EMPLOYEE MANAGEMENT SYSTEM

UNIVERSITY OF ENGINEERING
&
MANAGEMENT, JAIPUR

Employee management system

Submitted in the partial fulfillment of the degree of

BACHELOR OF TECHNOLOGY

in

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BY

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CHAPTER 1.

PROJECT DESCRIPTION

Employee management is a crucial aspect of any organization, involving tasks like record-keeping, performance evaluation, and payroll processing. Traditionally, these functions may be handled manually using paper-based systems or basic spreadsheets. However, as organizations grow, managing employee data efficiently becomes increasingly challenging.

This mini-project addresses this need by developing a basic **Employee Management System (EMS)**. This system aims to streamline employee data management by providing functionalities for:

- **Employee Login:** Secure access for authorized personnel to manage employee data.
- **Adding New Employees:** Create new employee records by entering relevant details.
- **Deleting Employee Records:** Remove employee data when necessary, ensuring proper record keeping.

This project utilizes an **Entity-Relationship (ER) diagram** to model the system's data structure, clearly illustrating the relationships between entities like Employee, Department, and Login.

CHAPTER 2.

OBJECTIVE & SCOPE OF THE PROJECT

3.1 Objective

The objective of this mini-project is to develop a basic Employee Management System (EMS) with functionalities for:

Secure Login: Enable authorized personnel to access and manage employee data through a secure login system.

Adding New Employees: Streamline the process of onboarding new employees by creating and storing their information within the system.

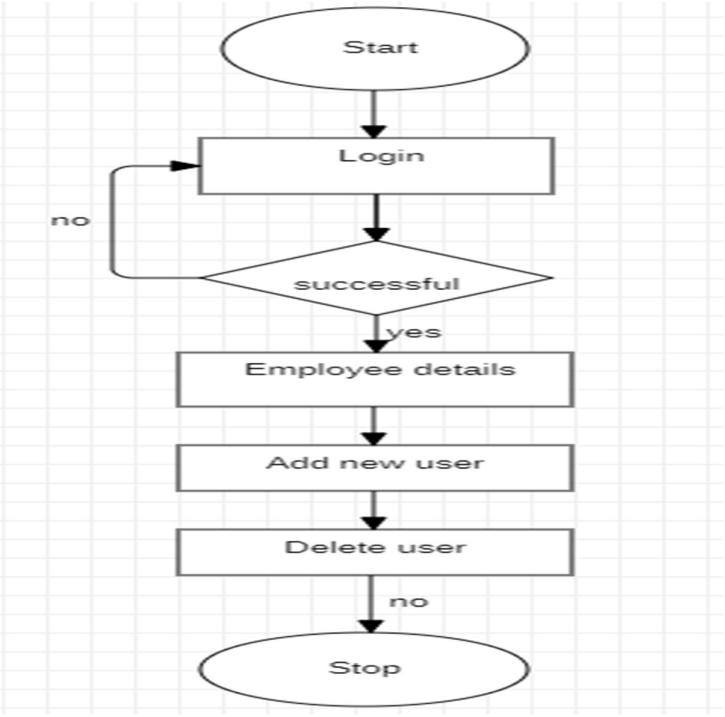
Deleting Employee Records: Facilitate the removal of employee data when necessary, ensuring proper record keeping and data management.

3.2 Scope of the project

The scope of this mini-project for an Employee Management System (EMS) will focus on core functionalities for managing employee data. Here's a breakdown :Develop a user interface for login with username and password credentials.Develop a user interface for login with username and password credentials.Develop a user interface for login with username and password credentials.

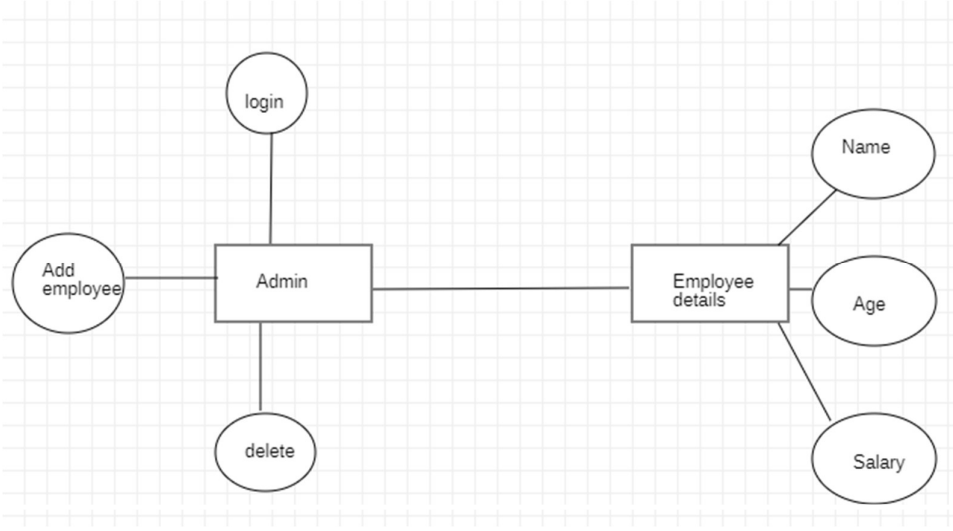
CHAPTER 3.

