Servlet/JSP Connect #4

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Agenda

1. Understanding the role of JSP in MVC with Bootstrap

2. Introduction to Session Tracking

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Objectives

At the end of this session, you will be able to:

- Understand how to present dynamic content in a JSP page
- Understand how to use Bootstrap
- Understand about session tracking

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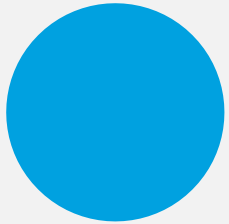
Understanding the role of JSP in MVC with Bootstrap



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Employee Application

To do list:

1. Create an employee_table and add some records.
2. Create a LandingPage.jsp with a hyper link “View All Employees”
   - Add bootstrap class styling
   - Using scriptlet tag, iterate and print the received the ArrayList of employees in table format
3. Create an EmployeeBean class in com.wipro.bean package
4. Create a DBUtil class in com.wipro.util package
5. Create an EmployeeDAO in com.wipro.dao package
6. Create a Servlet EmployeeController in com.wipro.controller package

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1. Employee Table

SQL> Create table employee_table (employee_id number(5), employee_name varchar2(20), employee_salary number(5));

SQL> Insert into employee_table values (101, 'Vijay', 5000);

SQL> Insert into employee_table values (102, 'Kumar', 6000);

SQL> Insert into employee_table values (103, 'Ajay', 7000);

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2. LandingPage.jsp

```
<%@page import="java.util.Iterator"%>
<%@page import="com.wipro.bean.EmployeeBean"%>
<%@page import="java.util.List"%>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
</head>
```

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2. LandingPage.jsp continued..

```
<body>
<br>
<center>
<a href="EmployeeController" class="btn btn-primary">View All Employees</a>
</center>
<br>
<br>
<div class="container">
<table width="40%" align="center"
class="table table-bordered table-striped">
<%
List<EmployeeBean> employeeList = (List<EmployeeBean>)
request.getAttribute("employeeList");
```


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2. LandingPage.jsp continued..

```
if (employeeList != null) {
%>
<tr>
<th>Employee Id</th>
<th>Employee Name</th>
<th>Employee Salary</th>
</tr>
<%
Iterator<EmployeeBean> it = employeeList.iterator();
     while (it.hasNext()) {
          EmployeeBean bean = it.next();
%>
```

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2. LandingPage.jsp continued..

```
<tr>
<td><%=bean.getEmployeeId()%></td>
<td><%=bean.getEmployeeName()%></td>
<td><%=bean.getEmployeeSalary()%></td>
</tr>
<%
}
}
%>
</table>
</div>
</body>
</html>
```

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3. EmployeeBean

```
package com.wipro.bean;
public class EmployeeBean {
private int employeeId;
private String employeeName;
private int employeeSalary;
public int getEmployeeId() {
return employeeId;
}
public void setEmployeeId(int employeeId) {
this.employeeId = employeeId;
}
public String getEmployeeName() {
return employeeName;
}
public void setEmployeeName(String employeeName) {
this.employeeName = employeeName;
}
```

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3. EmployeeBean continued..

```
public int getEmployeeSalary() {
return employeeSalary;
}
public void setEmployeeSalary(int employeeSalary) {
this.employeeSalary = employeeSalary;
}
}
```

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4. DBUtil

```
package com.wipro.util;
public class DBUtil {
   public static Connection getDBConnection(){
   Connection con = null;
   try{
      Class.forName("oracle.jdbc.driver.OracleDriver");
     con =
      DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl",
                                                          "scott","tiger");
   }catch(Exception e){
    e.printStackTrace();
   }
   return con;
   }
}
```


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5. EmployeeDAO

```
package com.wipro.dao;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.ArrayList;
import java.util.List;
import com.wipro.bean.EmployeeBean;
import com.wipro.util.DBUtil;

public class EmployeeDAO {
public List<EmployeeBean> getAllEmployee() {
List<EmployeeBean> employeeList = new ArrayList<EmployeeBean>();
try {
String sql = "select * from employee_table";
Connection con = DBUtil.getDBConnection();
PreparedStatement st = con.prepareStatement(sql);
ResultSet resultSet = st.executeQuery();
```


