Practical No. 2(a)

Q. Create a registration servlet in Java using JDBC. Accept the details such as username, password, email, and country from the user using HTML Form and store the registration details in the database.

Steps to perform for database and table creation:

1. Select **services**->expand **databases**->right click on **MySQLserver at localhost:3306[disconnected]** ->click on connect-> **OK**
2. Right click on **MySQL server at localhost:3306[root]**-> select **Create databas**e -> enter database name and select the check box to grant permission.
3. Right click on **Table** under your database
4. Enter table name user by replacing untitled. Click on **Add column**, name -> **username**, type-> varchar, size-> 20, select checkbox of **primary key**, again click on **Add column,** name **-> password** varchar size 20, again click on Add column name **-> emailid** varchar (20), again click **Add column** name **-> country** varchar 10;
5. Add **mysql-connector to the library folde**r of the current application.

index.html

```html
<html>
  <head>
    <title>Registration Details</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="RegistrationServlet" method="post">
      Username: <input type="text" name="uname"><br><br>
      Password: <input type="password" name="pw"><br><br>
      Email Id: <input type="text" name="email"><br><br>
      Country: <select name="coun">
        <option> select…
        <option> India
        <option> Bangladesh
        <option> Bhutan
        <option> Canada
      </select> <br><br>
        <input type="Submit" value="Register">
    </form>
  </body>
```
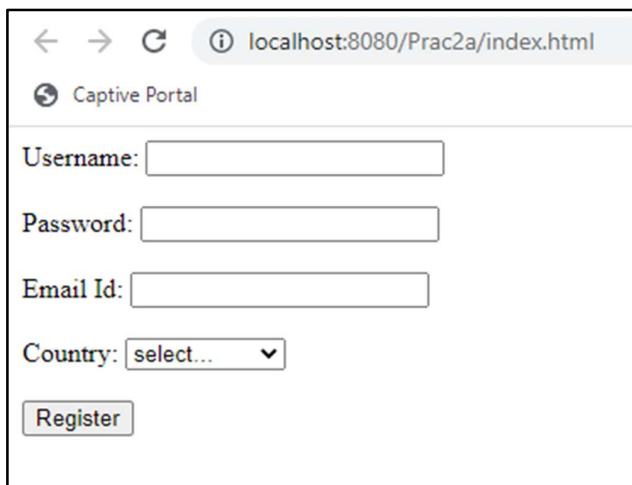
</html>

RegistrationServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;

public class RegistrationServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        Connection con=null;
        PreparedStatement ps =null;
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String username=request.getParameter("uname");
        String password=request.getParameter("pw");
        String emailid=request.getParameter("email");
        String country=request.getParameter("coun");
        try
        {
            Class.forName("com.mysql.jdbc.Driver");
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/mydatabase","root","")
;
            out.println("connection done successfully...");
            ps=con.prepareStatement("insert into user values(?,?,?,?)");
            ps.setString(1,username);
            ps.setString(2,password);
            ps.setString(3,emailid);
            ps.setString(4,country);
            ps.execute();
            out.print("Data inserted successfully!!!!");
        }
```

