

## **Project Report**

**Of**

**Online Quiz**

**Submitted To:**

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## Problem Statement

There is a growing need for a system that simplifies the quiz-taking process while ensuring fair evaluation and user-friendly access. The current manual or semi-automated systems are inefficient, lack real-time feedback, and may not support features like random question generation, time tracking, or performance analytics.

This project aims to solve the following problems:

- Lack of automated quiz generation and evaluation.
- Inefficiency in managing questions and answers.
- Absence of instant result feedback for quiz takers.
- No support for randomization, time tracking, and session management.

## Abstract

The **Online Quiz Solver** is a web-based application developed using **Java (Servlets & JSP)** aimed at simplifying the process of conducting, solving, and evaluating quizzes in real-time. In traditional methods, quiz management often requires manual effort, is time-consuming, and lacks instant feedback. This system overcomes these limitations by offering a user-friendly platform for both students and administrators.

The system allows **students** to register, log in, and attempt quizzes within a given time limit. Questions are randomly selected from a database to ensure uniqueness for each attempt. Upon submission, the answers are automatically evaluated, and the score is instantly displayed, giving users immediate feedback on their performance.

On the other hand, **administrators** can manage the quiz content by adding, editing, or removing questions and viewing detailed analytics of student performances. The application uses **JDBC** for database connectivity and **MySQL** to store user data, questions, and results securely.

The project ensures a responsive, secure, and scalable solution suitable for educational institutions and e-learning platforms. Features such as **session management**, **question randomization**, and **auto-evaluation** make this tool an efficient alternative to conventional quiz systems.

## Introduction

In the digital age, online assessments have become an essential part of educational and training systems. Quizzes are widely used to evaluate the understanding of learners across various subjects. However, manual quiz systems are often inefficient, lacking flexibility, instant feedback, and scalability. To overcome these challenges, the **Online Quiz Solver** is designed as a dynamic and interactive web application using **Java Servlets, JSP, and JDBC**.

This system provides an intuitive platform where users can attempt a quiz consisting of **10 multiple-choice questions**, each with a **15-second time limit**. The timer ensures time-bound participation, making. Once the

time for a question elapses, the system automatically moves to the next question, preventing delays and ensuring fair assessment.

The application includes **automated scoring**, **random question selection**, and **immediate result display**. Administrators can manage the question bank and monitor user performance through the backend. All user data, questions, and results are securely stored in a **MySQL database**, with **JDBC** used for interaction between the application and the database.

The project aims to deliver a fast, secure, and user-friendly solution for conducting online quizzes with real-time constraints, making it ideal for schools, colleges, and online learning platforms.

## Objectives

1. Build a web-based quiz platform using **Java (Servlets/JSP)**.
2. Store questions and answers in a **MySQL database** using **JDBC**.
3. Enable users (students) to:
  - Register/Login
  - Take quizzes
  - Receive automatic evaluation and results
4. Enable admins to:
  - Add, update, or delete quiz questions
  - View quiz results and analytics
5. Implement features such as:
  - Random question selection
  - Timer for each quiz
  - Score calculation and result display
  - Session tracking

## System Design and Architecture

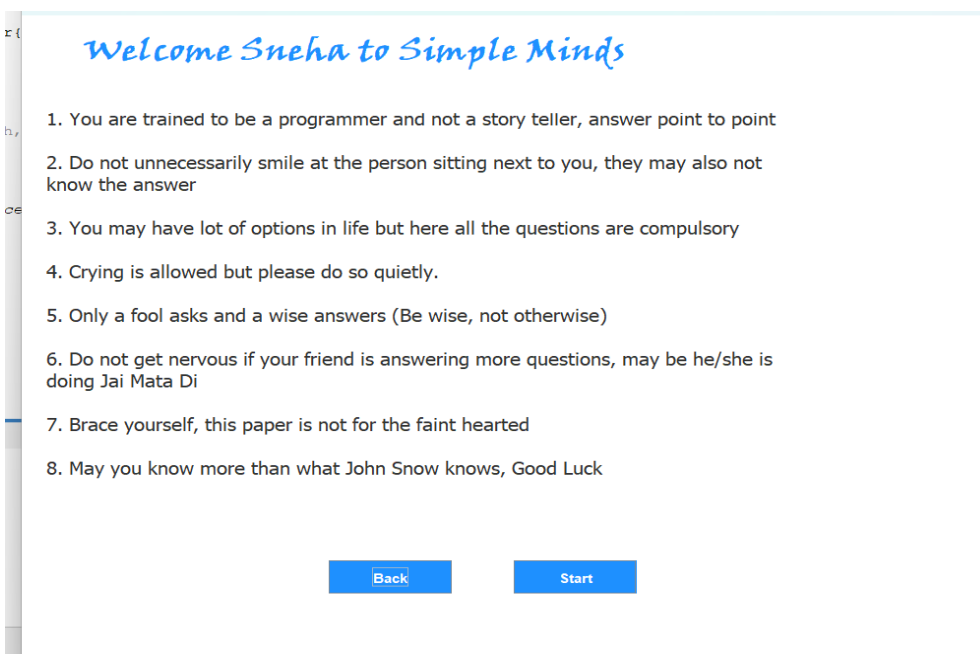
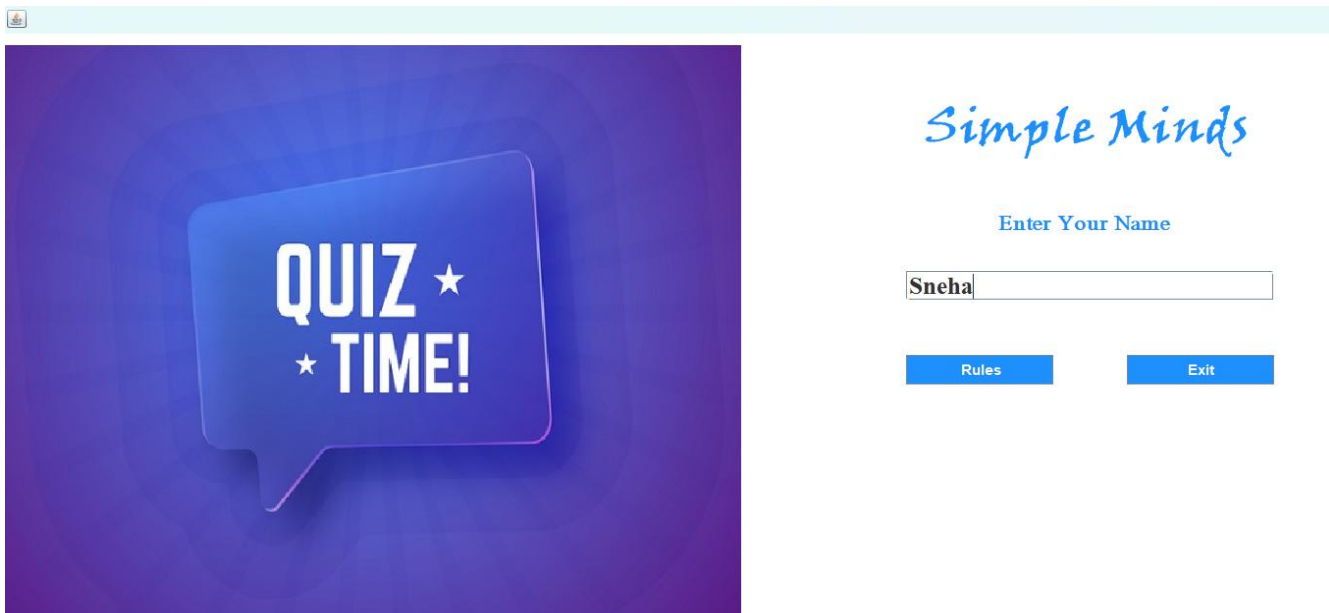
- **Presentation Layer (Front-End)**
- **Business Logic Layer (Application)**
- **Data Access Layer (Database)**

## Technology Stack

- Java (Servlets, JSP)
- JDBC for database operations

- HTML, CSS, JavaScript (for front-end)
- Apache Tomcat (as web server)

## Screenshots





1. Which is used to find and fix bugs in the Java programs.?

**Time Left - 4 seconds**

- ☒ JVM
- ☐ JDB
- ☐ JDK
- ☐ JRE

Next

50-50 Lifeline

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