Workflow



CHAPTER 5.

ER DIAGRAM



Codes:-

AddUser.java:

```
public class AddUser extends HttpServlet {
    /**
     * Processes requests for both HTTP <code>GET</code> and <code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        int id = Integer.parseInt(request.getParameter("txtUID_new"));
        String name = request.getParameter("txtName_new");
        int age = Integer.parseInt(request.getParameter("txtAge_new"));
        int salary = Integer.parseInt(request.getParameter("txtSalary_new"));
        String pass = request.getParameter("txtPass_new");
        try (PrintWriter out = response.getWriter()) {
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet AddUser</title>");
            out.println("</head>");
            out.println("<body>");
            if(addUser(id,name,age,salary,pass)>0){
                out.println("<h1>New User Added..</h1>");
            }else{
                out.println("<h1>Unable to add new user.</h1>");
            }
            out.println("</body>");
            out.println("</html>");
        }
    }
    private int addUser(int id, String name, int age, int salary, String pass){
//        pass = convertDate(pass);
        int ret = 0;
    try{
        Connection conn = getConnection();
        PreparedStatement ps = conn.prepareStatement("INSERT INTO db_employee VALUES(?,?,?,?,?)");
        ps.setInt(1,id);
        ps.setString(2,name);
        ps.setInt(3, age);
        ps.setInt(4, salary);
        ps.setString(5, pass);
        ret = ps.executeUpdate();
    }catch(Exception ex){}
        return ret;
    }

    private Connection getConnection() throws ClassNotFoundException, SQLException{
        Connection conn;
        String dbUrl = "jdbc:mysql://localhost:3306/";
        String dbDriver = "com.mysql.jdbc.Driver";
        String dbName = "db_arya";
        String dbUser = "root";
        String dbPass = "";

        Class.forName(dbDriver);
        conn = DriverManager.getConnection(dbUrl+dbName,dbUser,dbPass);
        return conn;
    }
```

DeleteUser.java:

```
public class DeleteUser extends HttpServlet {
   protected void processRequest(HttpServletRequest request, HttpServletResponse response)
         throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      int id = Integer.parseInt(request.getParameter("txtUID_delete"));
      try (PrintWriter out = response.getWriter()) {
         /* TODO output your page here. You may use following sample code. */
         out.println("<!DOCTYPE html>");
         out.println("<html>");
         out.println("<head>");
         out.println("<title>Servlet AddUser</title>");
         out.println("</head>");
         out.println("<body>");
         if(deleteUser(id)>0){
            out.println("<h1>User Details deleted..</h1>");
         }else{
            out.println("<h1>Unable to delete user details.</h1>");
         }
         out.println("</body>");
         out.println("</html>");
      }
   }

   private int deleteUser(int id){
      int ret = 0;
   try{
      Connection conn = getConnection();
      PreparedStatement ps = conn.prepareStatement("DELETE from db_employee WHERE ID=?");
      ps.setInt(1,id);
      ret = ps.executeUpdate();
   }catch(Exception ex){}
      return ret;
   }

   private Connection getConnection() throws ClassNotFoundException, SQLException{
      Connection conn;
      String dbUrl = "jdbc:mysql://localhost:3306/";
      String dbDriver = "com.mysql.jdbc.Driver";
      String dbName = "db_arya";
      String dbUser = "root";
      String dbPass = "";

      Class.forName(dbDriver);
      conn = DriverManager.getConnection(dbUrl+dbName,dbUser,dbPass);
      return conn;
   }
```

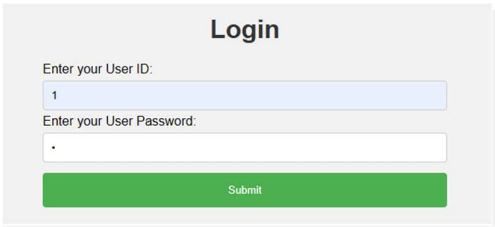
Display.java:

```
public class display extends HttpServlet {
   Connection conn;
   public display() {
      try {
         this.conn = getConnection();
      } catch (ClassNotFoundException ex) {
         Logger.getLogger(display.class.getName()).log(Level.SEVERE, null, ex);
```