```
       catch(ClassNotFoundException | SQLException e)
       {
          out.println(e);
       }
       out.println("<br>"+"<br>");
     }
  }
```
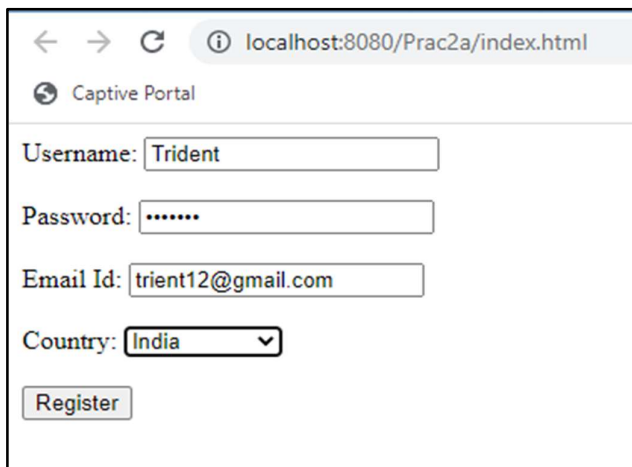
Output:

---

connection done successfully... Data inserted successfully!!!!
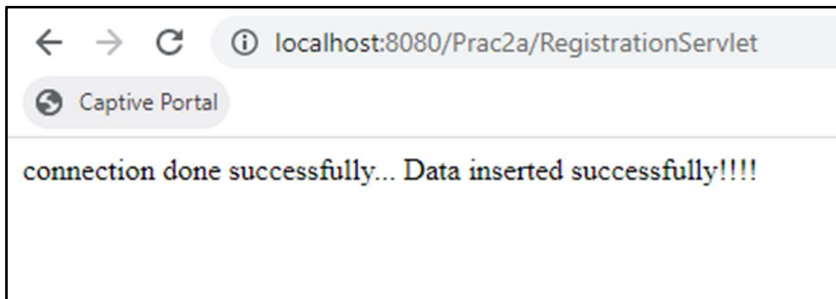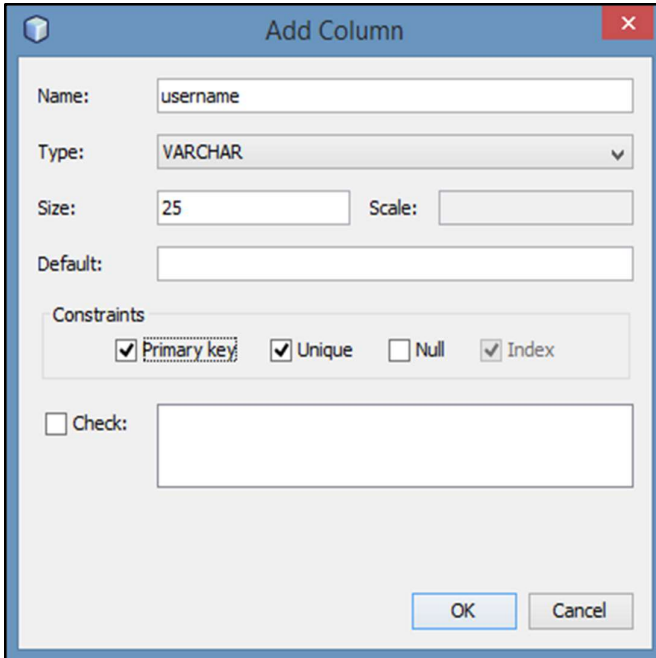
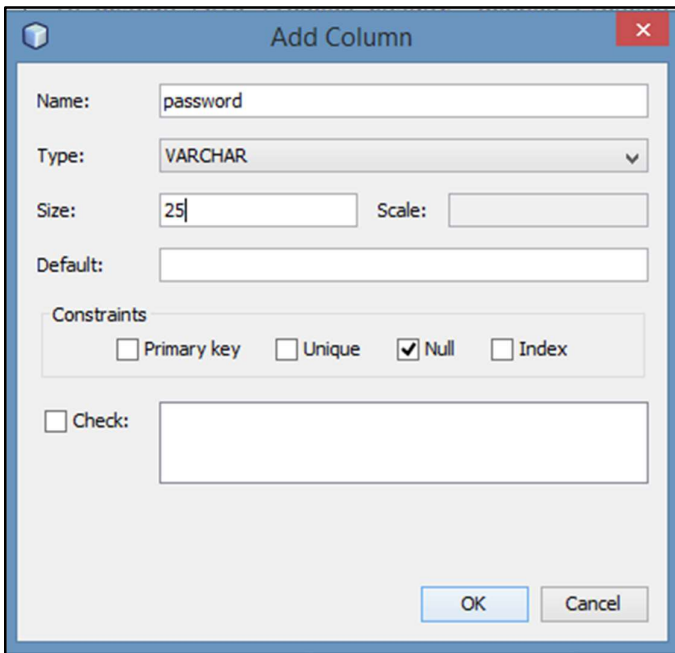| #	username	password	emailid	country
1	Trident	pass123	trient12@gmail.com	India

Practical No. 2(b)

Q. Create a web application for user authentication using servlet and MySQL database.

Create a database **mydatabase** in the services tab. Create table **user** and add columns in it, as shown below:

Press CTRL+Tab to exit data entry mode from the table. Press CTRL+0 to set NULL value and CTRL+1 to set DEFAULT value for a given column.

#	username	password
1	example	pass123
2	admin	adpass123

Show SQL   Add Row   Remove   OK   Cancel

Add the mysql Connector in the Library of your web application.

index.html

```html
<html>
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form method="post" action="UserAuthServlet">
      Enter Username: <input type="text" name="txtuname">
      Enter Password: <input type="password" name="txtpass">
      <input type="submit" name="submit" value="Submit">
    </form>

