just a few simple statements. Mysql is able to be climbed because that can manage large amounts of data, until 50 million rows and outside limits. Mysql is specifically companionable to PHP, the most common web growth terminology. Mysql is especially versatile since it can run a wide variety of embedded applications.

CHAPTER 4

SYSTEM DESIGN

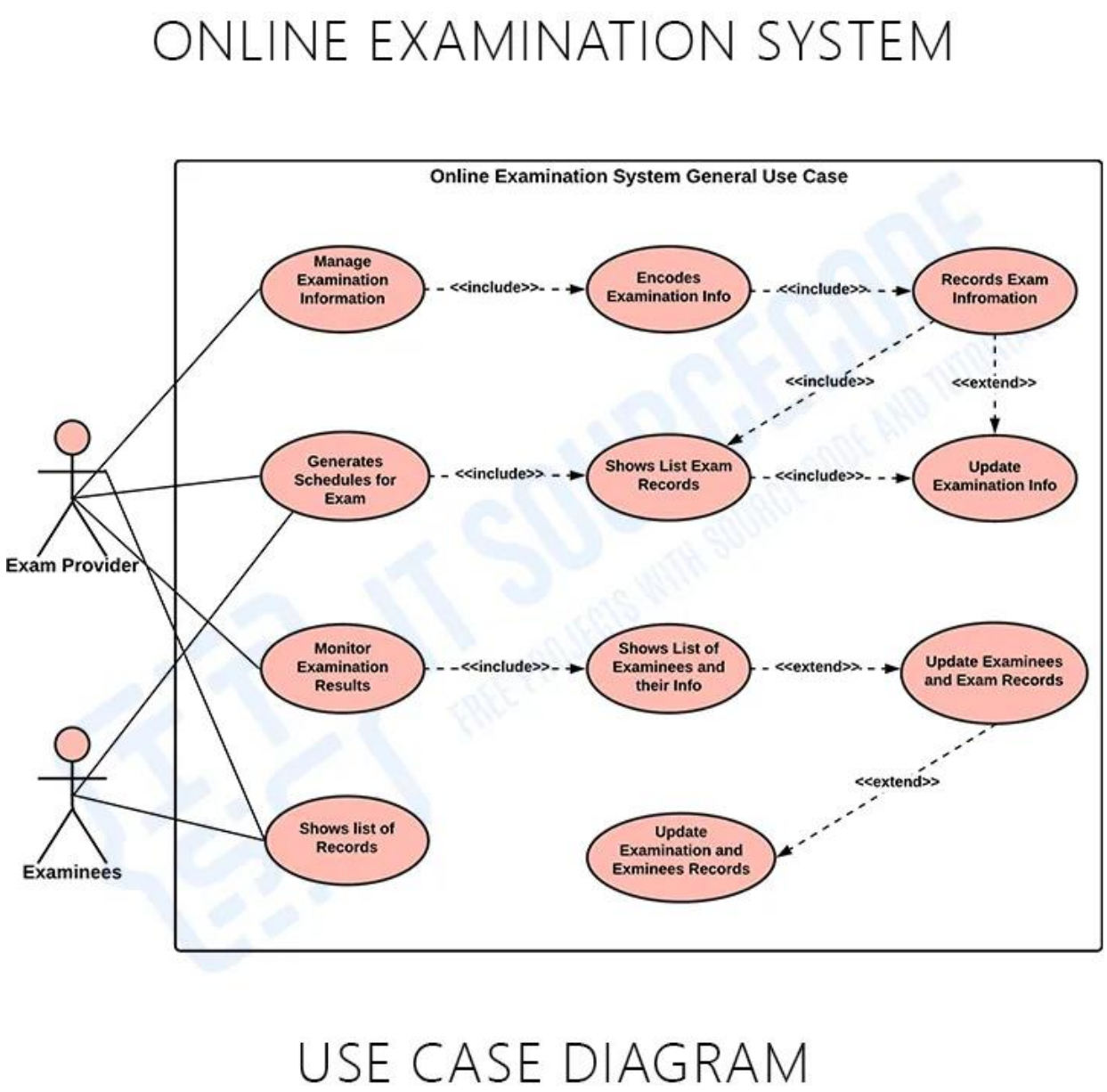
4. 1. SYSTEM ARCHITECTURE

The design of a system consists of classes, interfaces, and collaboration. UML provides a class diagram, and an object diagram to support this. Implementation defines the components assembled together to make a complete physical system. UML component diagram is used to support the implementation perspective.



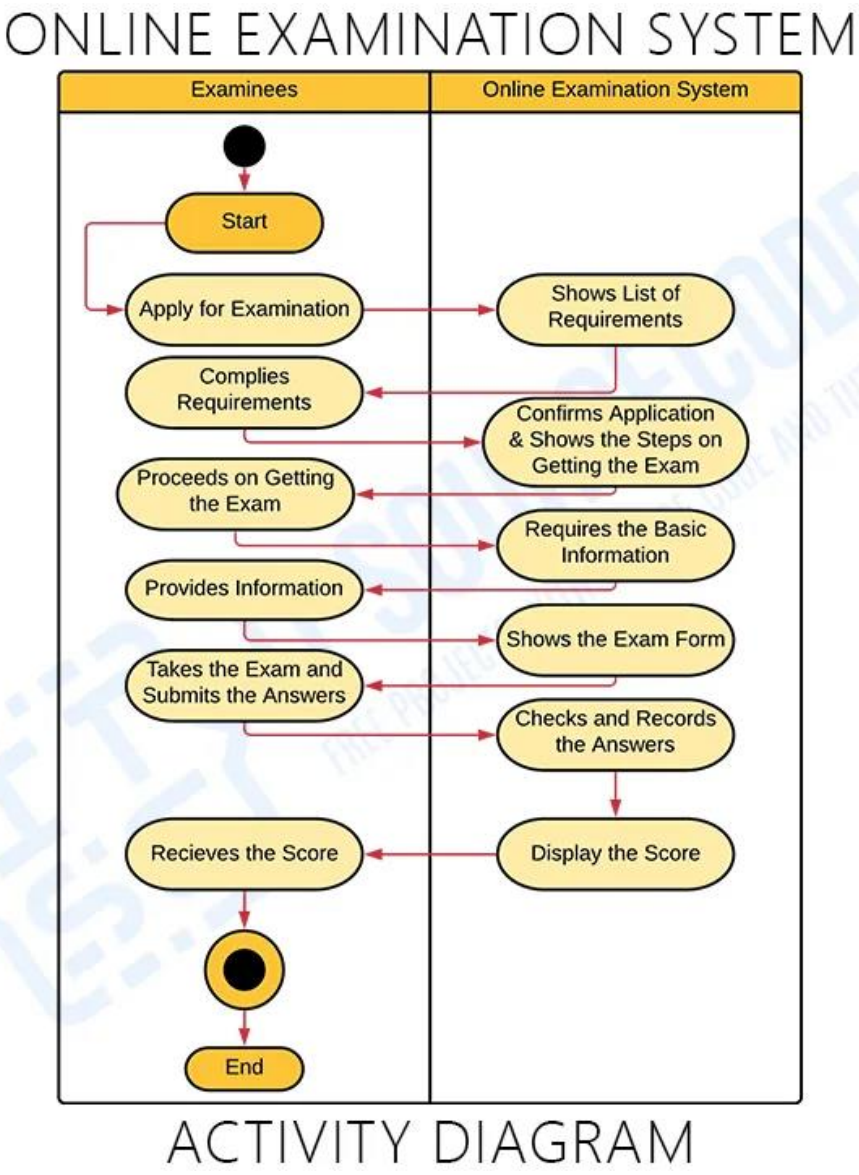
4.2 USE CASE DIAGRAM

The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system. These internal and external agents are known as actors. So use case diagram are consists of actors, usecases and their relationships.



