# UNIVERSITY INSTITUE OF ENGINEERING AND TECHNOLOGY, KURUKSHETA



**TEST PALLETE**

A PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THEDEGREE OF BACHELOR OF ENGINEERING AND TECHNOLOGY

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# ABSTRACT

**The "Mock Test for Competitive Exams" project is a comprehensive initiative designed to simulate real examination scenarios, providing candidates with a valuable tool to assess their preparedness for competitive assessments. The primary objective of this project is to offer a platform that mirrors the format, difficulty level, and time constraints of actual competitive exams, allowing candidates to familiarize themselves with the examination environment. The mock test comprises a diverse range of questions covering various subjects, enabling candidates to evaluate their proficiency in key areas such as mathematics, science, language, and general knowledge.**

**The mock test interface is intuitively designed to replicate the user experience of a genuine examination, fostering a sense of readiness and confidence in candidates. It includes features such as a timer to simulate the strict time constraints of competitive exams, randomized question order, and an interactive scoring system for immediate feedback. Additionally, the project incorporates adaptive testing methodologies to tailor the difficulty level of questions based on the candidate's performance, providing a personalized and challenging testing experience.**

**The scalability and extensibility of the mock test platform allow for the inclusion of a vast question bank, ensuring a diverse set of questions for each attempt. Moreover, the project emphasizes data security and privacy, implementing robust measures to safeguard candidate information and maintain the integrity of the testing process.**

**By offering a realistic and dynamic simulation of competitive exams, the Mock Test for Competitive Exams project aims to empower candidates with the tools needed to identify strengths and weaknesses, refine time management skills, and ultimately enhance their chances of success in the highly competitive examination landscape. The project's success is measured through candidate feedback, performance analytics, and its impact on candidates' overall examination preparedness.**

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# INTRODUCTION

The "Mock Test for Competitive Exams" project emerges as a pivotal initiative, strategically crafted to address the pressing needs of aspirants preparing for competitive examinations. As the academic and professional landscape becomes increasingly competitive, the significance of well-structured preparatory tools cannot be overstated. This project serves as a dynamic and adaptive platform, meticulously designed to replicate the challenges and rigor of actual competitive exams. Its inception is rooted in the recognition that effective preparation involves more than just acquiring knowledge; it necessitates a comprehensive understanding of the examination environment, time constraints, and question dynamics. Through the amalgamation of innovative technology and educational expertise, this project endeavors to provide candidates with an immersive and realistic testing experience. The mock test not only assesses knowledge across diverse subjects but also integrates features like adaptive testing, randomized question order, and a time-bound interface, closely mirroring the conditions candidates will face on examination day. This introduction sets the stage for an exploration into a project poised to revolutionize the way candidates approach and succeed in competitive examinations, marking a significant leap towards informed preparedness and increased confidence amongaspirants.

# FEATURES :

### One-Time Login :

The "Mock Test for Competitive Exams" project ensures user convenience with its easy and one-time login features. Streamlined login procedures enable swift access, while one-time logins enhance security, ensuring a focused and secure testing environment. This commitment to accessibility and safety underscores the project's dedication to candidate-centric exam preparation.

### Create New Account:

The "Mock Test for Competitive Exams" project prioritizes user-friendly account creation with a seamless and efficient process. Candidates can effortlessly register for a new account, ensuring a hassle-free entry into the mock test platform. This emphasis on easy account creation enhances accessibility and encourages a swift transition for candidates beginning their exam preparation journey.

### Interactive mock test view:

The "Mock Test for Competitive Exams" project revolutionizes exam preparation with its interactive mock test interface. Crafted for an immersive experience, the interface offers real-time feedback, randomized question orders, and a timer for simulated exam conditions. This dynamic platform adapts to users' performance, ensuring a personalized and engaging test environment.

# Advantages of MailCraft Pro:

### Realistic Exam Simulation:

The interactive mock test interface provides a realistic exam simulation by incorporating features like randomized question order, time constraints, and real-time feedback. This mirrors the actual testing conditions, allowing candidates to familiarize themselves with the format and challenges of competitive exams

### Personalized Learning experience:

The platform's adaptive testing methodologies create a personalized learning experience. By adjusting the difficulty level based on individual performance, candidates are presented with questions tailored to their proficiency, promoting continuous learning and targeted improvement.

### Enhanced engagement and focus:

Interactive elements, such as real-time feedback and a timer, keep candidates actively involved, fostering a more immersive and productive testing experience.

# Software Requirements:

### Java Development Kit (JDK):

* + Version: JDK 8
  + Description: Required for developing and executing Java Servlets and JSP pages.

### Apache Tomcat:

* + Version: Apache-Tomcat 8
  + Description: Web server used to deploy and execute Java Servlets and JSP pages.It handles HTTP requests and manages the Servlet lifecycle.

### MySQL Database:

* + Version: MySQL 8.0.3
  + Description: Relational database management system (RDBMS) used for storing and retrieving data related to user accounts, emails, and system configurations.

### HTML, CSS, JavaScript:

* + Description: Front-end technologies utilized for creating the user interface of the mailing portal. HTML for structuring, CSS for styling, and JavaScript for client-side interactions.

### Bootstrap Framework:

* + Version: Bootstrap 5.1
  + Description: Front-end framework for developing responsive and visually appealing web pages. Bootstrap is used to enhance the design and layout of the mailing portal.

### Integrated Development Environment (IDE):

* + Recommended: VISUAL STUDIO CODE
  + Description: An IDE for Java development, facilitating coding, debugging, and deployment of Servlets and JSP pages.

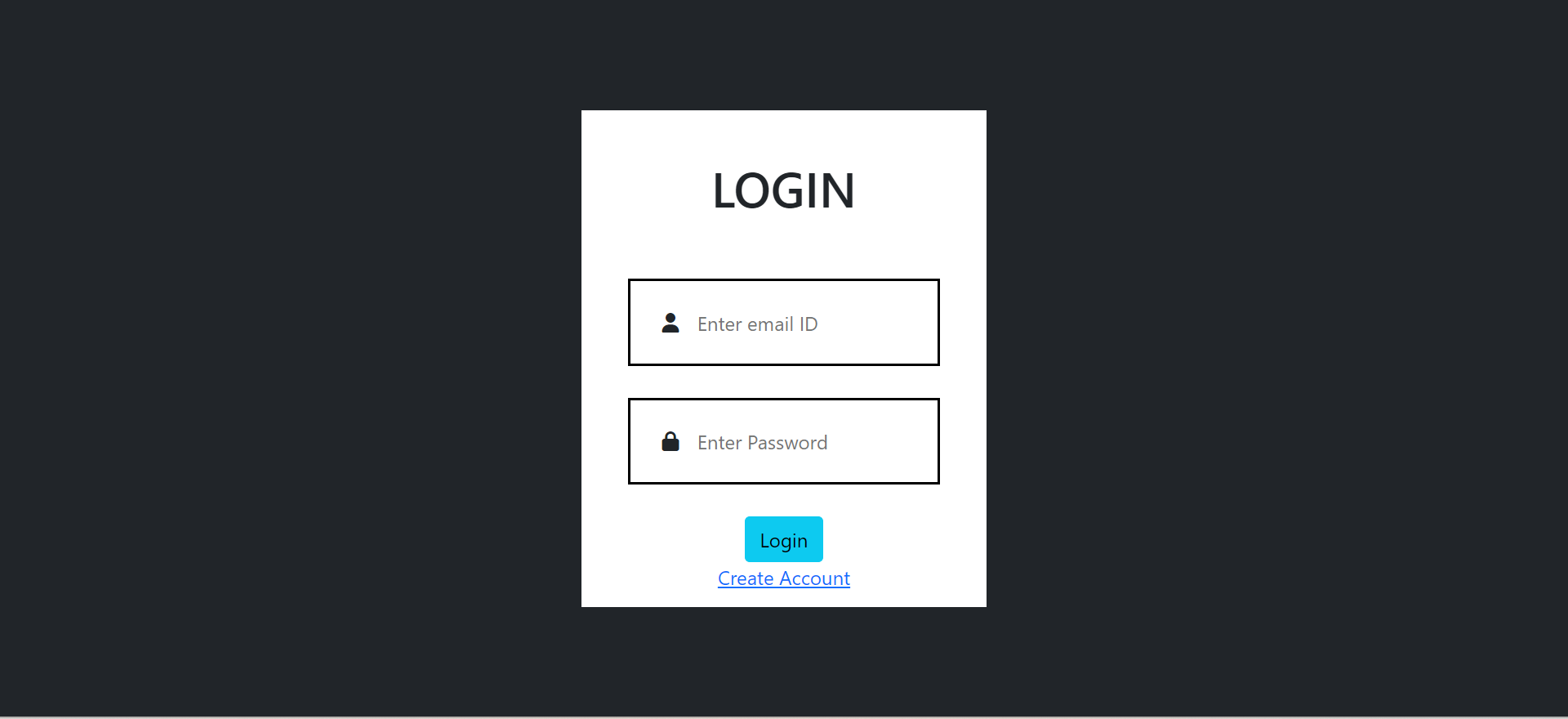
### Web Browser:

* + Recommended: Google Chrome, Microsoft Edge
  + Description: Web browsers for testing and interacting with the developed mailing portal.

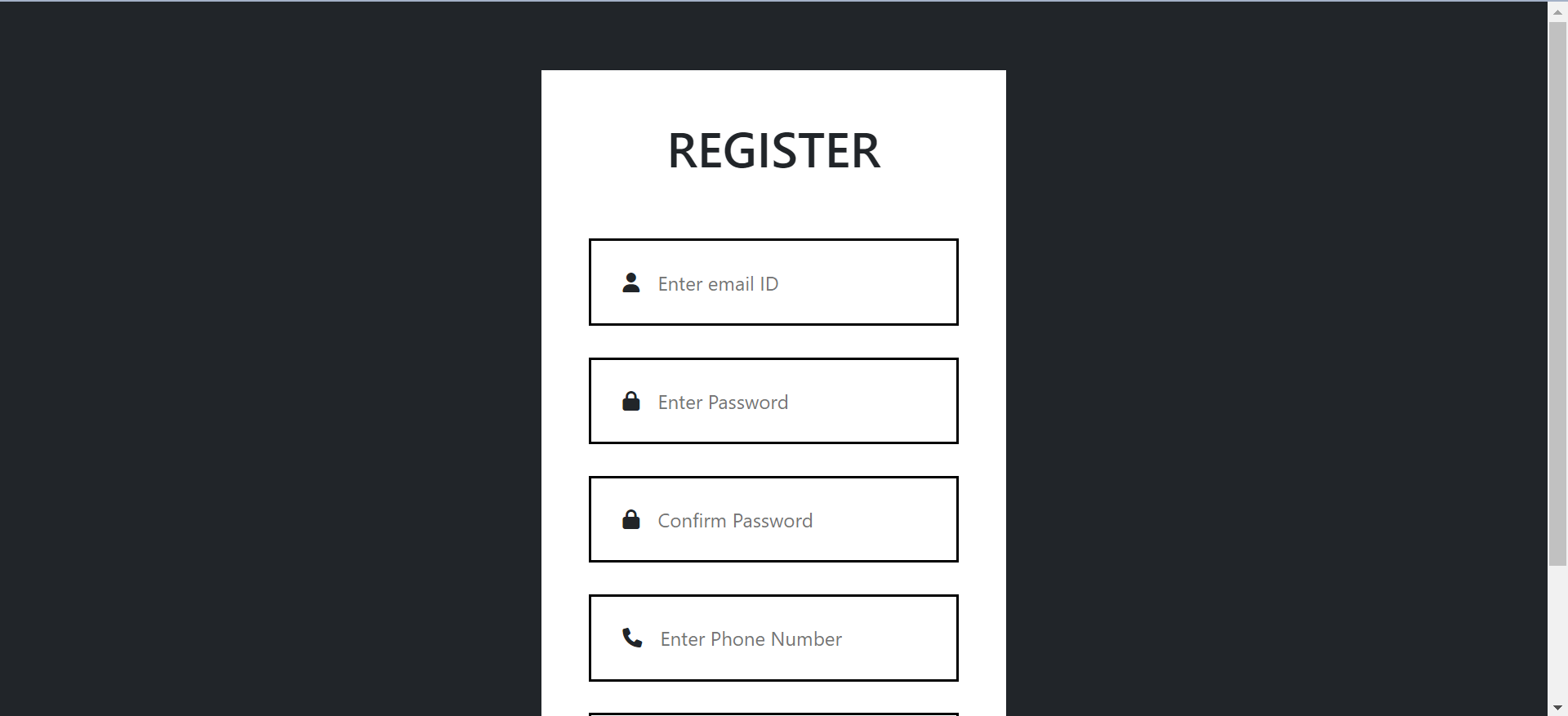
These software requirements ensure the compatibility and functionality of the developed mailing portal, supporting its deployment, execution, and maintenance throughout the development lifecycle.

# IMPLEMENTATION:

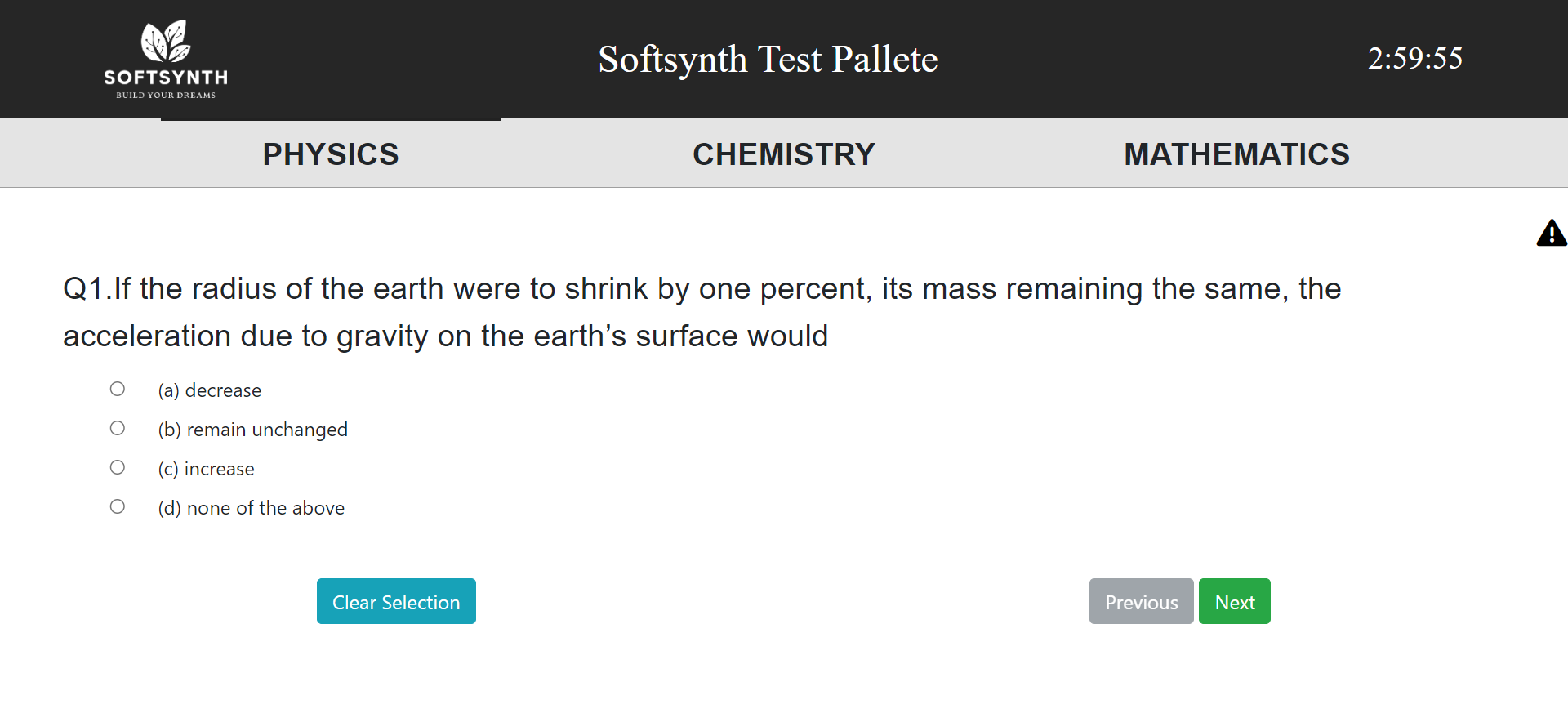
**Login Page :**

****

# New Regsitration Page :

****

**Mock Test Page:**

****

**SOURCE CODE:**

# Login JSP:

<%@ page import="connectionPack.DatabaseConnection,java.sql.\*,java.util.Date,thread.AppThread"%>

<%! DatabaseConnection db = new DatabaseConnection();

    public static int count=0;

    {

        Thread t = new Thread(new AppThread());

        t.start();

    }

%>

<%

    response.setContentType("text/html");

    String email = request.getParameter("email");

    String password = request.getParameter("pass");

    try{

        db.connect();

        db.ps = db.con.prepareStatement("select \* from userdetails where email = ?");

        db.ps.setString(1,email);

        db.rs = db.ps.executeQuery();

        if(db.rs.next()){

            session = request.getSession();

            if(db.rs.getBoolean("attempt")==false){

                if(!db.rs.getString(2).equals(password)){ %>

                    <div style='position: absolute;top: 35%;right: 43%;z-index: 9;'><b style='color: red;'>Wrong Password!</b></div>");

                 <% RequestDispatcher rd = request.getRequestDispatcher("index.jsp");

                    rd.include(request,response);

                }

                else{

                    db.ps = db.con.prepareStatement("update userdetails set attempt = ? where email = ? and password = ?;");

                    db.ps.setBoolean(1,true);

                    db.ps.setString(2,email);

                    db.ps.setString(3,password);

                    db.ps.executeUpdate();

                    application.setAttribute("count",++count);

                    RequestDispatcher rd = request.getRequestDispatcher("project.html");

                    rd.forward(request,response);

                }

            }

            else{

                RequestDispatcher rd = request.getRequestDispatcher("/showRefresh");

                rd.forward(request,response);

            }

        }

        else{%>

            <div style='position: absolute;top: 35%;right: 43%;z-index: 9;'><b style='color: red;'>Account does'nt exists!</b></div>"

            <% RequestDispatcher rd = request.getRequestDispatcher("index.jsp");

            rd.include(request,response);

        }

    }catch(SQLException e){

        out.print(e);

    }

    finally{

        db.looseConnect();

    }

%>

# NewUser Servlet:

package pack;

import connectionPack.DatabaseConnection;

import javax.servlet.\*;

import javax.servlet.http.\*;

import java.io.\*;

import java.sql.\*;

public class NewuserServlet extends HttpServlet{

DatabaseConnection db = new DatabaseConnection();

/\*Connection con = db.con;

PreparedStatement ps = db.ps;

ResultSet rs = db.rs;\*/

public void doPost(HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException{

/\*ServletContext ctx = getServletContext();\*/

res.setContentType("text/html");

PrintWriter p = res.getWriter();

String email = req.getParameter("email");

String pass = req.getParameter("pass");

String phone = req.getParameter("phone");

String address = req.getParameter("address");

try{

/\*Class.forName(ctx.getInitParameter("Driver"));

con = DriverManager.getConnection(ctx.getInitParameter("Database"),ctx.getInitParameter("Root"),ctx.getInitParameter("Password"));\*/

db.connect();

db.ps = db.con.prepareStatement("select \* from userdetails where email = ?");

db.ps.setString(1,email);

db.rs = db.ps.executeQuery();

if(db.rs.next()){

p.print("<div style='position: absolute; right: 43%; top: 23%; z-index: 9;'><b style='color:red;'>Account already exists!</b></div>");

RequestDispatcher rd= req.getRequestDispatcher("newUser.html");

rd.include(req,res);

}

else{

db.ps = db.con.prepareStatement("insert into userdetails values (?,?,?,?,?)");

db.ps.setString(1,email);

db.ps.setString(2,pass);

db.ps.setLong(3,Long.parseLong(phone));

db.ps.setString(4,address);

db.ps.setBoolean(5,false);

db.ps.executeUpdate();

res.sendRedirect("index.jsp");

}

}catch(SQLException e){

p.print(e);

}

}

}

# 

# CONCLUSION:

In conclusion, the "Mock Test for Competitive Exams" project stands as a pivotal tool in revolutionizing exam preparation. With its realistic and interactive mock test interface, the platform provides a dynamic and personalized learning experience. The adaptive testing, real-time feedback, and comprehensive subject coverage contribute to a holistic skill assessment. Aspirants benefit from a simulated exam environment that not only mirrors real conditions but also enhances engagement. Ultimately, this project empowers candidates with a robust and effective means of refining their skills and boosting their confidence for success in competitive examinations.

**Future Scope:**

Looking ahead, the "Mock Test for Competitive Exams" project holds significant potential for future enhancements and expansions. Further development could involve the integration of advanced analytics to provide in-depth performance insights, allowing candidates to identify specific areas for improvement. Collaboration with educational institutions and partnerships with renowned exam boards could broaden the platform's reach. Additionally, continuous updates to incorporate emerging technologies and adaptive learning methodologies would ensure the project remains at the forefront of revolutionizing exam preparation, catering to evolving educational landscapes and the diverse needs of aspiring candidates.