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5. EmployeeDAO continued..

```
 while (resultSet.next()) {
         EmployeeBean bean = new EmployeeBean();
         bean.setEmployeeId(resultSet.getInt("employee_id"));
         bean.setEmployeeName(resultSet.getString("employee_name"));
         bean.setEmployeeSalary(resultSet.getInt("employee_salary"));
         employeeList.add(bean);
 }

} catch (Exception e) {
e.printStackTrace();
}
return employeeList;
}
}
```

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6. EmployeeController

```
public class EmployeeController extends HttpServlet {

protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
   EmployeeDAO dao = new EmployeeDAO();
   List<EmployeeBean> employeeList = dao.getAllEmployee();
   request.setAttribute("employeeList", employeeList);
   request.getRequestDispatcher("LandingPage.jsp").forward(request, response);
 }
}
```


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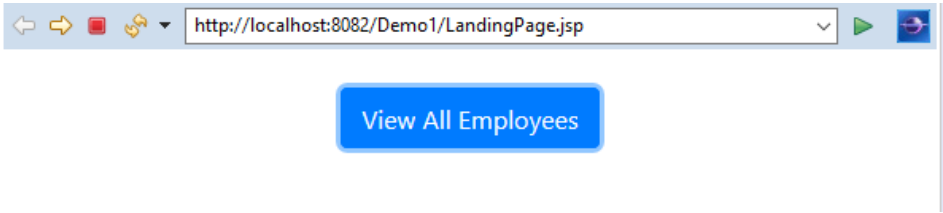
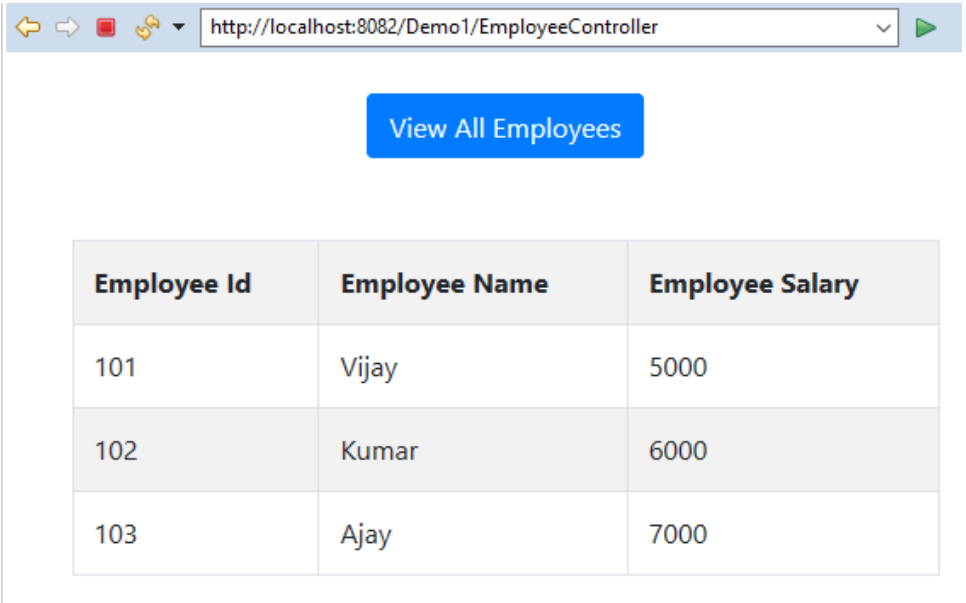
Output





Employee Id	Employee Name	Employee Salary
101	Vijay	5000
102	Kumar	6000
103	Ajay	7000

