

DBMS Mini-Project

On

Online Examination System



PCET'S PIMPRI CHINCHWAD COLLEGE OF ENGINEERING

Sector No. 26, Pradhikaran, Nigdi,

Pune - 411044

DEPARTMENT OF COMPUTER ENGINEERING

Certificate

This is to certify that the DBMS report entitled

“Online Examination System”

Submitted By

Name of student: Samvedya Bhaskar Jedhedeshmukh Roll No.: TECOB203

is approved by Prof. Sushma Vispute for submission. It is certified further that, to the best of my knowledge, the report represents work carried out by my students as the partial fulfilment for T.E. Computer Engineering (Semester I) DBMS Laboratory Work as prescribed by the Savitribai Phule Pune University for the academic year 2021-22.

Prof. Sushma Vispute

(DBMS Guide)

Prof. Dr. K. Rajeswari

(Head of the Department)

Place: Pune

Date:

ABSTRACT:

ONLINE EXAMINATION SYSTEM is a web-based examination system where examinations are given online, either through the internet or intranet using computer system. The main goal of this online examination system is to effectively evaluate the student thoroughly through a totally automated system that not only reduce the required time but also obtain fast and accurate results.

ONLINE EXAMINATION SYSTEM is an online test simulator is to take online examination, test in an efficient manner and no time wasting for manually checking of the test paper. The main objective of this web based online examination system is to efficiently evaluate the student thoroughly through a fully automated system that not only saves lot of time but also gives fast and accurate results. For students they give papers according to their convenience from any location by using internet and time and there is no need of using extra thing like paper, pen etc.

Functional Specification:

1. Registering new Student
2. Getting the student and staff info and storing it to databases
3. Getting the type and number of question paper
4. Generating result after the exam.

INDEX:

CHAPTER		CONTENTS	PAGE NO.
1.		Introduction	
	a.	Problem Statement	
	b.	Project Idea	
	c.	Motivation	
	d.	Scope	
	e.	Requirement Analysis	
2.		Project Design	
	a.	Hardware and software requirements	
	b.	ER Model	
	c.	Schema of all the tables	
3.		Module Description	
4.		Results and Discussion	
	a.	Source Code	
	b.	Screenshots including GUI	
5.		Conclusion	

Figure/Table No.	Figure/Table Name	Page No.
1.	ER Diagram Notations	8
2.	ER. Diagram	9
3.	Schema Diagram	10

CHAPTER 1: INTRODUCTION

Database is a collection of data and Management System is a set of programs to store and retrieve those data. Based on this one can define DBMS as a collection of inter-related data and set of programs to store & access those data in an easy and effective manner

A. PROBLEM STATEMENT:

Implement an application (Online Examination System) using suitable front-end language such as Java, Python, .Net (Here html, CSS, JavaScript has been used) and back-end language such as Oracle, MySQL, Microsoft Excess etc (Here PHP Mysql has been used).

B. PROJECT IDEA:

- Online Examination System allows the students and the staff to participate in an easy-to-understand procedure of online examination.
- The project will include a login/sign up form for the student and the staff, which will ask for general information such as name, email, DOB, department, username, password, and so on.
- New users can create new account either as a student or a member of the Staff.
- The teacher will be able to generate quizzes and add questions with options, the student will be able to attend the quiz and both can then view the score.
- On forgetting password the user can reset the password through the “forgot password” option.
- The system consists of a dashboard, profile, score and sign out options upon login in.
- The online examination system allows easy to view and understand score system both for student and staff.

C. MOTIVATION:

- Online Examination System provides flexibility and security to the examination process. Questions uploaded can be shuffled and given in different orders to different students.
- Online examination system can be accessed anywhere from the internet.

- It is cheaper than the traditional method and can save many hours of human work.
- Even at present time many companies are following automatic system for aptitude test in placements.

D. SCOPE:

- The system allows storing student's and teacher's records in a quick and organized manner which also allows for faster retrieval of the data.
- Online examination system can be used in private institutes as well as educational institution.
- There is no such restriction that examiner has to be present when the candidate takes the test.
- This system is designed for educational institutes like school, colleges, and universities to conduct test in efficient manner.