4.3 ACTIVITY DIAGRAM

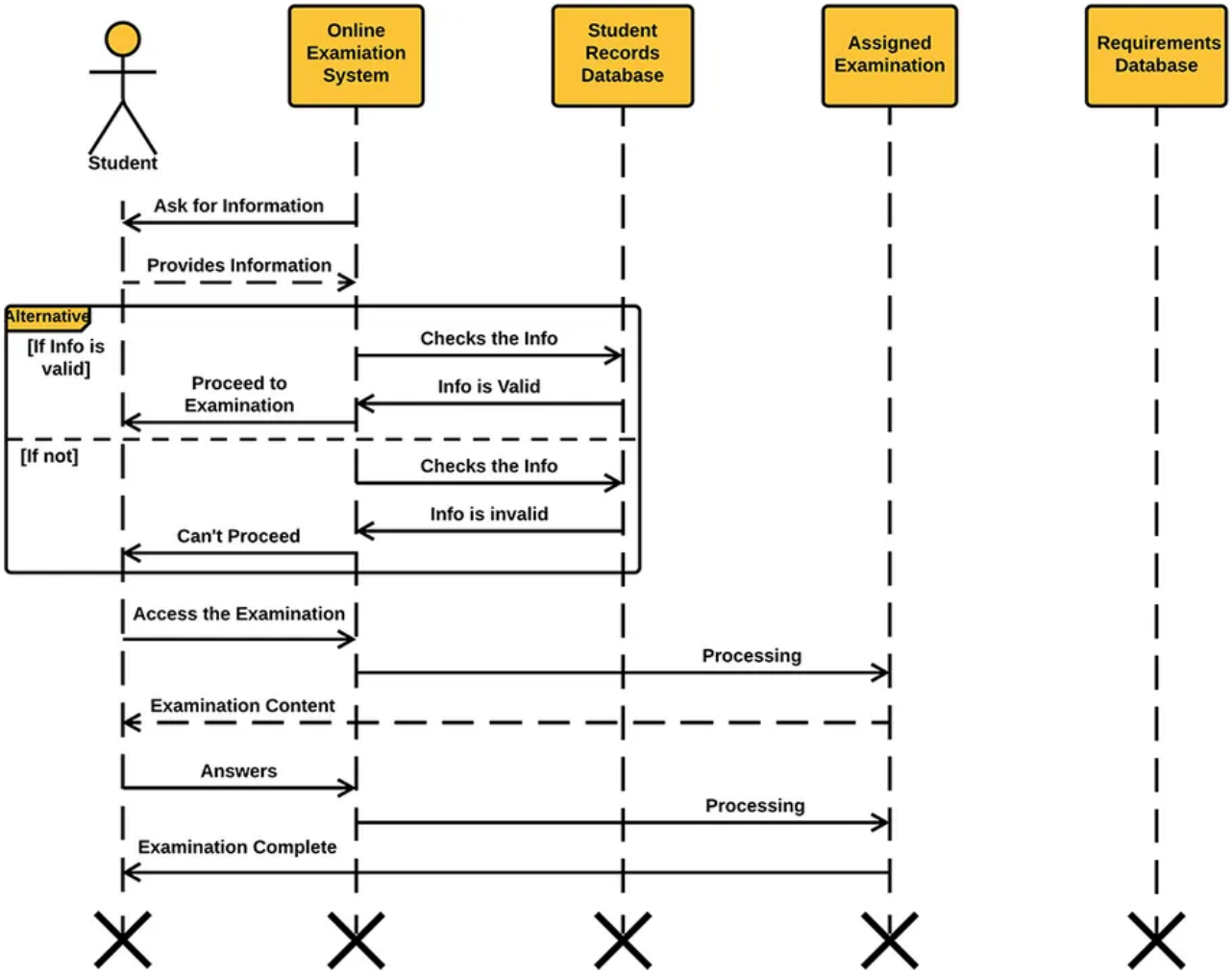
Activity diagram is another important diagram in UML to describe dynamic aspects of the system.Activity diagram is basically a flow chart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. So the control flow is drawn from one operation to another.



ACTIVITY DIAGRAM

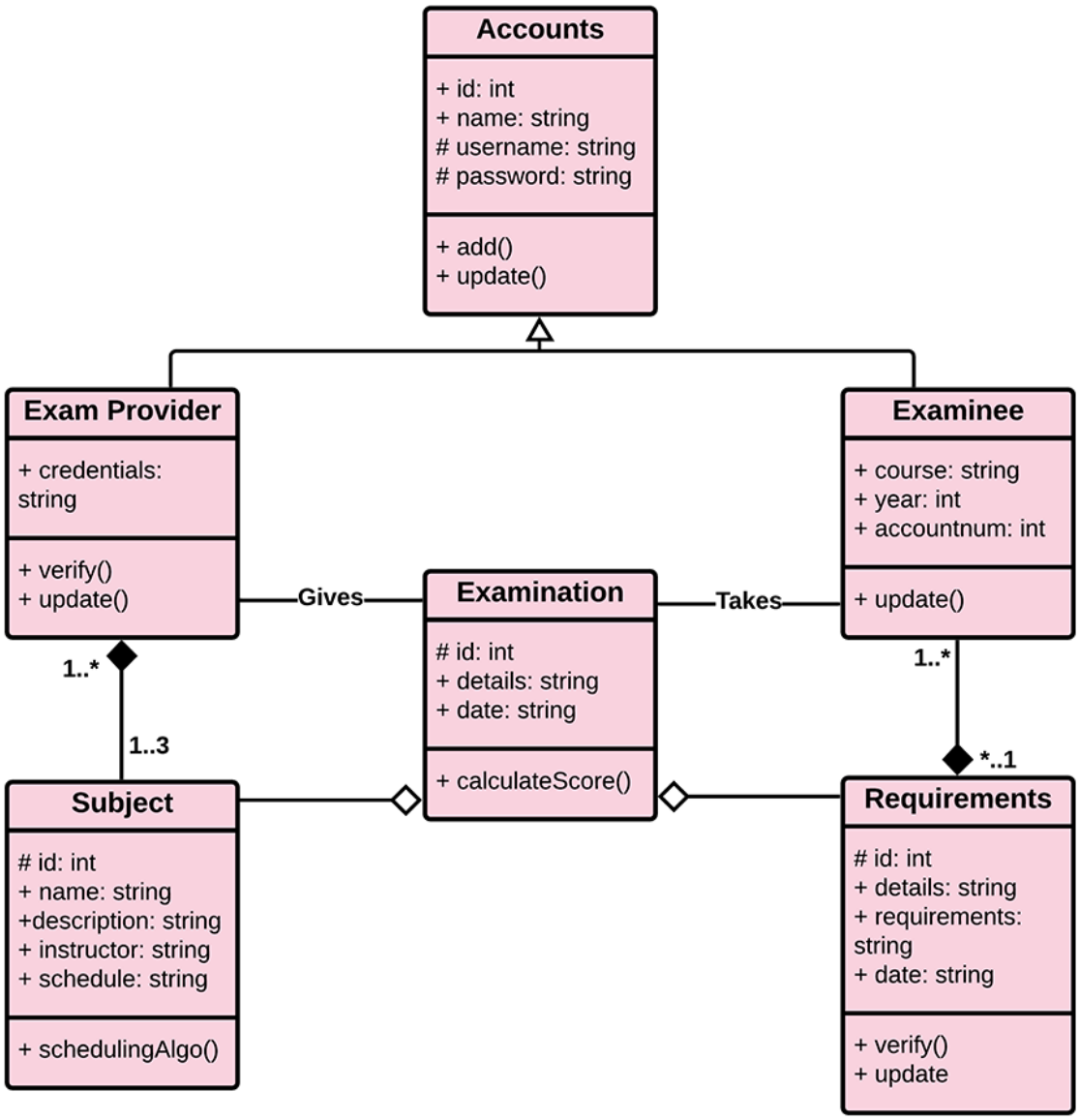
4.4 SEQUENCE DIAGRAM

Sequence diagram is the most common kind of interaction diagram, which focuses on the message interchange between a number of lifelines. Sequence diagram describes an interaction by focusing on the sequence of messages that are exchanged, along with their corresponding occurrence specifications on the lifelines.



4.5 CLASS DIAGRAM:

The Class diagram for Online Examination System shows the structures of information or data that will be handled in the system. These data or information will be represented by classes. Each of the classes will have their attributes in accord to the methods they will use. So the UML Class diagram was illustrated by a box with 3 partitions and the upper part was the name of the class, the middles are the attributes and the bottom is for the methods. The arrows on them represents their relationships in each other.