  </body>
</html>
```

UserAuthServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;

public class UserAuthServlet extends HttpServlet {

    Connection con=null;
    Statement stmt=null;
    ResultSet rs=null;
    String n="",p="";

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException
    {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out=response.getWriter();
        int cnt=0;
        n=request.getParameter("txtuname");
        p=request.getParameter("txtpass");
        try
        {
            Class.forName("com.mysql.jdbc.Driver");
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/mydatabase","root","");
            stmt=con.createStatement();
            rs=stmt.executeQuery("select *from user1");
            while(rs.next())
            {
                String un=rs.getString(1);
                String up=rs.getString(2);
                if(n.equals(un) && p.equals(up))
                {
                    out.println("<h1> Welcome!!! "+un+"<h1>");
                    cnt++;
                    break;
                }
            }
            if(cnt==0)
            {
                out.println("<h1> Sorry!!! Try again!!! </h1>");
```
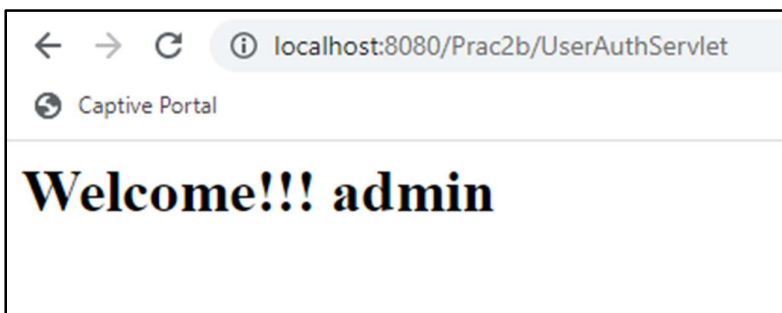
```
                }
            }
        catch(ClassNotFoundException | SQLException e) { }
        }
    }
```

Output:

Output after giving right credentials:
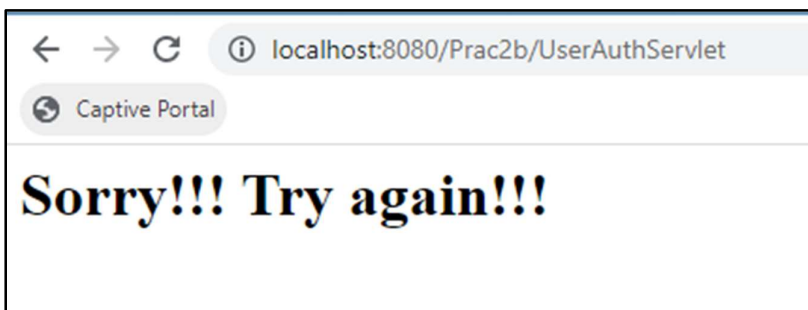
Output after giving wrong credentials:

Practical No. 2(c)

Q. Develop a simple servlet question answer application using a database.

Create a table in mysql
Create a database
Database name: **queansdb**
Table name: **quiz**

Fields:
1. queno integer primary key
2. question varchar 200
3. opt1 varchar 100
4. opt2 varchar 100
5. opt3 varchar 100
6. opt4 varchar 100
7. anskey varchar 1

Insert minimum 2 to 3 records in table queans.
Add mysql Connector in Library of your web application.

Create Table							

Table name: quiz

Key	Index	Null	Unique	Column name	Data type	Size	
✔	✔		✔	queno	INT	0	Add column
		✔		question	VARCHAR	200	Edit
		✔		opt1	VARCHAR	100	Remove
		✔		opt2	VARCHAR	100	
		✔		opt3	VARCHAR	100	Move Up
		✔		opt4	VARCHAR	100	Move Down
		✔		anskey	VARCHAR	1	

OK   Cancel   Help

Insert Record(s)

Press CTRL+Tab to exit data entry mode from the table. Press CTRL+0 to set NULL value and CTRL+1 to set DEFAULT value for a given column.

#	queno	question	opt1	opt2	opt3
1	1	What is RDBMS?	Relational Database Management System	Relational	Database
2	2	What is a Computer?	Brain	Electronic Device	Calculator
3	3	Which is not a method from life cycle of a s...	post()	init()	delete()
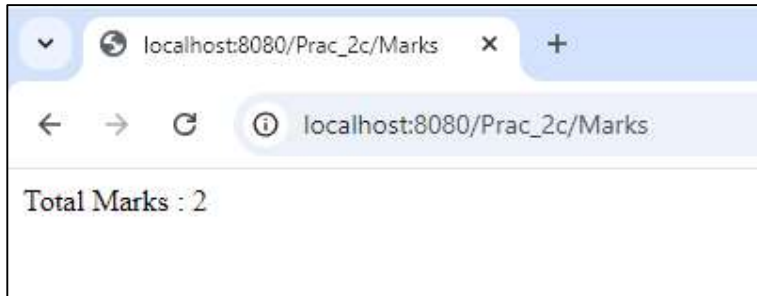
Show SQL   Add Row   Remove   OK   Cancel

for a given column.