E. REQUIREMENT ANALYSIS:

- The system should allow the user (student/staff) to register with:
 - Name
 - Username/Staff id
 - Email
 - Phone number
 - Department
 - DOB
 - Gender
 - Password
- It should allow the user to view the dashboard:
 - quiz title,
 - date of creation of quiz
 - created by
 - take quiz option

Along with the leader board consisting of:

- Quiz title
- Score
- Total score
- Student name
- Student mail id

- The dashboard for Staff should consist following options along with similar leader board as for the student:
 - Add quiz
 - Delete quiz
 - View quiz
- The system must include the profile option to view the information filled while registering such as the name, username, email, etc.
- It should also include the score option to view:
 - Quiz title
 - Score obtained
 - Total score

CHAPTER 2: PROJECT DESIGN

A. HARDWARE AND SOFTWARE REQUIREMENTS:

Hardware Requirements:

CPU : Pentium IV 2.4 GHz or above
 Memory (Primary) : 512 MB, 1 GB or above
 Hard Disk : 40 GB, 80 GB, 160 GB or above
 Monitor : 15 VGA color

Software Requirements:

Programming language : PHP, MYSQL
 Operating system : ANY OS (Recommended: Windows8/10, Windows Vista, Windows XP)
 Application required : Standalone desktop application
 Xampp Coding language : PHP, HTML, CSS, JavaScript

B. ER-MODEL:

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

The cardinality or fundamental principle of one data aspect with respect to another is a critical feature. The relationship of one to the other must be precise and exact between each other in order to explain how each aspect links together. In simple words Cardinality is a way to define the relationship between two entities.

The following are the notations of the ER diagram:

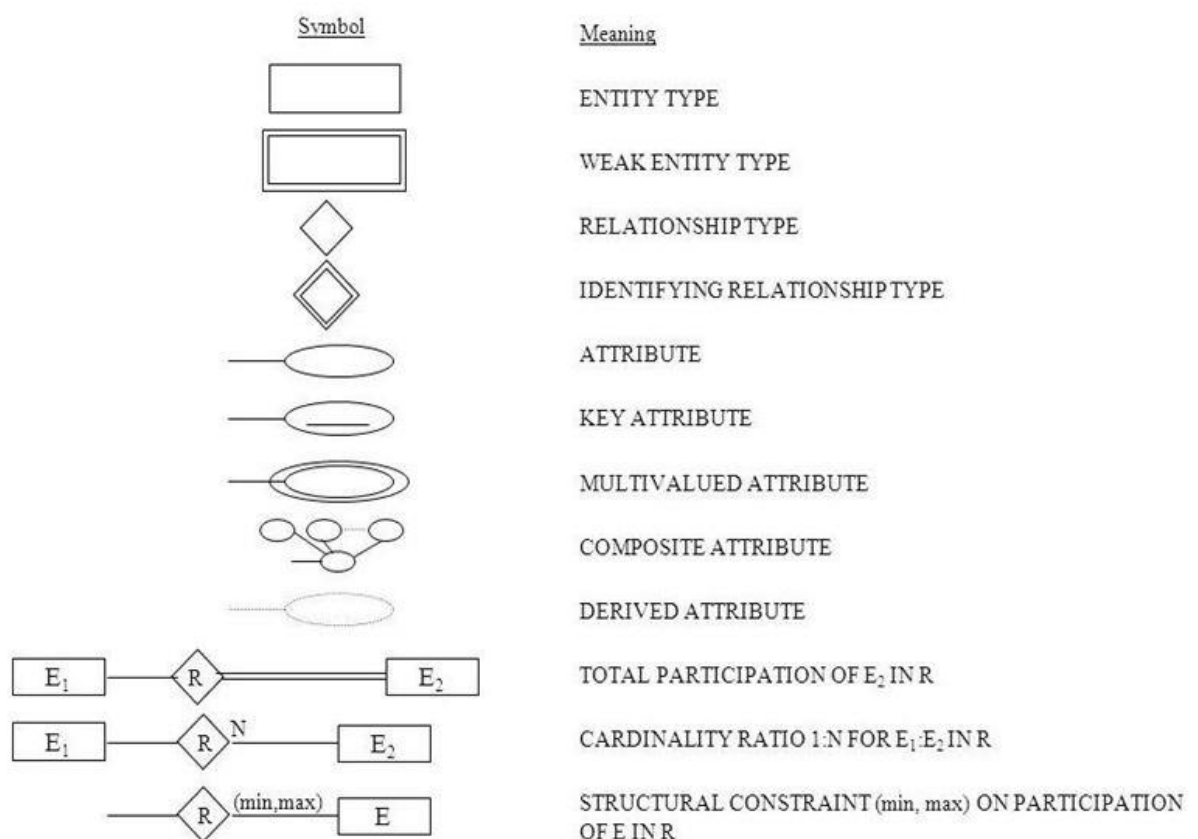


Fig 1: ER Diagram Notations

ER Diagram of Online Examination System:

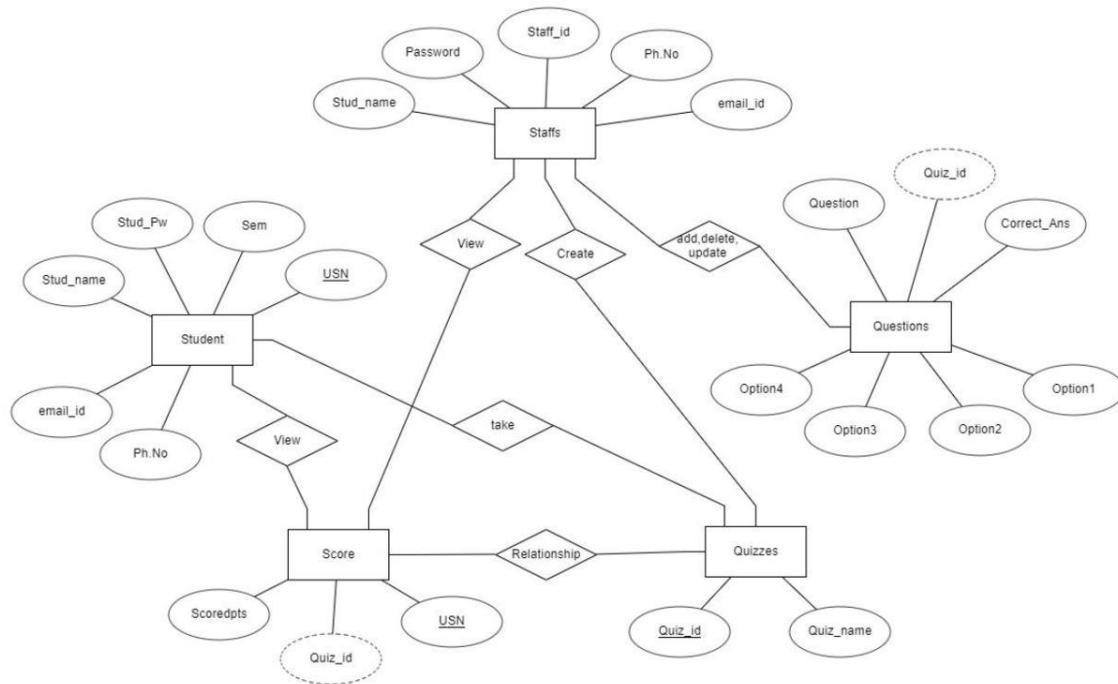


Fig 2: ER Diagram

Atomic value is present so relation is 1nf. Since No partial dependency relation is 2nf. As relation is in 2nf and there is no transitive dependency therefore er diagram in 3nf.

C. SCHEMA OF ALL THE TABLES:

In any data model it is important to distinguish between the description of the database and the database itself. The description of a database is called the database schema, which is specified during database design and is not expected to change frequently. A displayed schema is called a schema diagram. A schema diagram displays only some aspects of a schema, such as the names of record types and data items, and some types of constraints

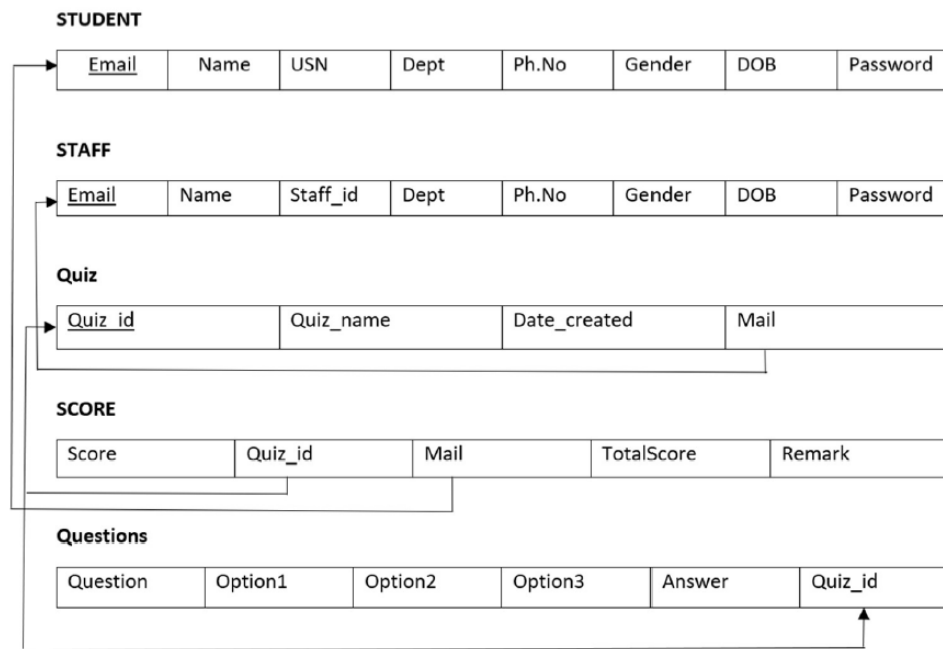


Fig 3: Schema Diagram

CHAPTER 3: MODULE DESCRIPTION

Modules in Online Examination System:

Online Examination System is that which enables the Students & Teachers to register for the system. Students are allowed to take the online test and see their progress. Also, it enables the Teachers to add, delete, and update the test questions and also to keep track of the student progress.

- Student
- Staff
- Login
- Add/Remove quizzes and questions
- Score

Student: Student has to log in to the system and can then view all the quizzes. Student can see the quiz list and attend the quizzes. After attending the quizzes students will get instant result and the same will be stored in the database.

Staff: Staff also has to log in to the system first, then they can add/remove quizzes. They can see the progress and they can also update the existing quiz.

Login: Login is must and should for both staff and student. So that all records will be safely saved to the database. If someone had forgot the password, one can reset that password.

Add/Remove quiz and question: Staff can add, remove the quiz. And also they can add extra questions to an existing quiz.

Score: Staff can see the scoreboard of the quiz which is added by him/her. And student can see the score of the quiz which he/she is attended

Functional Modules:

The functional modules included in this project are listed below:

Insert Module:

This module provides the functionality of collecting the required data from the designed interface and transmitting it to the appropriate table present in the database designed for this project. If the provided data does not satisfy the given constraints, it must refrain from storing it into the database.

Update Module:

This module again has the functionality of collecting the data from the designed interface, but it updates the already existing tuple that matches the provided primary key of the tuple to be updated, by replacing the existing attribute values with the newly collected data. Again, if the

Newly provided data does not satisfy the given constraints, it must refrain from updating the corresponding tuple.

Delete Module:

The delete counterpart is loaded with the ability to delete a single or multiple records from the table. It searches for the tuple, in the query specified table, based on the provided value for an attribute. Admin can delete in the interface, based on which delete module searches for the record corresponding to that provided attribute value and deletes the record.

Retrieve Module:

The retrieve module has a basic functionality of accessing the entire specified table from the database and displays it.

Trigger Module:

Trigger in database is set of statements that are executed after an event occurs on the specified table. This is useful for logs wherein every change in database can be logged which helps keep a track of all changes/transactions on the database

CHAPTER 4: RESULTS AND DISCUSSION

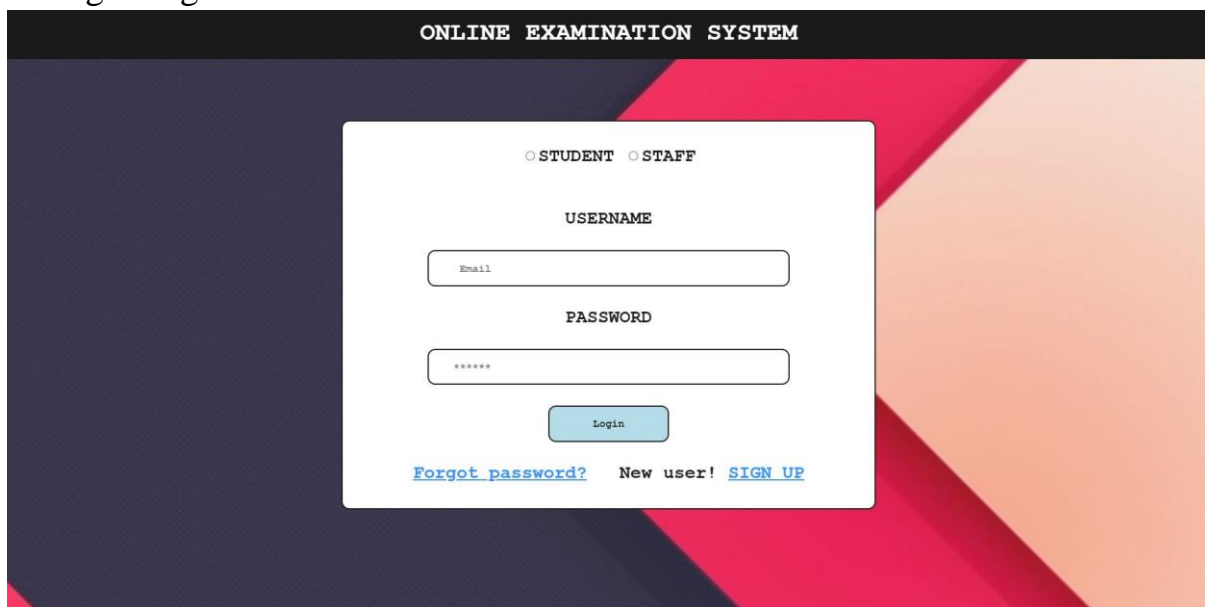
A. SOURCE CODE:

This project has been uploaded to Github. Link to the repository is given below:

<https://github.com/NayankumarKadhre/OnlineExamSystem.git>

B. SCREENSHOTS INCLUDING GUI:

1. Login Page



The screenshot displays the login interface of an 'ONLINE EXAMINATION SYSTEM'. The page features a dark header with the system name. Below the header, there are two radio buttons to select the user type: 'STUDENT' (selected) and 'STAFF'. The 'USERNAME' field is labeled 'Email' and is a text input. The 'PASSWORD' field is a password input showing asterisks. A 'Login' button is positioned below the password field. At the bottom, there are links for 'Forgot password?', 'New user! SIGN UP', and a 'SIGN UP' link.

2. Student Sign-up page

The screenshot shows the 'Sign-Up as Student' page. At the top is a black header with 'ONLINE EXAMINATION SYSTEM' in white. Below it is a navigation bar with a purple 'STUDENT' tab and a light blue 'STAFF' tab. The main content area is white and contains the title 'Sign-Up as Student' in bold. Below the title are several input fields: 'NAME', 'USN', 'Email', 'Ph No.', 'Department' (a dropdown menu with 'CSF' selected), and 'DOB' (a date picker). The page is framed by a dark blue sidebar on the left and a red sidebar on the right.

ONLINE EXAMINATION SYSTEM

STUDENT STAFF

Sign-Up as Student

NAME

USN

Email

Ph No.