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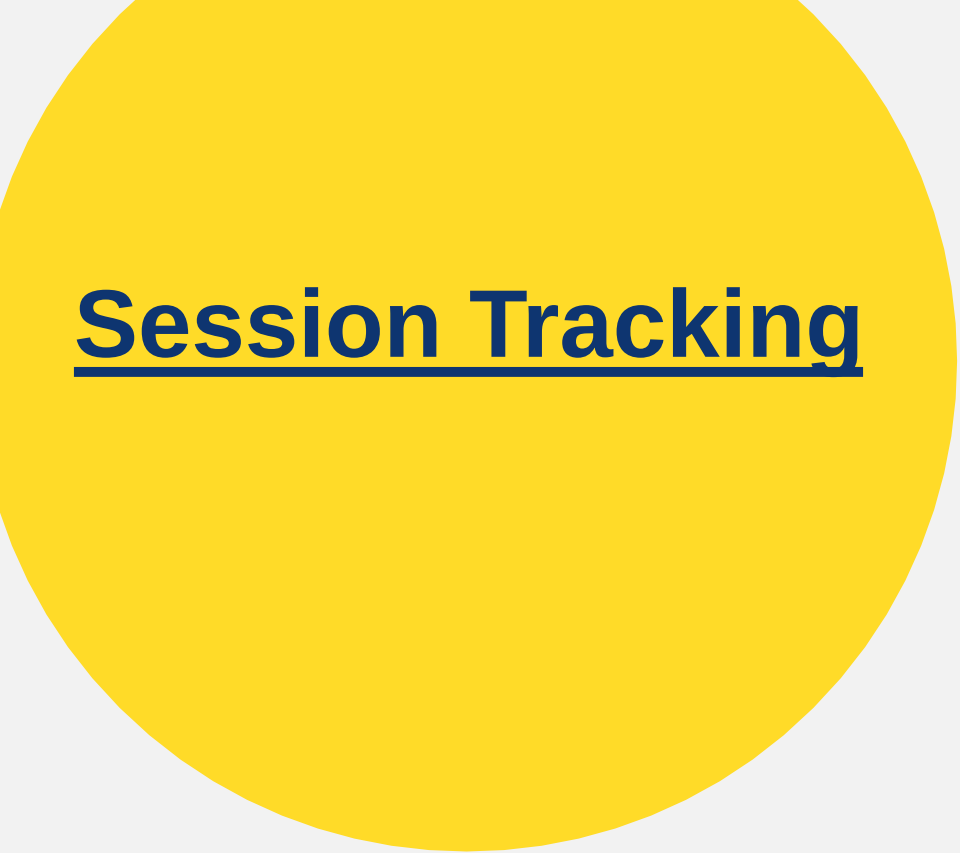
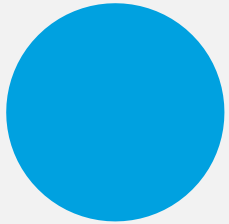
Session Tracking





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Session Tracking

To do list:

1. Create a Login.jsp page to accept username and password
2. Create a Servlet LoginServlet to validate the credentials
3. Create a HomePage.jsp page and display a welcome message along with the username
4. Create an AboutUs.jsp page and display a welcome message along with the username
5. Create an ContactUs.jsp page and display a welcome message along with the username

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1. Login.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
  <form name="myform" action="LoginServlet">
     <div>
        Username <input type="text" name="uname"><br> <br>
        Password <input type="password" name="pwd"> <br> <br>
        <input id="b1" type="submit" value="Login">
     </div>
  </form>
```

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1. Login.jsp continued..

```
<%
String msg = (String) request.getAttribute("msg");
if (msg != null) {
%>
<p style="color: red"><%=msg%></p>
<%
}
%>
</body>
</html>
```

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2. LoginServlet

```
public class LoginServlet extends HttpServlet {

protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
   String userName = request.getParameter("uname");
   String password = request.getParameter("pwd");
   if(userName.equals("John") && password.equals("John@123")) {
      request.getSession().setAttribute("name", userName);
      request.getRequestDispatcher("HomePage.jsp").forward(request, response);
   }
   else {
      request.setAttribute("msg", "Invalid Credentials");
      request.getRequestDispatcher("Login.jsp").forward(request, response);
   }
 }
}
```

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3. HomePage.jsp

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Insert title here</title>
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
</head>
<body>
   <font color=green><b>
      <%= session.getAttribute("name") %>, Welcome to Home page! </b></font>
   <br><br><a href="ContactUs.jsp" class="btn btn-primary">Contact Us</a>
   <a href="AboutUs.jsp" class="btn btn-primary">About Us</a>
</body>
</html>
```