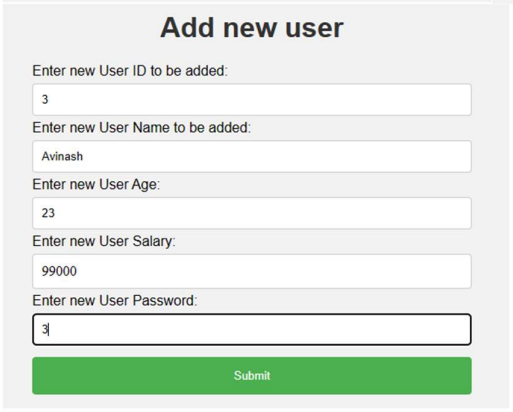
```
        } catch (SQLException ex) {
            Logger.getLogger(display.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        int id = Integer.parseInt(request.getParameter("txtUID_login"));
        String pass = request.getParameter("txtPass_login");
        try (PrintWriter out = response.getWriter()) {
            /* TODO output your page here. You may use following sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet display</title>");
            out.println("<link rel=\"stylesheet\" type=\"text/css\" href=\"styles.css\">");
            out.println("</head>");
            out.println("<body>");
            out.println("<div class=\"container\">");
            out.println("<div class=\"sub-container\">");
            out.println("<h1>Employee Details</h1>");
            out.println("<table border=\"1\">");
            out.println("<tr><th>Attribute</th><th>Value</th></tr>");
            out.println("<tr><td>Employee Name</td><td>" + getName(id, pass) + "</td></tr>");
            out.println("<tr><td>Employee Age</td><td>" + getAge(id, pass) + "</td></tr>");
            out.println("<tr><td>Employee Salary</td><td>" + getSalary(id, pass) + "</td></tr>");
            out.println("</table>");
//            out.println("<button class=\"make_change\"
onclick=\"location.href='detailsPage.html'\">Make changes</button>");
            out.println("</div>");
            out.println("</div>");
            out.println("</body>");
            out.println("</html>");

        } catch (Exception ex) {
            ex.printStackTrace();
        }
    }

    private String getName(int id, String pass) {
        String name = "";
        try {
            PreparedStatement ps = conn.prepareStatement("SELECT Name FROM db_employee
WHERE ID = ?");
            ps.setInt(1, id);
            ResultSet rs = ps.executeQuery();
            while (rs.next()) {
                name = rs.getString("Name");
            }
```

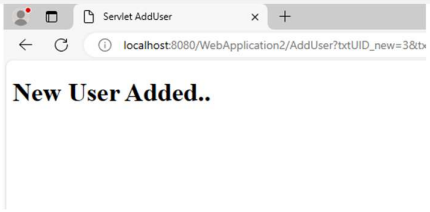
```
            return name;
        } catch (Exception ex) {
        }
        return name;
    }

    private int getAge(int id, String pass) {
        int age = 0;
        try {
            PreparedStatement ps = conn.prepareStatement("SELECT Age FROM db_employee
WHERE ID = ?");
            ps.setInt(1, id);
            ResultSet rs = ps.executeQuery();
            while (rs.next()) {
                age = rs.getInt(1);
            }
            return age;
        } catch (Exception ex) {
        }
        return age;
    }
    private int getSalary(int id, String pass) {
        int salary = 0;
        try {
            PreparedStatement ps = conn.prepareStatement("SELECT Salary FROM db_employee
WHERE ID = ?");
            ps.setInt(1, id);
            ResultSet rs = ps.executeQuery();
            while (rs.next()) {
                salary = rs.getInt(1);
            }
            return salary;
        } catch (Exception ex) {
        }
        return salary;
    }

    private Connection getConnection() throws ClassNotFoundException, SQLException {
        Connection conn;
        String dbUrl = "jdbc:mysql://localhost:3306/";
        String dbDriver = "com.mysql.jdbc.Driver";
        String dbName = "db_arya";
        String dbUser = "root";
        String dbPass = "";

        Class.forName(dbDriver);
        conn = DriverManager.getConnection(dbUrl + dbName, dbUser, dbPass);
        return conn;
    }
```

