

# **QuizWhiz – Online Quiz Portal**

## **Major Project - Proposal**

### **CS 816: Software Production Engineering**

*Guided By*

**B. Thangaraju**  
**Professor**

**International Institute of Information Technology, Bangalore**



**International Institute of Information Technology,  
Bangalore**

*Created by:*

**Vraj Jatin Naik**  
**MT2023050**  
**Vraj.Naik@iiitb.ac.in**

**Arjun Gangani**  
**MT2023153**  
**Arjun.Gangani@iiitb.ac.in**

# TABLE OF CONTENTS

<b>1</b>	<b>PROBLEM STATEMENT.....</b>	<b>1</b>
<b>2</b>	<b>APPLICATION FEATURE.....</b>	<b>2</b>
<b>3</b>	<b>TOOL STACK.....</b>	<b>5</b>

# 1 PROBLEM STATEMENT

Traditional methods of administering quizzes and exams in educational institutions lack efficiency and responsiveness, often characterized by manual processes and outdated assessment methods. Existing online quiz portals may not adequately address the needs of educational institutions, leading to challenges in exam management, assessment, and scalability. Furthermore, there is a growing demand for platforms that can accommodate user feedback and updates in a timely manner.

The project "QuizWhiz" aims to address these challenges by developing an online quiz portal tailored for educational institutions. The primary objective is to implement a typical DevOps pipeline to enhance frequent deliverables and responsiveness to user feedback. By leveraging DevOps methodologies, QuizWhiz seeks to streamline exam management processes, improve assessment methods, and ensure scalability and reliability. This initiative aims to revolutionize the assessment process in educational settings by providing a user-friendly and efficient platform for conducting quizzes and exams.

## 2 APPLICATION FEATURE

- **Roles:**

1. **Student:**

Role Description: Students are users who primarily take quizzes and view their own profiles.

2. **Faculty:**

Role Description: Faculty members are users responsible for creating and managing quizzes, as well as viewing their own profiles.

3. **Admin:**

Role Description: Administrators have the highest level of access and are responsible for managing users, including adding and removing students and faculty, as well as overseeing the overall system administration.

- **Role-wise Functionalities:**

1. **Student:**

- **Take Quiz:**

Description: Students can take quizzes assigned to them.

Actions:

- Start quiz
- Answer quiz questions
- Submit quiz

- **View Profile:**

Description: Students can view their personal details and quiz history.

Actions:

- View personal details
- View quiz history

- **Reset Password:**

Description: Students can reset their passwords if forgotten.

Actions:

- Request password reset
- Set new password

## **2. Faculty:**

- **Create Quiz:**

Description: Faculty members can create new quizzes and add questions to them.

Actions:

- Create new quizzes
- Add questions to quizzes

- **Update Quiz:**

Description: Faculty members can update existing quizzes, including adding or removing questions.

Actions:

- Edit existing quizzes
- Add or remove questions from quizzes

- **Manage Quizzes:**

Description: Faculty can view and manage quizzes created by them, including assigning quizzes to students and viewing quiz results.

Actions:

- View quizzes
- View quiz results

- **View Profile:**

Description: Faculty members can view their personal details and quiz creation history.

Actions:

- View personal details
- View quiz creation history

- **Reset Password:**

Description: Faculty members can reset their passwords if forgotten.

Actions:

- Request password reset
- Set new password

### **3. Admin:**

- **Manage Users:**

Description: Admins can add, view, edit, and remove users (both students and faculty) from the system.

Actions:

- Add new users
- View user profiles
- Edit user profiles
- Delete user accounts

- **Manage Quizzes:**

Description: Admins can view and manage quizzes, including assigning quizzes to students and viewing quiz results.

Actions:

- View all quizzes
- View all quiz results

- **System Administration:**

Description: Admins oversee the overall system administration, ensuring its smooth operation and handling any technical issues.

Actions:

- Handle system configurations
- Perform maintenance tasks
- Address technical issues and escalations

## 3 TOOL STACK

### Front End:

- React JS

### Back End:

#### ➤ Frame Work:

- Spring Boot

#### ➤ Database:

- MySQL

### DevOps Tool:

- **GitHub:** Version control and collaboration
- **Jenkins:** Automation for building, testing, and deployment
- **Docker:** Containerization for application management
- **Ansible:** Automation for configuration and deployment
- **ELK Stack:** Log management and analysis