CHAPTER 5

SYSTEM IMPLEMENTATION

MODULE DESCRIPTION

Online Examination System Modules

1. **Home** – Home page of Online Examination site.
2. **Login** – Student can login to start test.
3. **Register** – From this page new student can register for test.
4. **Student Page** – Previously saved test results can be viewed here and other links like Edit Profile, Logout, and Change Password.
5. **Edit Profile** – Student can edit registration information like personal details, address, contact no, display name
6. **Change Password** – Currently logged user can change his password from this link.
7. **Logout** – User logged out from this site.
8. **Examination** – Selection of available examination.
9. **Test** – System randomly select questions from question bank and display one by one to the student.
10. **Results** – After completing the examination student can view results.

SYSTEM IMPLEMENTATION:

1. **System activities:**

- **Login system**
  Login system contain the following programs
- **login as admin**
  By using already stored admin name and password the individual can log on to the system any time he/she desires as an admin to manage the admin activities. Logging is successful only if the input detail is matched with the database, else an error message is displayed.
- **Login as student**
  The information of each student will be sorted by the admin upon the registration process, enabling this way the particular student to log on the system without having to undergo the process of registration again. Logging is successful only if the input detail is matched with the database, else an error message is displayed.

2. Admin activities

Admin activities contain the following programs:

- **Questions management**

Managing questions contain two main operations:

i. Adding Questions: include adding three type of questions according to the admin desires either (true/false, multiple choices, image matching).
ii. Deleting Questions: include deleting questions of the three types of questions (true/false, multiple choices, image matching).

- **Students management**

Managing students contain two main operations:

i. Registering students: include inserting the information of each student (student name, email, and password) to complete the registration process.

ii. Deleting student: by inserting the (name and email) of the student to be deleted the admin can delete any student.

- **Result management:**

show all students results.

3. Students activities

Student activities contain the following operations:

- **Give the exam:**

After the student logging in, a group of questions will be displayed to him to start and give an exam.

- **Get the results:**

After answering all the questions in a screen.specified period the student will finish the exam and his/her degree will be displayed on the

.

CHAPTER 6

FEATURES

6.1 FUTURE SCOPE OF ONLINE EXAMINATION SYSTEM:

Online Examination System is widely used as compared to other exams .Online examination system can be used in private institutes as well as educational institution. As it is user friendly web base application it can be used anywhere and anytime. Every software may have some cases of bugs, errors, security related problems or system faults. There are many problems or system faults for example; computer collapse or crashes due to power supply problem will invalidate efforts of number of students. There are large numbers of chances in which software may produce wrong results or may display invalid data. These bugs must be identified and solved for improving quality of software. So in future we can develop more secure software by using advanced technologies.

6.2 ADVANTAGES OF ONLINE EXMINATION SYSTEM:

- It fully automates the previous manual process of taking written exams.
- It is implemented by web based online examination software or through Intranet variance .It decreases the need of supervision during the exam is being examine or taken using web based Online Examination System gives a high level of clarity as opposite of traditional method. Most of
- System is able to reduce the workload of teachers by using automated test paper exams and marking schemes.
- Students can study independently for example at home or any place.
- The amount of time given at a particular question gives you the ability of "Quick Learning Quick Thinking".
- The data in Online Examination System is regenerated repeatedly so that students have access to new data
- Online Examination System is a computerized system which gives instant results and also saves time

6.3 DISADVANTAGES OF ONLINE EXAMINATION SYSTEM:

- The question and answers may be tricky and confusing as there are multiple choices for answers.
- Lack of interaction between the teacher and student.
- Network problems may arise in Online Examination System, test may be postponed or cancel.
- As India is not a fully developed country problem may arise in rural areas where there is deficiency of computers or where computers are not yet discovered.
- Hackers can easily manage to achieve confidential data through fake online application or websites.
- While attempting online exams we can easily manage to open another window on existing computer.
- Teaching techniques of an instructor or teacher may vary from online exam questions.

6.4 GOALS AND OBJECTIVES

- Online Examination System reduces the amount of restless job of evaluating the answers given manually by the candidates.
- Reduces paper work.
- Creates tests and answer keys.
- Online Examination provides grading which can be recorded as per its test

6.5 FUNCTIONAL OR SPECIFIC REQUIREMENTS:

Required software is for conducting on-line `***objective***' type examination and providing immediate results. The system should satisfy the following requirements:

- **<u>Administrator Aspect</u>**

    1. Taking backup of the database
    2. Editing/Deleting/Creating the database.
    3. Adding or expelling faculty
    4. Changing the super password.

- **Faculty Aspect**

    1. Logging into the system.
    2. Sending invitations to specific student by mail
    3. Accepting registrations of candidates
    4. Adding the candidate to a group
    5. Create/Edit/Delete candidate groups
    6. Creating a test
    7. Posting questions in the above test
    8. Posting multiple options to respective question
    9. Marking correct answer within the given options
    10. Specifying to allow user defined answer
    11. Time limit of the test if any.
    12. Whether to randomize the questions
    13. Whether to randomize the options displayed
    14. To allow the test to be taken in practice mode where the correct answer is shown immediately after the candidate selects an option.
    15. Set negative marks for wrong responses

- **Student Aspect:**

    1. Requesting registration
    2. Logging into the system.
    3. Edit user information.
    4. Selecting the test.
    5. Selecting whether the test to be taken in practice mode where the correct answer is shown immediately after the candidate selects an option.
    6. Appearing for the examination.
    7. Printing the result at the end of the examination.

8. Reviewing the given responses.
9. Changing password.
10. Resetting of forgotten password

- **Analysis**

1. Authenticating users based on username and password
2. Keeping session track of user activity
3. Recording candidates' responses to every question
4. Checking whether the given response is correct or not
5. Keeping history of test reports of all users

- **Mailing**

1. The reports are required to be mailed to the candidates on the registered mail address.
2. Temporary password will be mailed to the user in case the user forgets the password.
3. Invitations for the appearance for the new test will be mailed

CHAPTER 7

CONCLUSION:

- The objective of online examination system discussed in this paper is to establish a smart, efficient, secure and reliable paperless examination system, which is the unity of teaching and examination. With the diversity in question type selection, the system can accommodate various disciplines, teaching, examination, which plays an important role in examination process, teaching process and excellent course construction as well as reducing the work of teachers and educational administrative staff, enhancing students' learning time and inquiring the scores conveniently.

- 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.

CHAPTER 8

INPUTS SCREENSHOT :

ADMIN TABLE:

Showing rows 0 - 0 (1 total, Query took 0.0003 seconds.)

```
SELECT * FROM `admin_acc`
```

admin_id	admin_user	admin_pass
1	admin@username	admin@password

COURSE TABLE:

Showing rows 0 - 5 (6 total, Query took 0.0002 seconds.)

```
SELECT * FROM `course_tbl`
```

cou_id	cou_name	cou_created
69	DSA	2022-06-05 19:32:01
70	CYBER SECURITY	2022-06-05 19:47:04
77	GK	2022-06-05 19:53:45
78	JAVA	2022-06-05 20:11:28
80	PYTHON	2022-06-05 20:11:44
82	C	2022-06-05 20:11:55

EXAM ANSWERS:

Showing rows 0 - 24 (36 total, Query took 0.0003 seconds.)

```
SELECT * FROM `exam_answers`
```

exans_id	axmne_id	exam_id	quest_id	exans_answer	exans_status	exans_created
295	4	12	25	Diode, inverted, pointer	old	2019-12-07 08:22:14
296	4	12	16	Data Block	old	2019-12-07 08:22:14
297	6	12	18	Programmable Logic Controller	old	2019-12-05 18:29:47

EXAM ATTEMPT:

Showing rows 0 - 4 (5 total, Query took 0.0003 seconds.)

```
SELECT * FROM `exam_attempt`
```

examat_id	exmne_id	exam_id	examat_status
51	6	12	used
52	4	11	used
53	4	12	used
54	8	12	used
55	10	24	used

EXAM QUESTIONS:

Showing rows 0 - 24 (49 total, Query took 0.0003 seconds.)

```
SELECT * FROM `exam_question_tbl`
```

eqt_id	exam_id	exam_question	exam_ch1	exam_ch2	exam_ch3	exam_ch4	exam_answer	exa
9	12	In which decade was the American Institute of Elec...	1850s	1880s	1930s	1950s	1880s	act
10	12	What is part of a database that holds only one typ...	Report	Field	Record	File	Field	act
14	12	OS computer abbreviation usually means ?	Order of Significance	Open Software	Operating System	Optical Sensor	Operating System	act

EXAM TABLE:

Showing rows 0 - 4 (5 total, Query took 0.0003 seconds.)

```
SELECT * FROM `exam_tbl`
```

ex_id	cou_id	ex_title	ex_time_limit	ex_questlimit_display	ex_description	ex_created
12	77	GK	30	5	GK Exam	2022-06-05 19:53:51
24	69	DATA STRUCTURES	60	10	ALGORITHMS	2022-06-05 19:58:48
25	78	java	60	10	java	2022-06-05 20:13:19
26	82	c	30	5	c	2022-06-05 20:22:36
27	70	cyber security	50	7	cyber security	2022-06-05 20:26:53

EXAMINEE TABLE:

Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)

```
SELECT * FROM `examinee_tbl`
```

exmne_id	exmne_fullname	exmne_course	exmne_gender	exmne_birthdate	exmne_year_level	exmne_
8	rohid sai ram	26	male	2019-12-21	second year	rohid@g
10	Santhosh	69	male	2001-11-27	third year	mssanth

FEEDBACK:

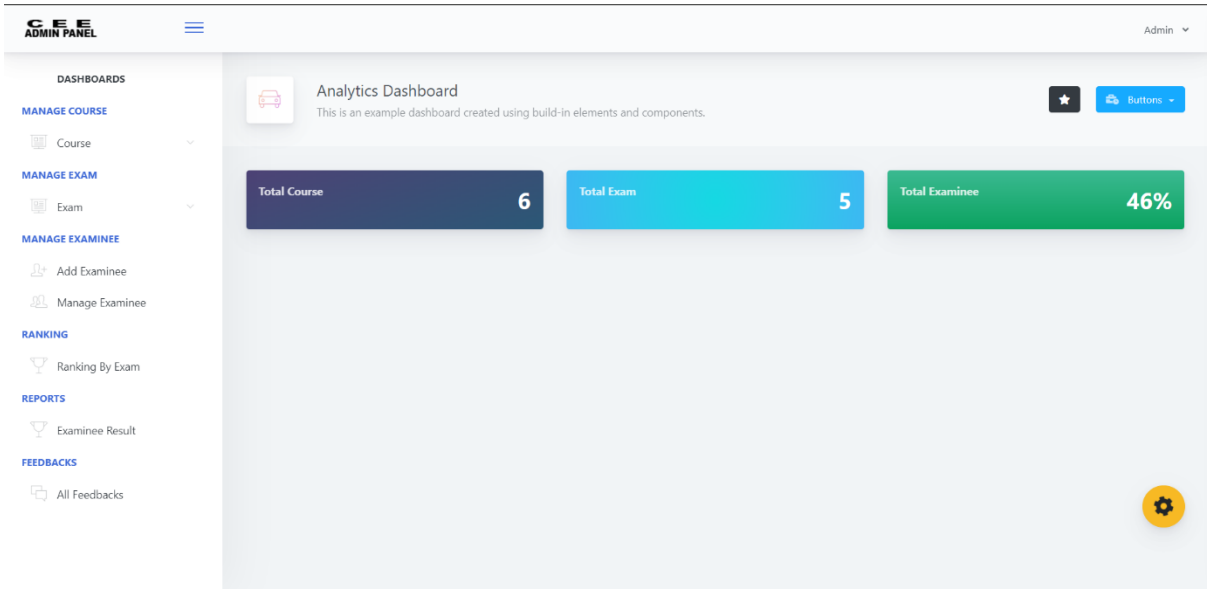
Showing rows 0 - 2 (3 total, Query took 0.0002 seconds.)

```
SELECT * FROM `feedbacks_tbl`
```

fb_id	exmne_id	fb_exmne_as	fb_feedbacks	fb_date
4	6	SANTHOSH	IT WAS A BEST EXAM TO TEST MY ABILITIES	December 05, 2019
10	0	ROHID	THE TEST QUESTIONS WERE GOOD	MARCH 5 2020
11	10	Santhosh	i have scored 8/10 which is my personel best	June 05, 2022

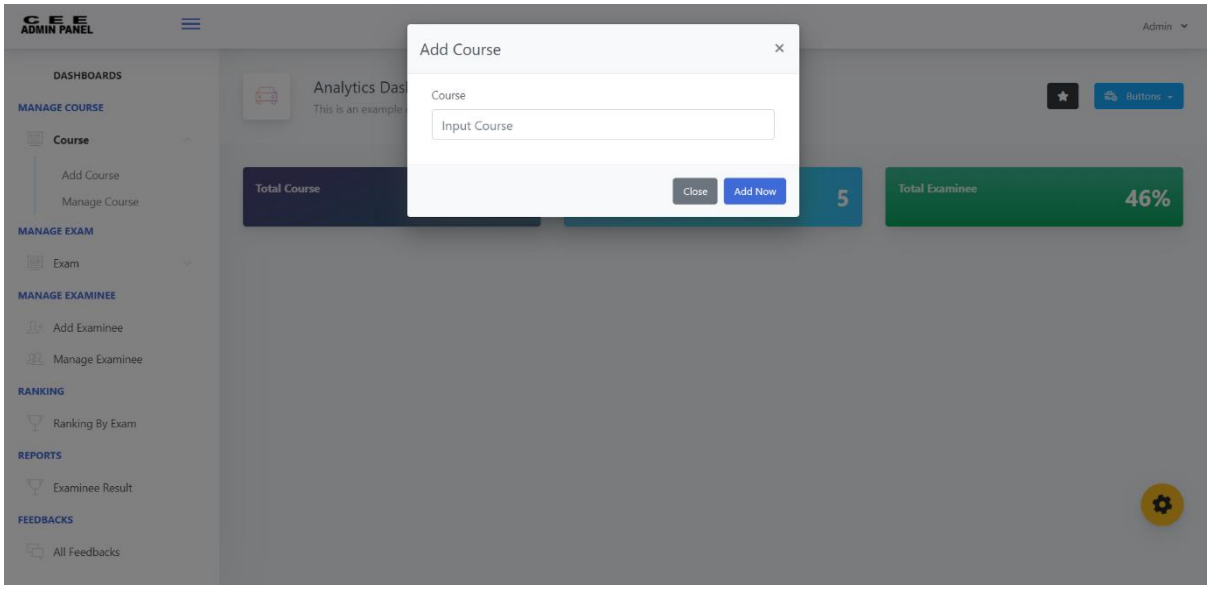
OUTPUT SCREENSHOT:

CEE ADMIN PANEL DASHBOARD:

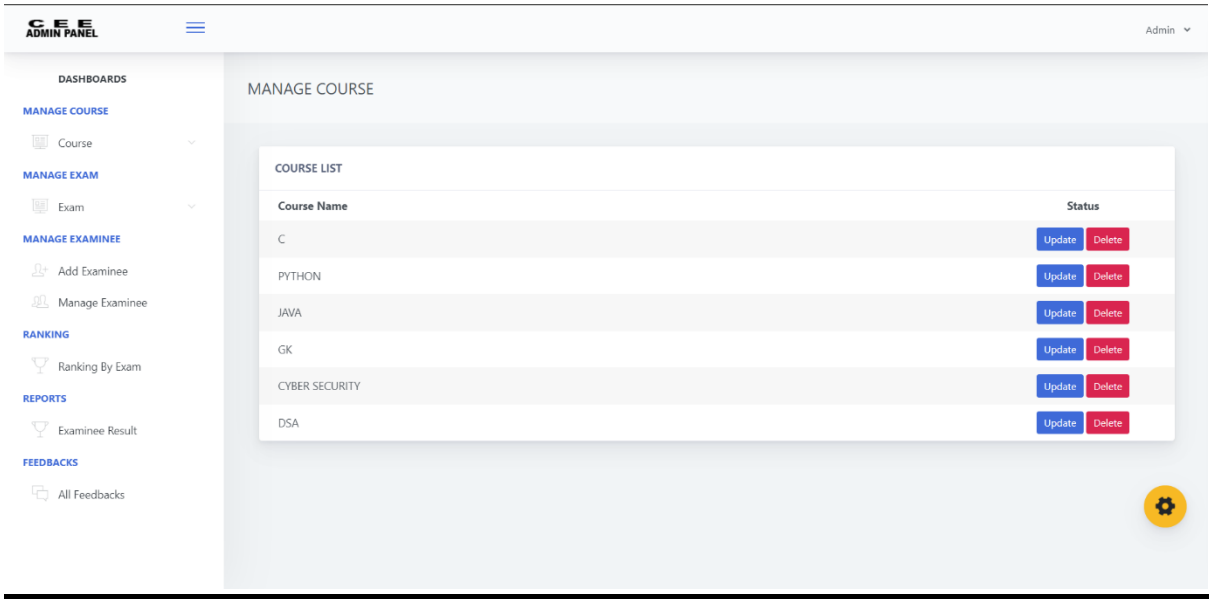


COURSE:

ADD COURSE:

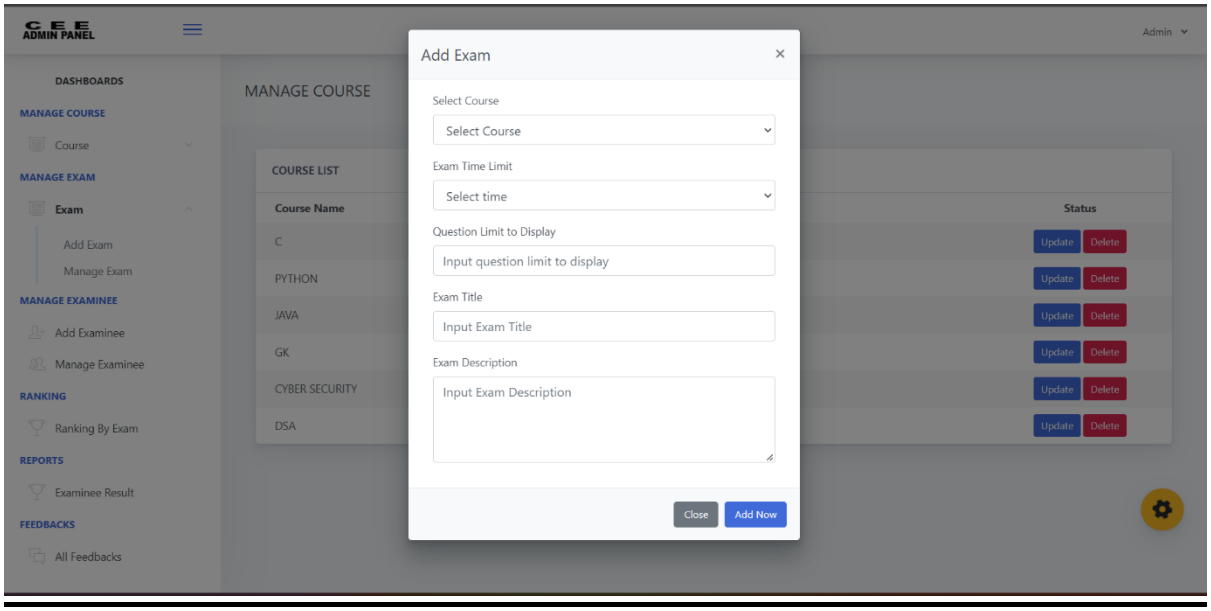


MANAGE COURSE:

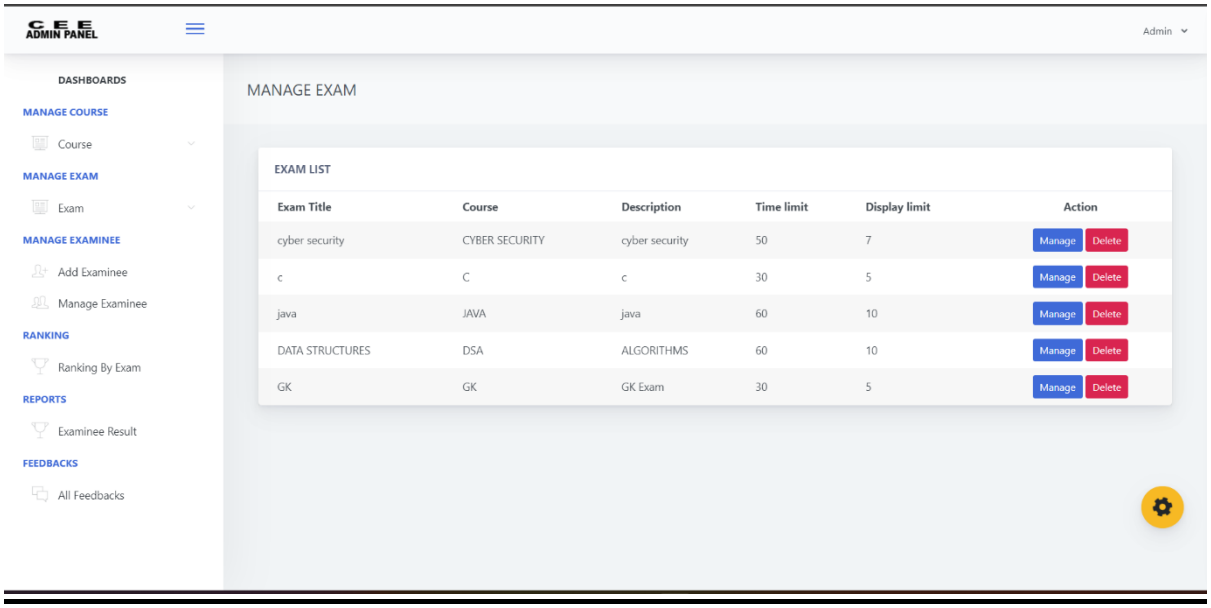


EXAM:

ADD EXAM:

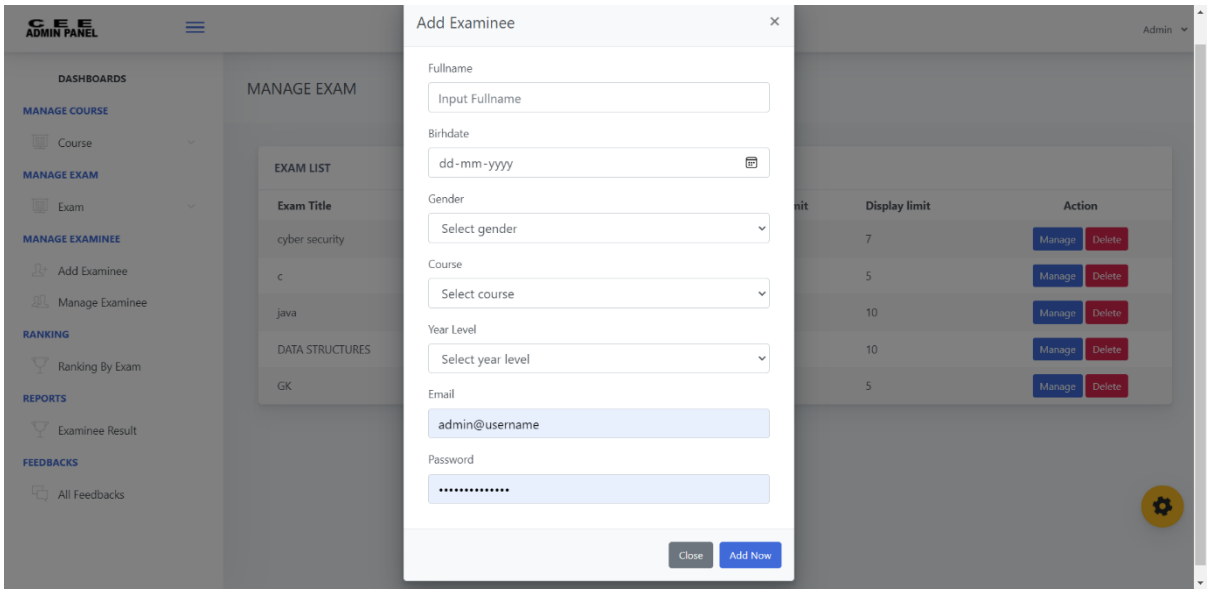


MANAGE EXAM:

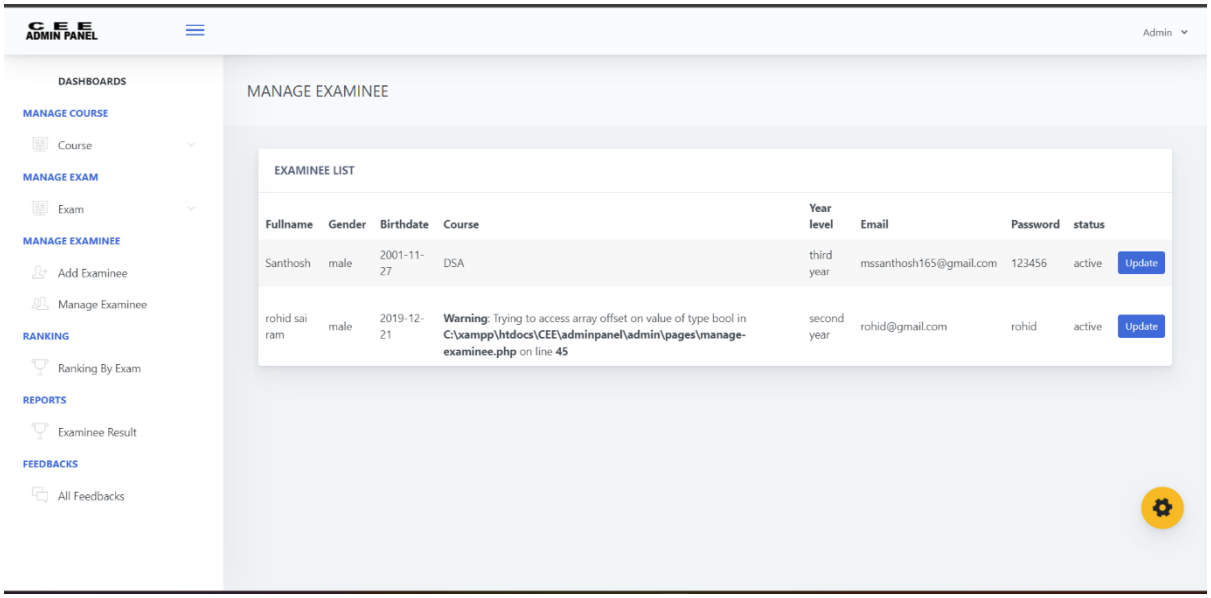


EXAMINEE:

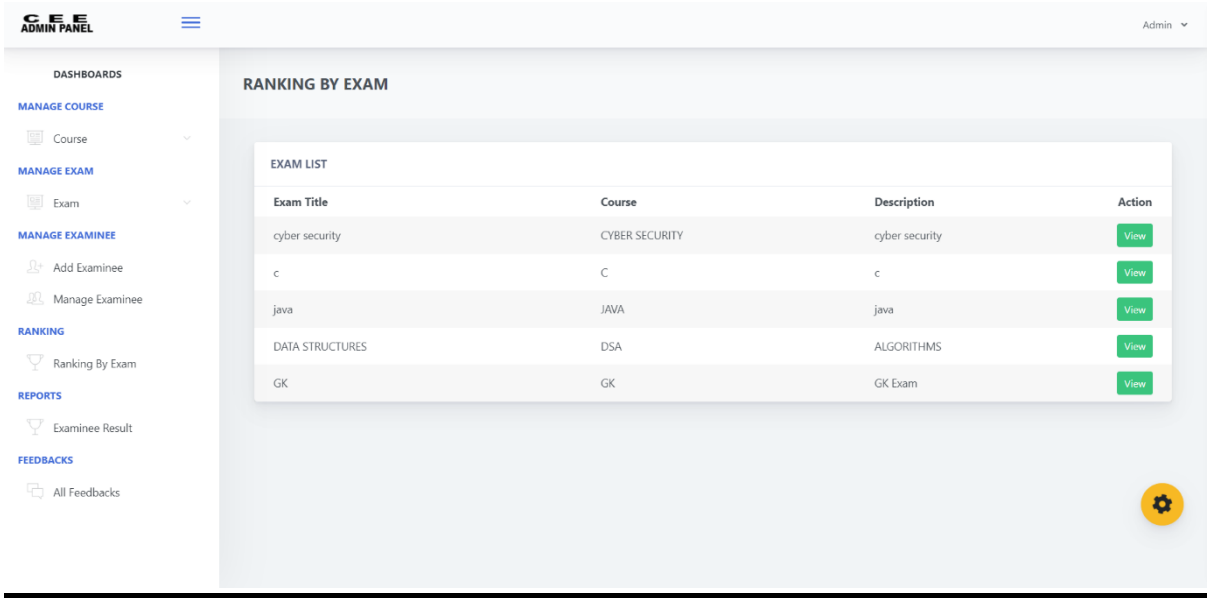
ADD EXAMINEE:



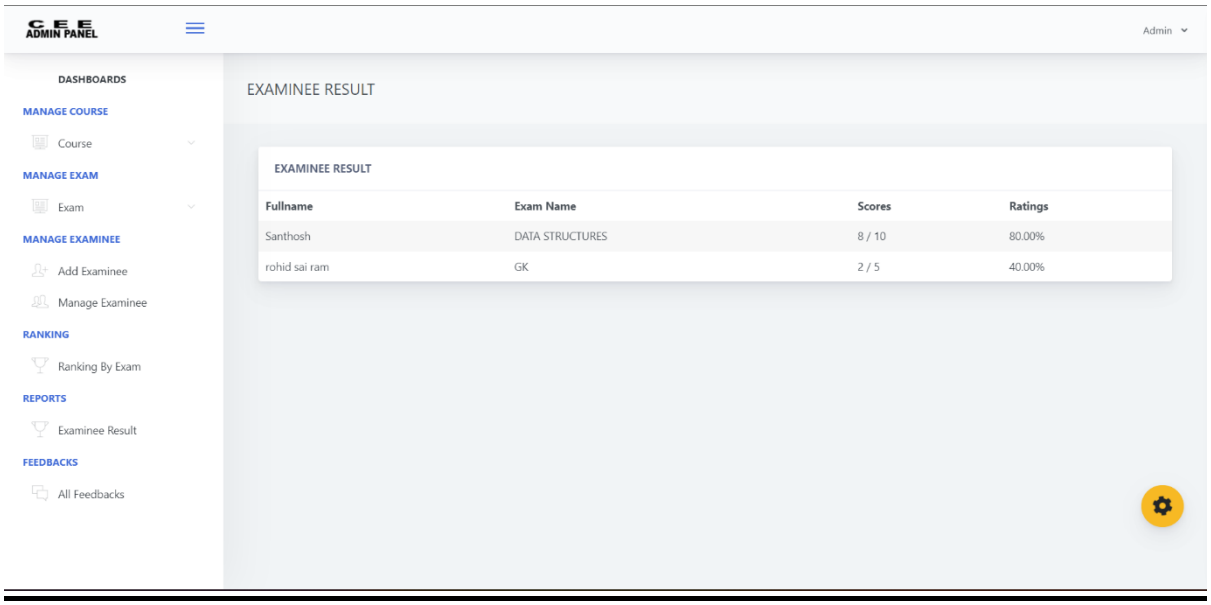
MANAGE EXAMINEE:



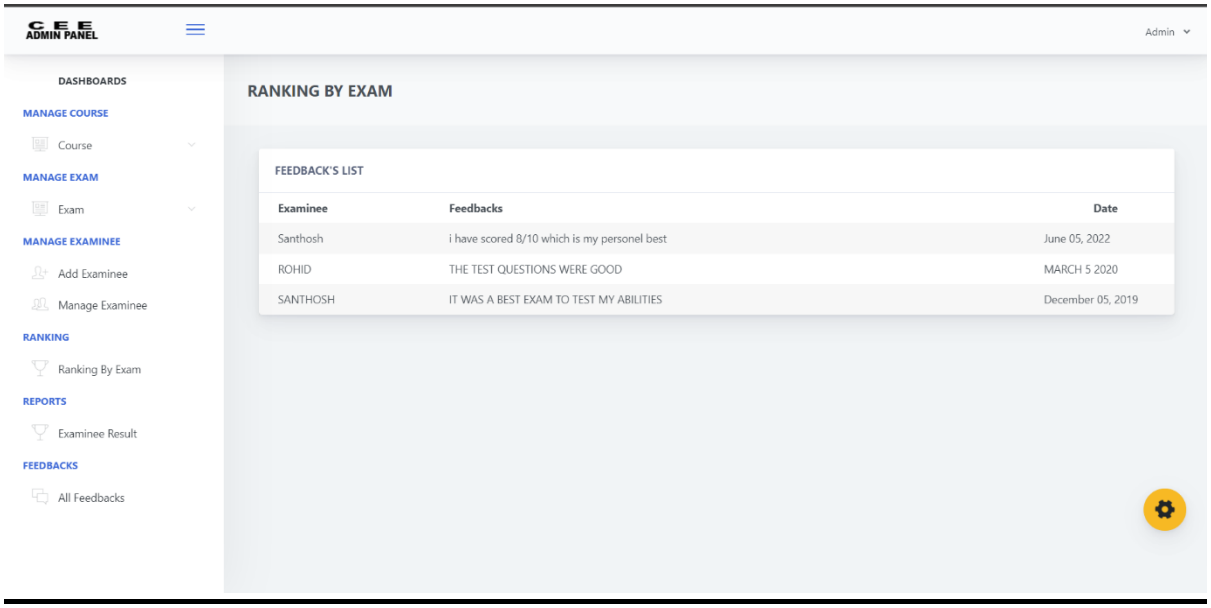
RANK BY EXAM:



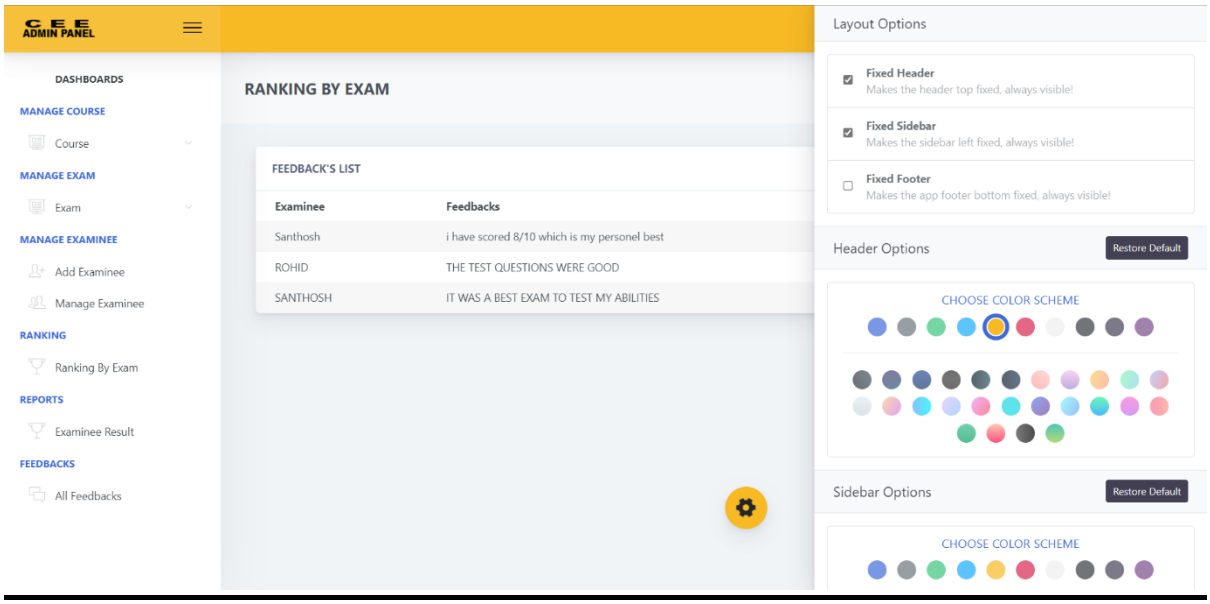
EXAMINEE RESULT:



ALL FEEDBACK:

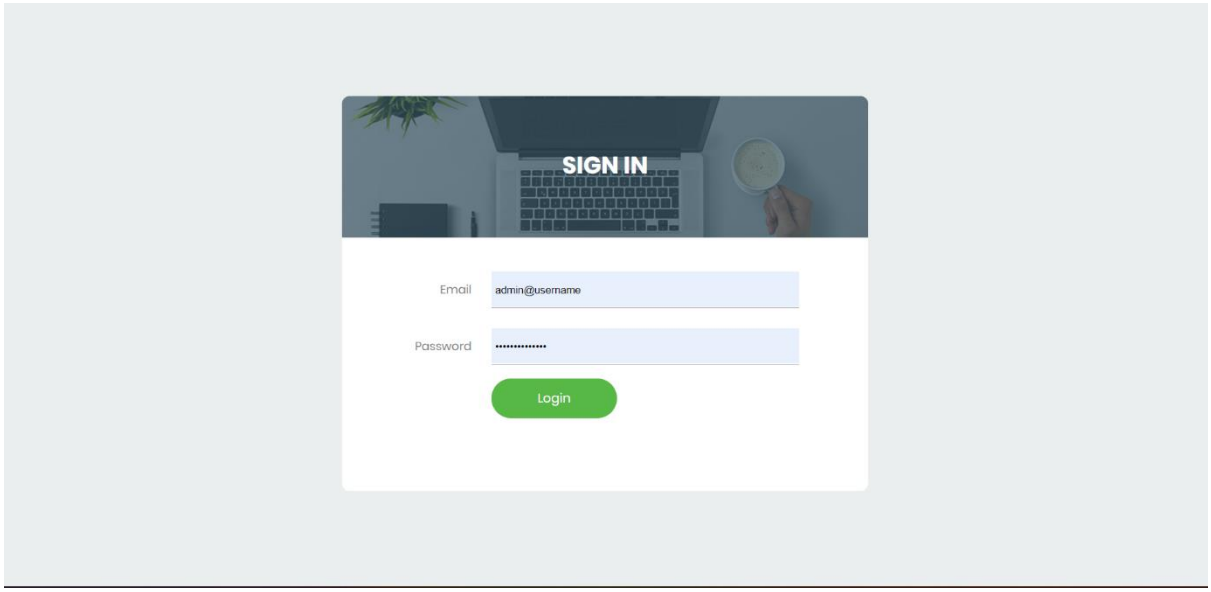


LAYOUT OPTION:

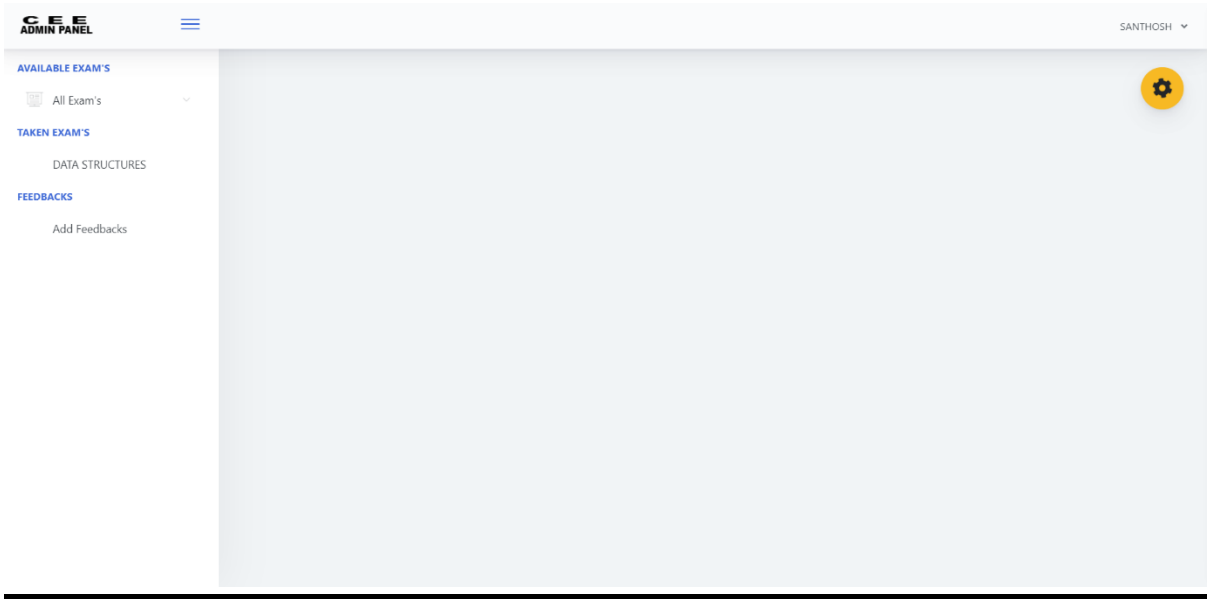


CEE USER PANEL:

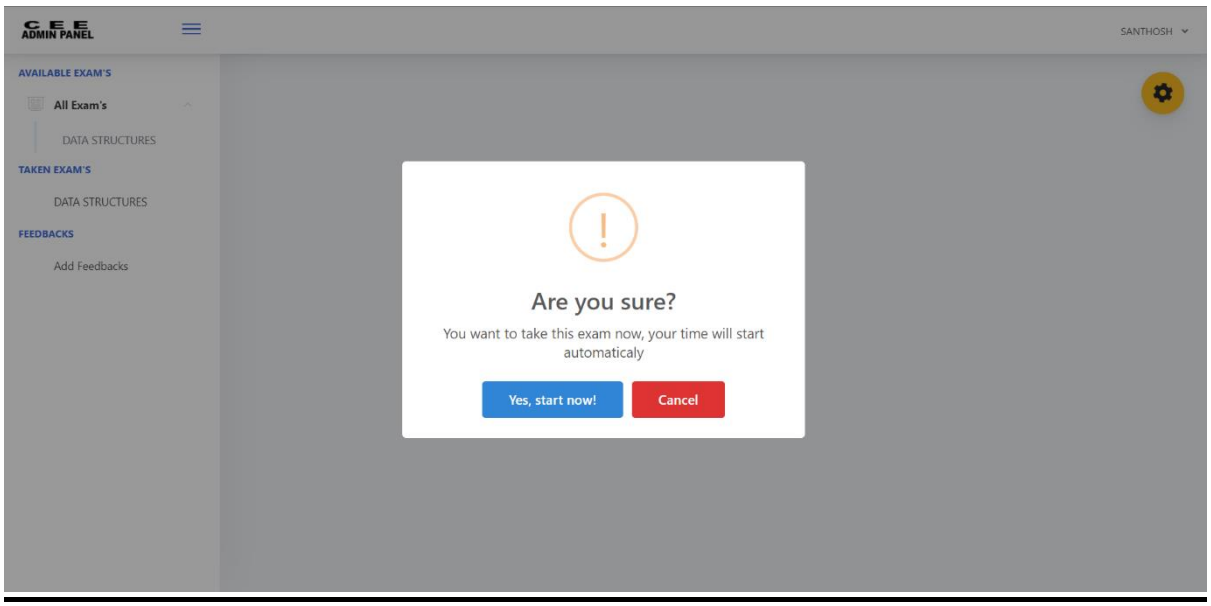
HOME.PHP:



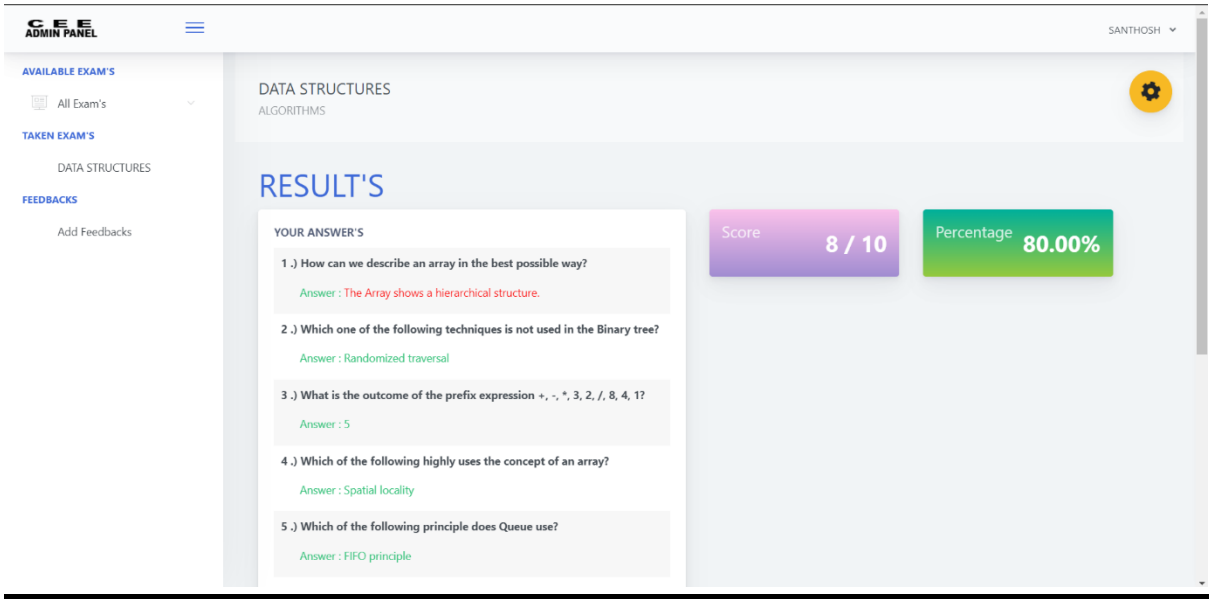
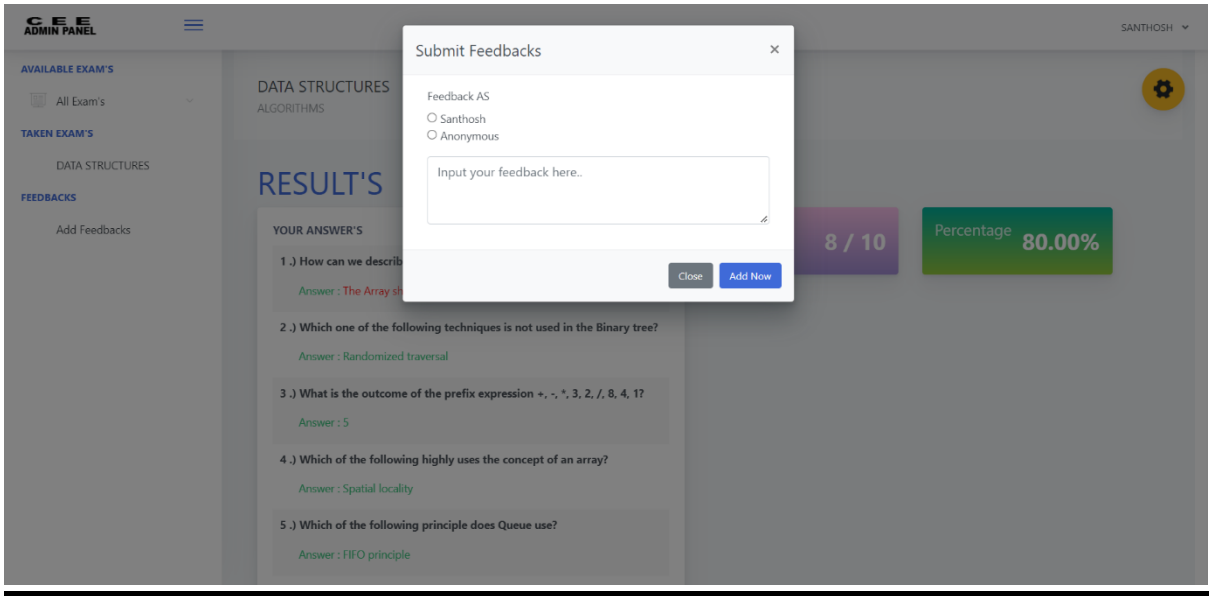
USER DASHBOARD:



WRITE EXAM:



RESULT:



SUBMIT FEEDBACK: