

Web Application for Online Exam

Augment Experiment submitted in partial fulfilment of the requirement of the course.

JAVA in Web Technologies

Submitted

By

Names:

S.V.Sai Poojitha

Jntu no:

21341A05G1

Under the esteemed guidance of

Mr.S.Vinodkumar

Assistant Professor

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

GMR INSTITUTE OF TECHNOLOGY

An Autonomous Institute Affiliated to JNTUK,Kakinada

(Accredited by NBA, NAAC with 'A' Grade & ISO 9001:2008 Certified Institution)

GMR Nagar, Rajam – 532 127,Srikakulam,Andhra Pradesh, India.

(Academic Year 2021-2022)

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. The main objective of our software is to efficiently evaluate the candidate thoroughly through a fully automated system there is no need of paper and pen. The user can write exam without going to the exam centre. Also the website will provide a good.

Keywords: Online Exam, Offline Exam, Efficiency, Accuracy, Assessment

INTRODUCTION:

The online examination system has ushered a revolution in how examinations are being conducted traditionally. The online exam advantages are multifold, especially with the ongoing pandemic impacting the global education landscape. Online exams have ensured educational continuity, providing the option of taking an exam remotely in a secure virtual environment using the latest technology. There are several benefits of an online examination system as it is conducted digitally to evaluate students' academic knowledge and understanding of the curriculum. It also offers creativity to devise new ideas and solutions. Typically, evaluations continue to be based on the pen-and-paper approach, wherein students are gathered and handed the question paper to be completed within the allotted time. Students submit their answer sheets, and examiners disclose their scores after the evaluation.

There are immense benefits of an online examination system. While the traditional methodology persists, but, instead of an examination center, students log onto an online system to take the test and share their responses. The assessor evaluates and circulates the test results.

Advantages of online exam

Online examination will reduce the hectic job of assessing the answers given by the candidates manually

- Being an integrated Online examination system it will reduce paper work
- To allow faculty to give additional time to students with disabilities.
- To allow faculty to create tests and answer key.
- To allow automatic grading and manual grading which can be recorded per test.
- Random generation of test question Timed exams

The result will be shown immediately to the participating students.

•The project allows faculties to create their own tests. It would enable educational institutes to perform tests, quiz and create feedback forms. The whole process of assigning test and evaluating their scores after the test, was done manually till date. Processing the test paper i.e. checking and distributing respective scores used to take time when the software was not installed.

Disadvantages of Current Exam System

- The current system is very time consuming.
- To take exam of more candidates more invigilators are required but no need of invigilator in case of online examination.
- The chances of paper leakage are more in current system as compared to proposed system.
- Result processing takes more time as it is done manually.

The online test created for taking online test has following features.

- In comparison to the present system the proposed system will be less time consuming and is more efficient.
- Result will be very precise and accurate and will be declared in very short span of time because calculation and evaluations are done by the simulator itself.
- The proposed system is very secure as no chances of leakage of question paper as it is dependent on the administrator only.
- The logs of appeared candidates and their marks are stored and can be backup for future use

EXPERIMENTAL SETUP

SOFTWARE REQUIREMENTS:

- Browser : Chrome
- Softwares : Eclipse ide, Tomcat Server.
- DataBase : MY SQL Server.
- Languages : JSP, Java, CSS, Servlets.

Home page.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>home page</title>
<link rel="stylesheet" href="homepage.css">
</head>
<body>
<ul class="first">

<br><li><br>Home</li><br><br>
<li><a href="register.jsp" ><br>Register</a></li><br><br>
<li><a href="login.jsp"><br>login</a></li></ul>
<div style="position:relative; top:80px; left:2px; font-size:60px;" >Online
Examination</div><br>
<div style="position:relative; top:80px;left:300px; font-size:18px;">(One
Destination For Complete Preparation!!)</p>
</body>
</html>
```

Homepage.css

```
@charset "UTF-8";
body{
    color:black;
    background-image: url("https://img.freepik.com/free-photo/hand-
writing-paper-with-pen_1232-
1344.jpg?w=996&t=st=1686247743~exp=1686248343~hmac=280aa1d8951f8ceae31b47a3a3265ad
7ec607c997e469791ac38cb3f2dba4868");
    background-size:cover;
    background-repeat:no-repeat;

}

.first{
    list-style-type:none;
    background:transparent;
}
ul li a{
    color:black;
    text-align:center;
    text-decoration:none;
}
p{
    color:pink;
}
```

Home Page



Login.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8" %>
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="login.css">
<style>
    label {
        display: block;
        margin-bottom: 5px;
    }

    input[type="text"],
    input[type="password"] {
        width: 200px;
        padding: 5px;
        border: 1px solid #ccc;
        border-radius: 4px;
        box-sizing: border-box;
        margin-bottom: 10px;
    }

    input[type="submit"] {
        padding: 10px 20px;
        background-color: rgba(0,31,26,0.36);
        color: white;
        border: none;
        border-radius: 4px;
        cursor: pointer;
    }
}
```

```
        input[type="submit"]:hover {
            background-color: #45a049;
        }
    </style>
</head>
<body>
    <script>

    </script>
<center><br><br><br><br><br><br>
    <form action=LoginExam method=post onsubmit="return validateForm()">
    <h1>User Login</h1>
    <label for="uname">Username:</label>
    <input type="text" id="uname" name="uname" required>

    <label for="pwd">Password:</label>
    <input type="password" id="pwd" name="pwd" required><br><br>

    <input type="submit" value="Submit">
    </form>
</center>
</body>
</html>
```

Login.css

```
@charset "UTF-8";
body{
    color:black;
    background-image:
url("https://t3.ftcdn.net/jpg/03/55/60/70/240_F_355607062_zYMS8jaz4SfoypkPwz5oViRVK
L32IabTP.jpg");
    background-size:cover;
    background-repeat:no-repeat;

}
```

Loginexam.java

```
package cscorner;
```

```
import java.io.IOException;
```

```
import java.io.PrintWriter;
```

```
import java.sql.Connection;
```

```
import java.sql.DriverManager;
```

```
import java.sql.PreparedStatement;
```

```
import java.sql.ResultSet;
```

```
import java.sql.SQLException;
```

```
import jakarta.servlet.RequestDispatcher;

import jakarta.servlet.ServletException;

import jakarta.servlet.http.HttpServlet;

import jakarta.servlet.http.HttpServletRequest;

import jakarta.servlet.http.HttpServletResponse;


/**
 * Servlet implementation class LoginServelet
 */
public class LoginExam extends HttpServlet {

    private static final long serialVersionUID = 1L;


    protected void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException {

        try {

            PrintWriter out=response.getWriter();

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/saipoojitha","root","
saipoojitha1906");

            String n=request.getParameter("uname");

            String p=request.getParameter("pwd");

            PreparedStatement ps=con.prepareStatement("select uname from
registrations where uname=? and pwd=?");

            ps.setString(1, n);

            ps.setString(2, p);

            ResultSet rs=ps.executeQuery();

            if(rs.next()) {

                RequestDispatcher
rd=request.getRequestDispatcher("test.jsp");
```

```
rd.forward(request, response);

    }

    else {

        out.println("<font color size=18>LOGIN  
FAILED!!<br><br><br>");

        out.println("<a href=login.jsp>Please try again!!</a>");

    }

} catch (ClassNotFoundException e) {

    e.printStackTrace();

} catch (SQLException e) {

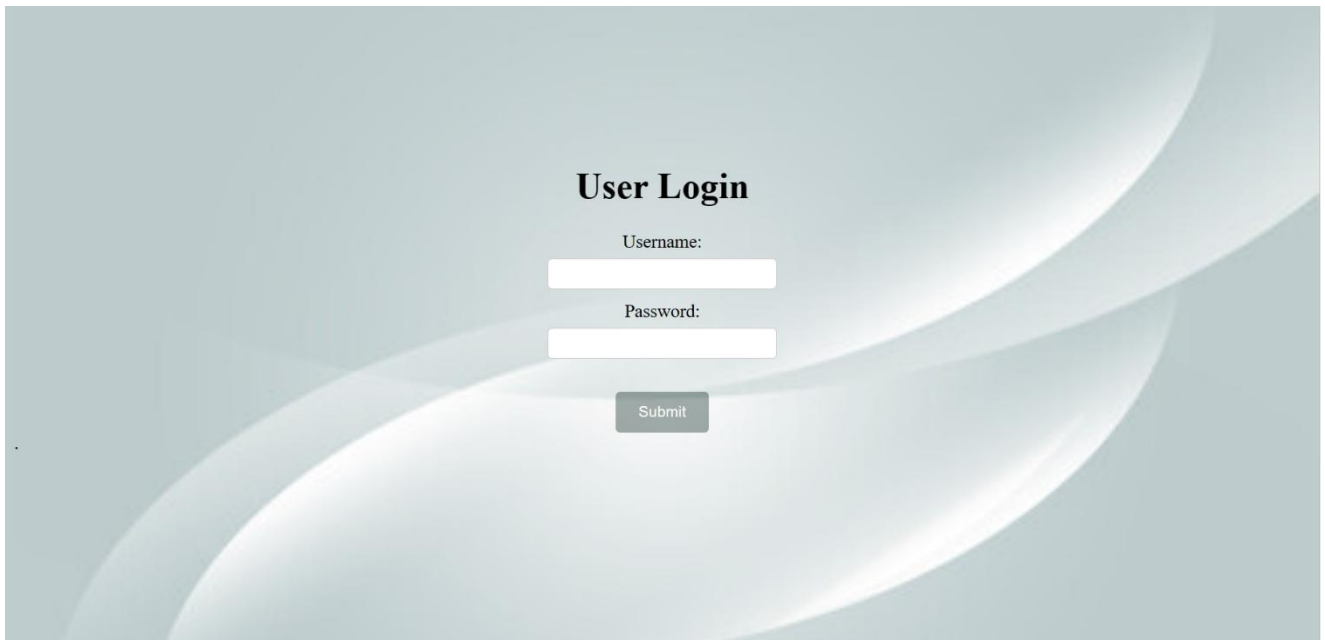
    e.printStackTrace();

}

}

}
```

Login Page

A screenshot of a web page titled "User Login". The page has a light blue background with a subtle wave pattern. In the center, there is a white rectangular box containing the login form. The form has two input fields: "Username:" and "Password:". Below the "Password:" field is a grey "Submit" button. The text "User Login" is centered above the input fields in a bold, black font.

Register.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
```



```
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
<link rel="stylesheet" href="register.css">
<script>
function validateForm() {
    var name = document.getElementById("name").value;
    var uname = document.getElementById("uname").value;
    var pwd = document.getElementById("pwd").value;
    var pwd1 = document.getElementById("pwd1").value;
    var course = document.getElementById("course").value;
    var gender = document.querySelector('input[name="gender-choice"]:checked');
    var mail = document.getElementById("mail").value;
    var abc=true;
    if (name === "") {
        alert("Please enter your name.");
        abc=false;
    }

    if (pwd === "" || pwd1 === "") {
        alert("Please enter a password and re-enter the password.");
        abc=false;
    }

    if (pwd !== pwd1) {
        alert("Passwords do not match.");
        abc=false;
    }

    if (course === "course") {
        alert("Please select a course.");
        abc=false;
    }

    if (!gender) {
        alert("Please select your gender.");
        abc=false;
    }

    if (mail === "") {
        alert("Please enter your email.");
        abc=false;
    }
    if(abc==true){
        alert("You have successfully registered for the exam.");
    }
    return abc;
}
</script>
</head>
<body>
<div class="a"><h1>Registration Form</h1></div>
<form action="RegisterExam" method="post" onsubmit="return validateForm()">
    <label for="name">Name:</label><br>
    <input type="text" id="name" name="name" required><br><br>
    <label for="uname">Username:</label><br>
    <input type="text" id="uname" name="uname"><br><br>
    <label for="pwd">Password:</label><br>
    <input type="password" id="pwd" name="pwd" required><br><br>
    <label for="pwd1">Re-enter password:</label><br>
    <input type="password" id="pwd1" name="pwd1" required><br><br>
    <label>Course:</label>
```

```
<select id="course" name="course">
  <option value="course">Courses</option>
  <option value="cse">CSE</option>
  <option value="ece">ECE</option>
  <option value="IT">IT</option>
  <option value="mech">MECH</option>
  <option value="eee">EEE</option>
  <option value="chem">CHEM</option>
</select><br><br>
<div>Gender:<br>
  <input type="radio" name="gender-choice" value="male" id="male">
  <label for="male">Male</label>

  <input type="radio" name="gender-choice" value="female" id="female">
  <label for="female">Female</label>

  <input type="radio" name="gender-choice" value="other" id="other">
  <label for="other">Other</label><br><br>
</div>
<label for="mail">Email:</label><br>
<input type="email" id="mail" name="mail" required><br><br>
<input type="submit" value="submit">
```

Register.css

```
@charset "UTF-8";
body{
    color:black;
    background-image:
url("https://t3.ftcdn.net/jpg/02/68/02/66/240_F_268026635_2FNvc7ph81MYygWcr1sF9LnDfB4bSYhK.jpg");
    background-size:cover;
    padding:5px 10px 10px 700px;
}
form{
    border:2px solid black;
    padding:10px 10px 10px 20px;
}
```

RegisterExam.java

```
package cscorner;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
```

```

public class RegisterExam extends HttpServlet {
    private static final long serialVersionUID = 1L;


    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {

        try {
            PrintWriter out=response.getWriter();
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/saipoojitha","root","saipoojitha1906
");

            String n=request.getParameter("name");
            String p=request.getParameter("uname");
            String p1=request.getParameter("pwd");
            String p2=request.getParameter("pwd1");
            String p3=request.getParameter("mail");
            Statement ps=con.createStatement();
            int i=ps.executeUpdate("insert into
registrations(name,uname,pwd,pwd1,mail)values('"+n+"','"+p+"','"+p1+"','"+p2+"','"+p3+"')");
            response.sendRedirect("homepage.jsp");
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}

```

Registration



Registration Form

Name:

Username:

Password:

Re-enter password:

Course:

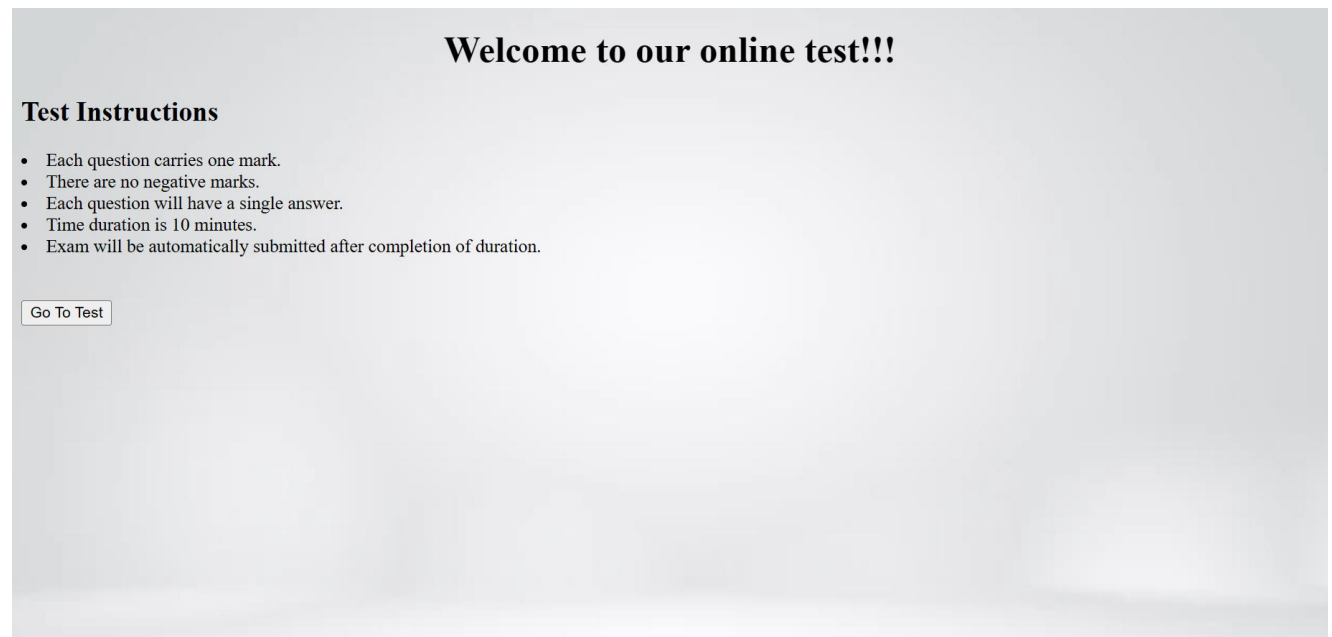
Gender:
☐ Male ☐ Female ☐ Other

Email:

TestInstruction.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>test</title>
<link rel="stylesheet" href="test.css">
</head>
<body>
<form action="exampaper.jsp" method="post">
<marquee direction="right"><h1>Welcome to our online test!!!</h1></marquee>
    <h2>Test Instructions</h2>
    <li>Each question carries one mark.</li>
    <li>There are no negative marks.</li>
    <li>Each question will have a single answer.</li>
    <li>Time duration is 10 minutes.</li>
    <li>Exam will be automatically submitted after completion of
duration.</li><br><br>
    <button >Go To Test</button>
</form>
</body>
</html>
```