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4. AboutUs.jsp

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Insert title here</title>
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
</head>
<body>
   <font color=green><b>
      <%= session.getAttribute("name") %>, Welcome to About Us page!</b></font>
   <br><br><a href="ContactUs.jsp" class="btn btn-primary">Contact Us</a>
   <a href="AboutUs.jsp" class="btn btn-primary">About Us</a>
</body>
</html>
```

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5. ContactUs.jsp

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Insert title here</title>
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
</head>
<body>
   <font color=green><b>
      <%= session.getAttribute("name") %>, Welcome to Contact Us page!</b></font>
   <br><br><a href="ContactUs.jsp" class="btn btn-primary">Contact Us</a>
   <a href="AboutUs.jsp" class="btn btn-primary">About Us</a>
</body>
</html>
```

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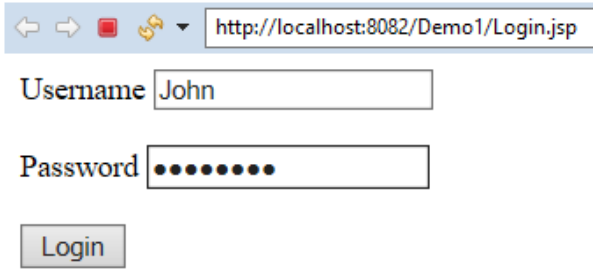
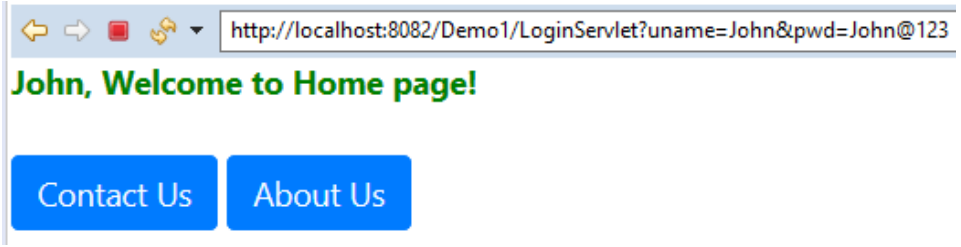
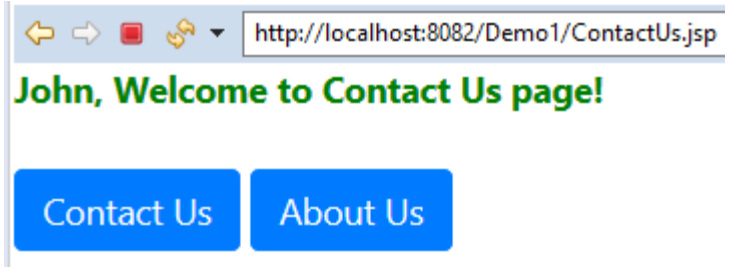
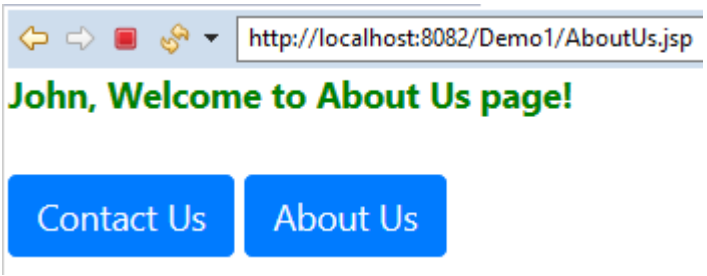
Output