opt4	anskey
Redhat	1
Mobile	2
service()	3

Row   Remove   OK   Cancel

QueAnsDBServlet.java

```java
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;
import java.sql.*;

public class QueAnsDBServlet extends HttpServlet
{
    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException
    {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        try
        {
            out.print("<html><body><br>");
            out.println("<form method='post' action='Marks'>");
            Class.forName("com.mysql.jdbc.Driver");
            Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/queansdb","root","");
            Statement st = con.createStatement();
            String sql="select *from quiz";
            ResultSet rs = st.executeQuery(sql);
            int i=0;
            out.print("<center>Online Exam</center>");
            while(rs.next())
            {
                i++;
                out.print("<br><br><hr>"+rs.getInt(1)+" ");
                out.print(rs.getString(2));
                out.print("<br><input type=radio name="+i+" value=1>"+rs.getString(3));
                out.print("<br><input type=radio name="+i+" value=2>"+rs.getString(4));
                out.print("<br><input type=radio name="+i+" value=3>"+rs.getString(5));
                out.print("<br><input type=radio name="+i+" value=4>"+rs.getString(6));
                String ans="ans"+i;
                out.println("<br><input type=hidden name="+ans+" value="+rs.getString(7)+">");
            }
            out.println("<br><input type=hidden name=total value="+i+">");
            out.println("<input type=submit value=Submit>");
            out.println("</form>");
            out.print("</body></html>");
        }
        catch(Exception e)
        {
            out.println("ERROR "+e.getMessage());
        }
    }
}
```
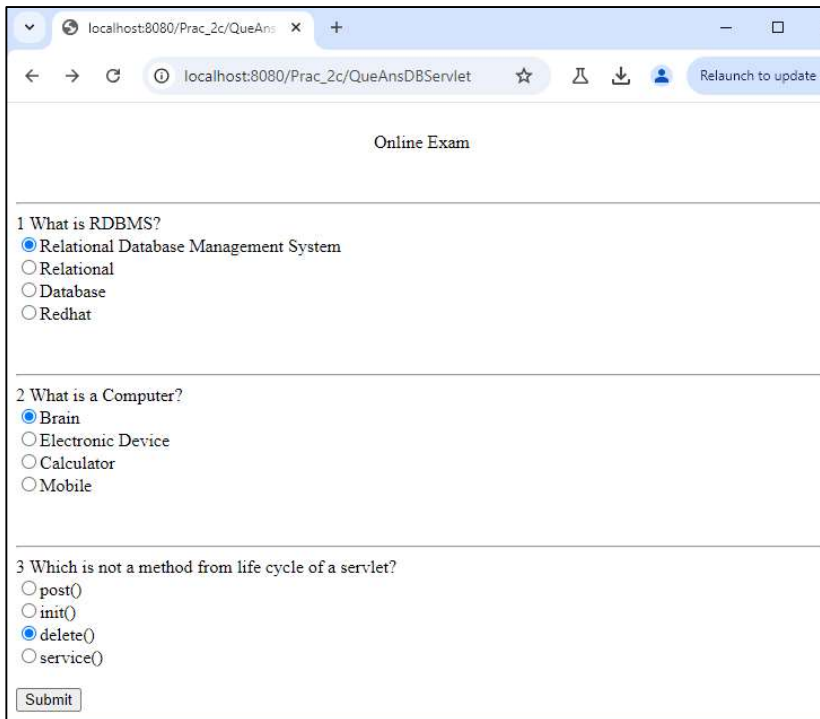
Marks.java

```java
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;
public class Marks extends HttpServlet
{
   @Override
   public void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException
   {
      response.setContentType("text/html");
      PrintWriter out = response.getWriter();
      try
      {
         out.print("<html><body>");
         int total=Integer.parseInt(request.getParameter("total"));
         int marks=0;

         for(int i=1; i<=total; i++)
         {
            String sel=request.getParameter(new Integer(i).toString());
            String ans=request.getParameter("ans"+i);

            if (sel.equals(ans))
            marks++;
         }
         out.println("Total Marks : "+marks);
         out.print("</body></html>");
      }
      finally
      {
        out.close();
      }
   }
}
```