

A FIELD PROJECT REPORT ON
ONLINE EXAMINATION SYSTEM

Submitted in partial fulfilment of the requirements for the award of the degree

BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE AND ENGINEERING

Submitted by

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CERTIFICATE

This is to certify that the field project entitled “Online Examination System” being submitted by (Bhuvana & 231FA04C83), (Prasanth & 231FA04C94), (Meghana & 231FA04D02), and (Sahithi & 231FA04D08) in partial fulfilment of Bachelor of Technology in the Department of Computer Science and Engineering, Vignan’s Foundation For Science Technology & Research (Deemed to be University), Vadlamudi, Guntur District, Andhra Pradesh, India, is a bonafide work carried out by them under my guidance and supervision.

Head of the Department

Guide

DECLARATION

We hereby declare that our project work described in the field project titled “Online Examination System” which is being submitted by us for the partial fulfilment in the department of Computer Science and Engineering, Vignan’s Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi, Guntur, Andhra Pradesh, and the result of investigations are carried out by us under the guidance of (Name of the Guide)

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INTRODUCTION:

The Online Examination System is a web-based platform designed to conduct exams efficiently in a digital environment. It eliminates the need for traditional pen-and-paper exams by providing a secure and automated testing process. The system is beneficial for educational institutions, certification bodies, and recruitment agencies, offering convenience, accessibility, and real-time assessment features.

PROJECT DEFINITION:

The system consists of a front-end interface for students and administrators, a secure backend for question storage and result processing, and a database to manage user records. It supports multiple-choice questions (MCQs). Key technologies include HTML, CSS, Java, and a database such as MySQL.

EXISTING SYSTEM:

The existing system of conducting exams mainly relies on traditional pen-and-paper methods or offline exam setups. In this conventional setup, students appear for exams in physical locations where they are monitored by invigilators. Some existing digital systems, such as Computer-Based Testing (CBT) platforms, attempt to modernize the process, but they still face limitations, such as:

- **Manual Grading:** Traditional exams often require manual grading, which can lead to delays in result declaration and errors.
- **Limited Accessibility:** The system requires physical presence, and the accessibility for remote students is often restricted.
- **Security Concerns:** Cheating, proxy attendance, and paper leaks are issues that still affect the integrity of the examination process.
- **Logistical Challenges:** Organizing and managing large-scale examinations can be time-consuming and costly in terms of paper, invigilators, and venues.
- **Inefficient Result Processing:** The process of calculating scores and providing feedback is slow and lacks automation, requiring significant manual effort.

PROPOSED SYSTEM:

The proposed **Online Examination System** aims to address the shortcomings of traditional and existing online exam setups by offering a secure, scalable, and automated solution. The key features of the proposed system include:

- **Automation:** Immediate, automated grading and result processing.
- **Security:** Advanced authentication and anti-cheating features (e.g., AI monitoring).
- **Scalability:** Cloud-based for easy access on various devices.
- **Monitoring:** Real-time exam monitoring by administrators.
- **Analytics:** Detailed performance reports for educators.
- **User Interface:** Simple, accessible UI for both students and administrators.

LITERATURE REVIEW:

A literature review was conducted to assess the current state of online examination systems, focusing on their strengths, weaknesses, and the potential for improvement. The following key areas were explored:

- **User Experience:** Need for accessible and user-friendly systems for all students.
- **Best Practices:** Successful platforms use AI proctoring, secure authentication, and automated grading.
- **Automated Result Processing:** Speeds up grading, ensures accuracy, and provides instant feedback.

SYSTEM REQUIREMENTS:

The **Online Examination System** requires both hardware and software components to function effectively. Below are the requirements for the system

HARDWARE REQUIREMENTS:

1. **Client Devices:**
 - **Students:** Laptops, desktops, tablets, or mobile devices with internet access.
 - **Admin:** Computers with higher performance to manage exams, results, and analytics.
2. **Networking:**
 - Reliable and fast internet connection
 - Network infrastructure to support multiple concurrent users.
3. **Testing Devices:**
 - Devices for students to take exams (laptops, desktops, smartphones).
 - Devices for administrators for exam setup, result processing, and user management.