Test Instructions



Exampaper.jsp

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title></title>
<link rel="stylesheet" href="exampaper.css">
</head>
```

```

<body>
<h1 align="center">WEB ONLINE EXAM</h1>
<form >
  <div>
    <p>1. What is the full form of AJAX?</p>
    <input type="radio" name="exam1-choice" value="choice-1">Asynchronous
JavaScript and XML<br>
    <input type="radio" name="exam1-choice" value="choice-2">Arithmetic
JavaScript and XML<br>
    <input type="radio" name="exam1-choice" value="choice-3">Asynchronous Java
and XML<br>
    <input type="radio" name="exam1-choice" value="choice-4">None<br>
  </div>
  <div>
    <p>2. What is React?</p>
    <input type="radio" name="exam2-choice" value="choice-2">Server-side
technology<br>
    <input type="radio" name="exam2-choice" value="choice-1">UI technology<br>
    <input type="radio" name="exam2-choice" value="choice-3">Both<br>
    <input type="radio" name="exam2-choice" value="choice-4">None<br>
  </div>
  <div>
    <p>3.which program is used by web clients to view the web pages?</p>
    <input type="radio" name="exam20-choice" value="choice-1">web browser<br>
    <input type="radio" name="exam20-choice" value="choice-2">protocol<br>
    <input type="radio" name="exam20-choice" value="choice-3">web server<br>
    <input type="radio" name="exam20-choice" value="choice-4">search
engine<br>
  </div>
  <div>
    <p>4.what is the name of the location address of hypertext documents?</p>
    <input type="radio" name="exam3-choice" value="choice-1">uniform resource
locator<br>
    <input type="radio" name="exam3-choice" value="choice-2">webserver<br>
    <input type="radio" name="exam3-choice" value="choice-3">file<br>
    <input type="radio" name="exam3-choice" value="choice-4">web address<br>
  </div>
  <div>
    <p>5.what are shared on internet and are called as web pages?</p>
    <input type="radio" name="exam4-choice" value="choice-3">programs<br>
    <input type="radio" name="exam4-choice" value="choice-2">cables<br>
    <input type="radio" name="exam4-choice" value="choice-1">hyper text
documents<br>
    <input type="radio" name="exam4-choice" value="choice-4">none<br>
  </div>
  <div>
    <p>6.CGI stands for?</p>
    <input type="radio" name="exam6-choice" value="choice-2">common gateway
internet<br>
    <input type="radio" name="exam6-choice" value="choice-1">common gateway
interface<br>
    <input type="radio" name="exam6-choice" value="choice-3">central gateway
interface<br>
    <input type="radio" name="exam6-choice" value="choice-4">none<br>
  </div>
  <div>
    <p>7._ is a collection of controls in html?</p>
    <input type="radio" name="exam7-choice" value="choice-1">form<br>
    <input type="radio" name="exam7-choice" value="choice-2">field<br>
    <input type="radio" name="exam7-choice" value="choice-3">table<br>
    <input type="radio" name="exam-choice" value="choice-4">frame<br>
  </div>

```

```
</div>
<div>
<p>8.html allows us to create 3 different kinds of _?</p>
<input type="radio" name="exam8-choice" value="choice-2">functions<br>
<input type="radio" name="exam8-choice" value="choice-3">events<br>
<input type="radio" name="exam8-choice" value="choice-4">files<br>
<input type="radio" name="exam8-choice" value="choice-1">lists<br>
</div>
<div>
<p>9._ files are more compact than GIF files?</p>
<input type="radio" name="exam9-choice" value="choice-1">.JPG and JPEG<br>
<input type="radio" name="exam9-choice" value="choice-2">.JPG<br>
<input type="radio" name="exam9-choice" value="choice-3">.JPEG<br>
<input type="radio" name="exam9-choice" value="choice-4">NONE<br>
</div>
<div>
<p>10.html allows us to use _ levels of headings?</p>
<input type="radio" name="exam10-choice" value="choice-2">2<br>
<input type="radio" name="exam10-choice" value="choice-3">3<br>
<input type="radio" name="exam10-choice" value="choice-4">5<br>
<input type="radio" name="exam10-choice" value="choice-1">6<br>
<center><input type="button" name="button" value="Submit"
onclick="calculateScore()"></center>
</div>
</form>
<div id="score" style="text-align: center; font-size: 24px;"></div>
<script>
    function calculateScore() {
        // Your scoring logic here
        var selectedAnswers =
document.querySelectorAll('input[type="radio"]:checked');
        var score = 0;

        selectedAnswers.forEach(function (selectedAnswer) {
            var selectedValue = selectedAnswer.value;
            if (selectedValue === "choice-1") {
                score++;
            }
        });
        alert("Your score is:"+score);