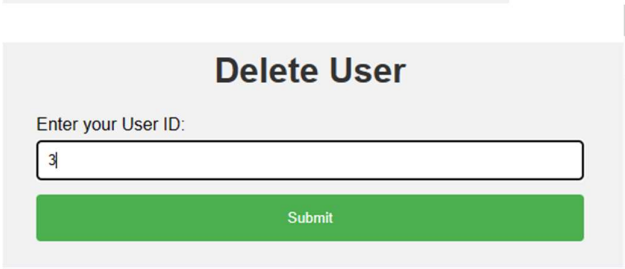
RESULTS

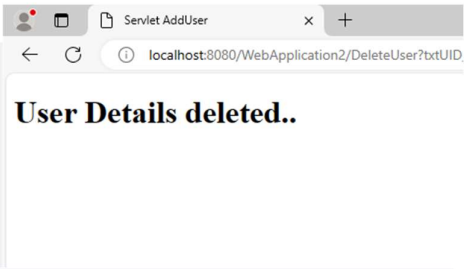

Login
Enter your User ID:
1
Enter your User Password:
Submit

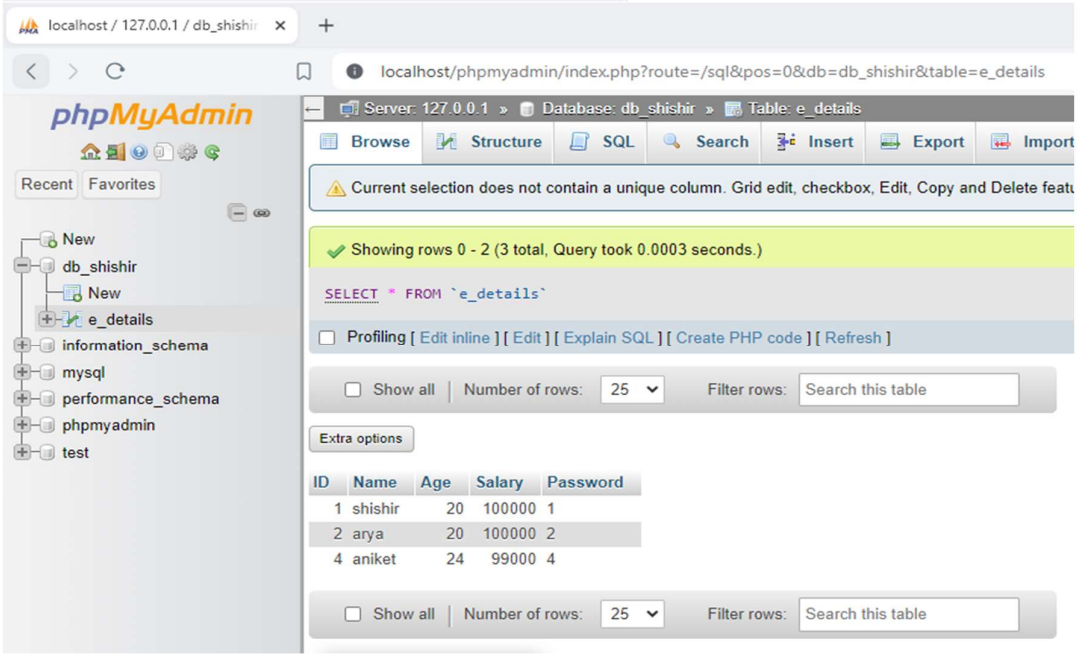

Employee Details
Attribute
Value
Employee Name
shishir
Employee Age
20
Employee Salary
100000


Add new user
Enter new User ID to be added:
3
Enter new User Name to be added:
Avinash
Enter new User Age:
23
Enter new User Salary:
99000
Enter new User Password:
Submit


Servlet AddUser
localhost:8080/WebApplication2/AddUser?txtUID_new=3&tx
New User Added..


Delete User
Enter your User ID:
3
Submit


Servlet AddUser
localhost:8080/WebApplication2/DeleteUser?txtUID
User Details deleted..


localhost / 127.0.0.1 / db_shishir
localhost/phpmyadmin/index.php?route=/sql&pos=0&db=db_shishir&table=e_details
phpMyAdmin
Recent
Favorites
New
db_shishir
New
e_details
information_schema
mysql
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: db_shishir » Table: e_details
Browse
Structure
SQL
Search
Insert
Export
Import
Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete featu
Showing rows 0 - 2 (3 total, Query took 0.0003 seconds.)
SELECT * FROM `e_details`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows:
25
Filter rows:
Search this table
Extra options
ID
Name
Age
Salary
Password
1 shishir 20 100000 1
2 arya 20 100000 2
4 aniket 24 99000 4
Show all
Number of rows:
25
Filter rows:
Search this table