Department

DOB

3. Staff Sign-up page

The screenshot shows the 'Sign-Up as Staff' page. At the top is a black header with 'ONLINE EXAMINATION SYSTEM' in white. Below it is a navigation bar with a light blue 'STUDENT' tab and a purple 'STAFF' tab. The main content area is white and contains the title 'Sign-Up as Staff' in bold. Below the title are several input fields: 'NAME', 'Staff Id', 'Email', 'Ph No.', 'Department' (a dropdown menu with 'CSF' selected), and 'DOB' (a date picker). The page is framed by a dark blue sidebar on the left and a red sidebar on the right.

ONLINE EXAMINATION SYSTEM

STUDENT STAFF

Sign-Up as Staff

NAME

Staff Id

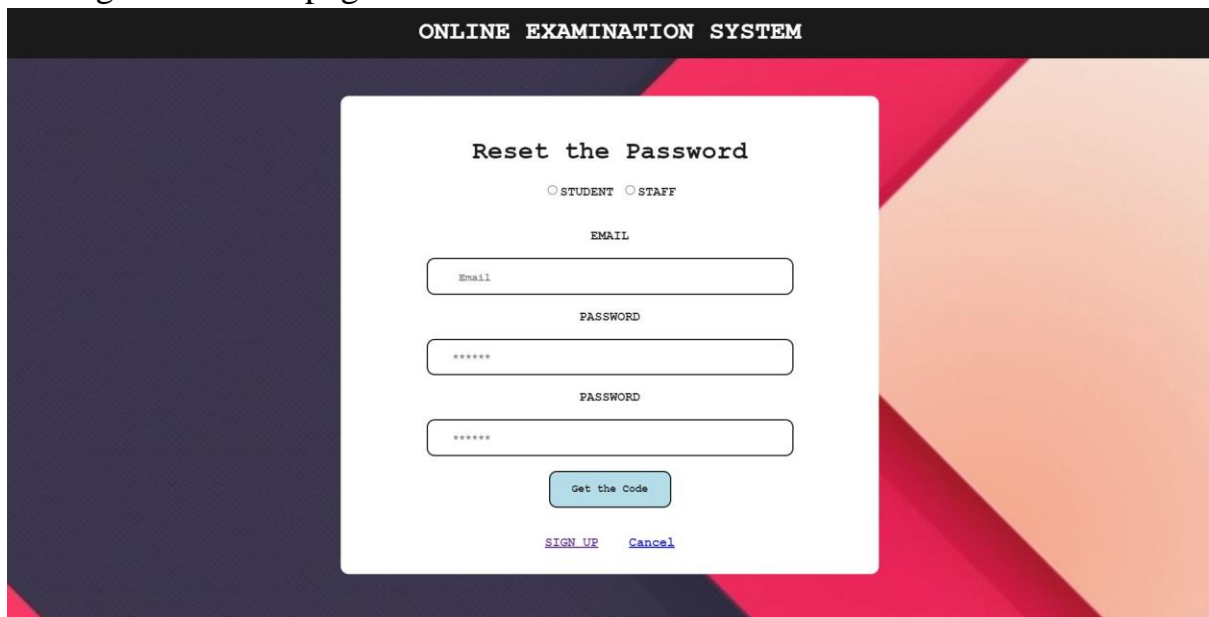
Email

Ph No.

Department

DOB

4. Forgot Password page



The screenshot shows a web interface for an 'ONLINE EXAMINATION SYSTEM'. The main heading is 'Reset the Password'. Below it, there are two radio buttons: 'STUDENT' (selected) and 'STAFF'. The form contains three input fields: 'EMAIL' (with a placeholder 'Email'), 'PASSWORD' (with a placeholder '*****'), and another 'PASSWORD' field (also with a placeholder '*****'). A blue button labeled 'Get the Code' is positioned below the password fields. At the bottom, there are two links: 'SIGN UP' and 'Cancel'.

CHAPTER 5: CONCLUSION

The online examination system provides better functionality for an examination to be more efficient and reduce manual paperwork in order to automate all possible tasks. For implementing this system, PHP, HTML, CSS, JavaScript and MySql are used. It can be used for managing quizzes, adding and deleting quizzes, and scoring system.