SOFTWARE REQUIREMENTS:

1. **Programming Languages:**
 - a. **Frontend:** HTML, CSS, JavaScript (for the user interface).
 - b. **Backend:** Java, PHP, or Python (for server-side logic and processing).
2. **Browser Compatibility:**
 - a. Compatible with modern browsers such as **Google Chrome**, **Mozilla Firefox**, and **Microsoft Edge**.

SYSTEM DESIGN:

The **System Design** of the Online Examination System focuses on the overall structure, data flow, and interaction between the system's components. It aims to provide an efficient, secure, and user-friendly platform for both students and administrators.

Admin Side:

- Create and manage user accounts for students and instructors.

- Design and schedule exams.
- View exam results and generate reports.

Student Side:

- Register and log into the system.
- Take online exams with real-time timers and automatic submission.
- View results and feedback after completing the exam.

MODULES OF THE SYSTEM:

The Online Examination System consists of several core modules:

1. User Authentication and Authorization Module:

- **Purpose:** Manages user registration, login, and role-based access (students, administrators).
- **Features:**
 - User registration and login (with 2FA for security).
 - Role management (admin, student).
 - Password reset functionality.

2. Exam Management Module:

- **Purpose:** Allows administrators to create, manage, and schedule exams.
- **Features:**
 - Creation of exams with MCQs or other types of questions.
 - Setting time limits and exam duration.
 - Question bank management.
 - Scheduling and assigning exams to students.

3. Examination Module:

- **Purpose:** Provides the interface for students to take exams.
- **Features:**
 - Displaying questions (MCQs, short answers).
 - Time tracking and countdown.
 - Submission of exams.
 - Real-time monitoring and alerting for suspicious activities.

4. Grading and Result Processing Module:

- **Purpose:** Automatically grades exams and generates results.
- **Features:**
 - Automatic grading for MCQs
 - Generation of results

RESULT:

ONLINE EXAMINATION

Request OTP

Welcome!
Kindly please log in to continue.

ONLINE EXAMINATION

Exam is about 45 Multiple choice questions, carries a total of 45M

LEVEL 1
(no negative marks)
total questions = 15
total marks = 15x1=15M
Most of the questions are almost easier in Level-1
Start LEVEL 1

LEVEL 2
(-0.5 for wrong answer).
total questions = 15
total marks = 15x1=15M
Most of the questions are Moderate in Level-2
Start LEVEL 2

LEVEL 3
(-1 for wrong answer).
total questions = 15
total marks = 15x1=15M
Most of the questions are harder than previous levels.
Start LEVEL 3

Important Instructions:

- Do not open other tabs or windows during the exam.
- Ensure you have a stable internet connection throughout the quiz.
- You have 20 minutes to complete the exam. The timer will start once you click "Start Exam".
- The quiz will automatically submit when the timer runs out.
- Once the quiz is submitted, your score will be displayed.
- Attempt all questions. There is only one correct answer per question.
- No external help is allowed. Please rely only on your knowledge.
- If you face any issues, do not refresh the page. Contact the administrator if necessary.
- You cannot change your answers once submitted, so double-check before submitting.
- Good luck! Stay calm and do your best!

☐ I have read and agree to the instructions above.

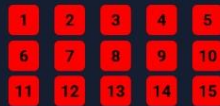


Red box: Indicates an unattempted question.

Green box: Indicates an attempted question.

Java Programming Test

Questions



Time left: 18:53

1. What is Java?

- Programming Language
- Coffee
- Operating System
- Tool

Previous

Next

Submit

Python Programming Test

Questions

| | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |

Time left: 19:57

1. What is Python?

- ☐ Programming Language
- ☐ Snake
- ☐ Fruit
- ☐ Game

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Submit

Data Structures Test

Questions

| | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |

Time left: 19:58

1. Which data structure follows the LIFO principle?

- ☐ Queue
- ☐ Stack
- ☐ Array
- ☐ Graph

Previous

Next

Submit

Your Exam Was Successfully Completed!

Thank you for participating in our Programming Quiz.

Close the Window

CONCLUSION:

The Online Examination System is a modern solution to the limitations of traditional exams, offering automation, enhanced security, and accessibility. By automating grading, using AI-based monitoring, and providing real-time result processing, it improves efficiency for both students and administrators. Its scalable cloud-based architecture ensures support for large-scale exams, making it a reliable and secure platform for educational institutions and other exam bodies.

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2. Patil, S. S., et al. "Design and implementation of an online examination system." *Int. J. of Engg. Research and Applications*, 2013.

