Exercise-4
MySQL Database Connectivity using Servlets

1. Install MySQL server


```
pglab1@pglab1-40:/media/pglab1/New Volume/apache-tomcat-9.0.86/bin$ sudo apt install mysql-server
[sudo] password for pglab1:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libevent-core-2.1-7
```

2. Check MySQL service status with following command
   sudo service mysql status

3. Getting into MySQL platform using following command
   sudo mysql
4. Create Database
5. Create Table
6. Insert values into Table.

Application:

1. Create application folder and deloy in tomcat server.
2. The folder structure
```
DBCon
  |-----WEB-INF--------|
  |-----  index.html      | ----classes ---- |
                          |                   |------ DBCon.java
                          |----web.xml      |------DBCon.class
                          | ----lib
                               |-----mysqlconnector jar file.
```

Note: https://dev.mysql.com/downloads/connector/j/ (link to download the jar file)

3.**index.html**
```
<html>
<head>
<title>Authentication Web Application</title>
</head>
<body>
<form action="hello" method="post">
ID: <input type="text" name="id"> <br>
Name:<input type="text" name="uname"> <br>
<button type="submit">Click Me</button>
</form>
</body>
</html>
```

4.**web.xml**
```
<web-app>
<servlet>
<servlet-name>DatabaseServlet</servlet-name>
<servlet-class>DatabaseServlet</servlet-class>
</servlet>
```

```
<servlet-mapping>
<servlet-name>DatabaseServlet</servlet-name>
<url-pattern>/hello</url-pattern>
</servlet-mapping>

<welcome-file-list>
   <welcome-file>index.html</welcome-file>
</welcome-file-list>
</web-app>
```

5.Servlet Code:

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


public class DatabaseServlet extends HttpServlet {
protected void doPost(HttpServletRequest request, HttpServletResponse response)throws
ServletException, IOException
{
try{
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","");
        Statement stmt=con.createStatement();
        ResultSet rs=stmt.executeQuery("select * from 'details'");
        while(rs.next())
        {
     if(Integer.parseInt(request.getParameter("id")) == rs.getInt(1) &&
request.getParameter("uname") == rs.getString(2))
        {
      PrintWriter out = response.getWriter();
         out.println("<html><body><b>Found"+"</b></body></html>");
        }
        else
        {
      PrintWriter out = response.getWriter();
         out.println("<html><body><b>Not found"+"</b></body></html>");
        }
    }
    rs.close();
    stmt.close();
    con.close();
    }
    catch(Exception e){System.out.println(e);}
```

```
    }
}
```