    }
</script>
</body>
</html>
```

ExamPaper

WEB ONLINE EXAM

1. What is the full form of AJAX?

- ☐ Asynchronous JavaScript and XML
- ☐ Arithmetic JavaScript and XML
- ☐ Asynchronous Java and XML
- ☐ None

2. What is React?

- ☐ Server-side technology
- ☐ UI technology
- ☐ Both
- ☐ None

3. which program is used by web clients to view the web pages?

- ☐ web browser
- ☐ protocol
- ☐ web server
- ☐ search engine

4. what is the name of the location address of hypertext documents?

- ☐ uniform resource locator
- ☐ webserver
- ☐ file

☐ none

7. _ is a collection of controls in html?

- ☒ form
- ☐ field
- ☐ table
- ☐ frame

8. html allows us to create 3 different kinds of _?

- ☐ functions
- ☐ events
- ☐ files
- ☒ lists

9. _ files are more compact than GIF files?

- ☐ .JPG and JPEG
- ☐ .JPG
- ☒ .JPEG
- ☐ NONE

10. html allows us to use _ levels of headings?

- ☐ 2
- ☐ 3
- ☐ 5
- ☒ 6

localhost:8082 says

Your score is:8

OK

Submit

SQL

```
MySQL 8.0 Command L x + v

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use saipoojitha;
Database changed
mysql> select * from registrations;
+-----+-----+-----+-----+-----+
| uname | name  | pwd  | pwd1 | mail                |
+-----+-----+-----+-----+-----+
| deepu  | deepthi | deepu123 | deepu123 | deep@gmail.com      |
| devi   | devi    | devi123 | devi123 | devi@gmail.com      |
| haari  | harika  | haari123 | haari123 | 21341A05G1@gmr.it.edu.in |
| haari11 | harika sambangi | haari1234 | haari1234 | 21341A05G1@gmr.it.edu.in |
| kiran  | saikiran | kiran123 | kiran123 | kiran@gmail.com      |
| kiran12 | kiran  | kiran12  | kiran12  | kiran@gmail.com      |
| kiran123 | kiran  | kiran45  | kiran45  | kiran@gmail.com      |
| krithi  | krithika | krithi123 | krithi123 | krithi@gmail.com     |
| nani    | nani    | 123456   | 123456   | nani123@gmail.com    |
| nith    | nithya  | nith123  | nith123  | nithya123@gmail.com  |
| pavan  | pavansai | pavan123 | pavan123 | pavan@gmail.com      |
| pavi    | pavithra | pavi123  | pavi123  | pavi@gmail.com       |
| pavii   | pavithra | pavil8   | pavil8   | pavi1803@gmail.com   |
| sai     | saipoojitha sambangi | pooji19 | pooji19 | 21341A05G1@gmr.it.edu.in |
| saipooji | saipoojitha | pooji193 | pooji193 | 21341A05G1@gmr.it.edu.in |
| siri    | sirisha | siri123  | siri123  | siri123@gmail.com    |
| srav    | sravani | srav123  | srav123  | srav@gmail.com       |
| swathi  | swathi  | swathi123 | swathi123 | swathi@gmail.com     |
| varshi123 | varshu | var123   | var123   | varshu@gmail.com     |
| varshu  | varshitha | varshu5  | varshu5  | varshu@gmail.com     |
| yamu    | yamini  | yamu123  | yamu123  | yamini@gmail.com     |
+-----+-----+-----+-----+-----+
21 rows in set (0.00 sec)

mysql>
```

CONCLUSION:

Online Examination System (OLES) is a web application. The key concept is to minimize the amount of paper and convert all forms of documentation to digital form. It can observe that the forms of documentation to digital form. It can observe that the information required can be obtained with ease and accuracy in the computerized system. The user with minimum knowledge about computer can be able operate the system easily. The system also produces brief result required by the management.