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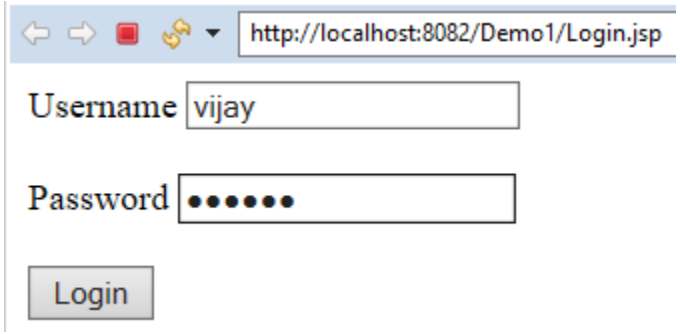
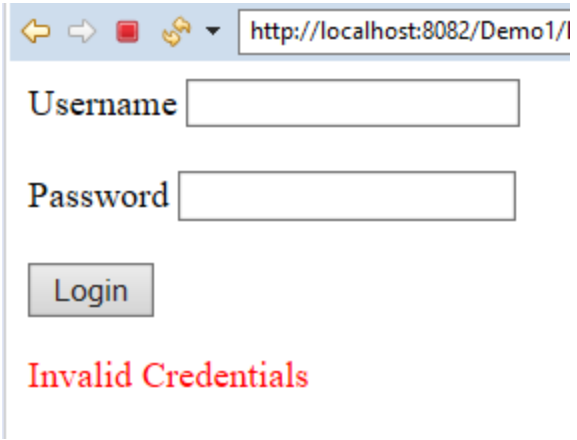
Output





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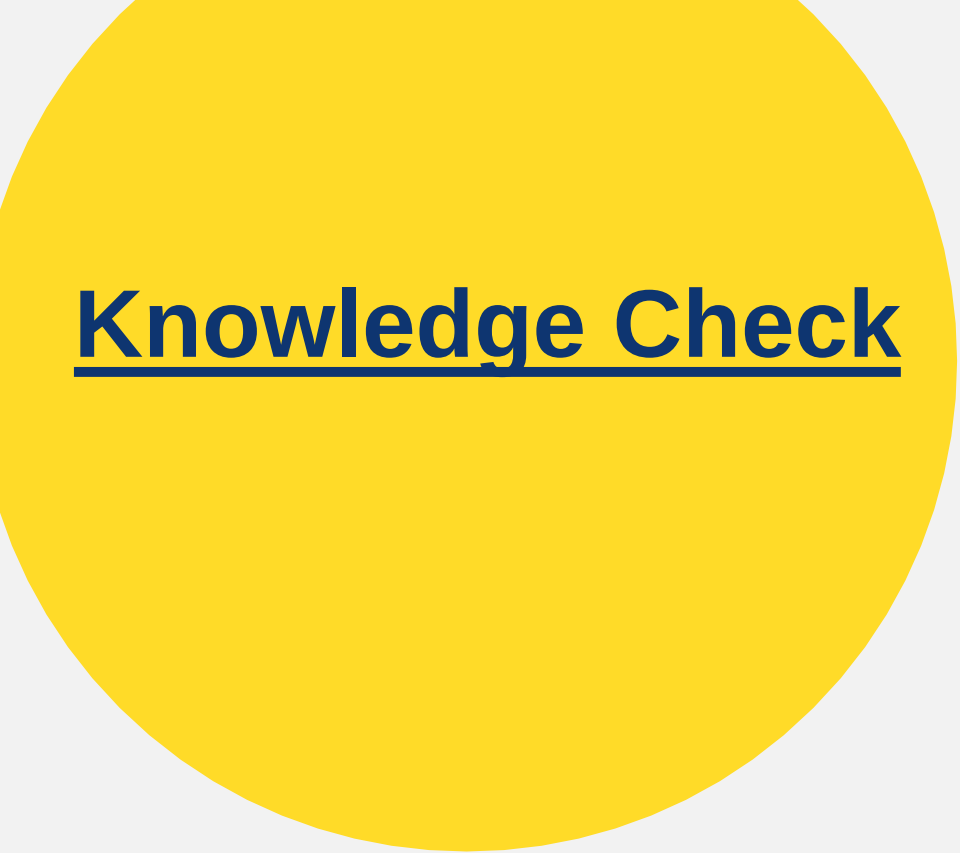
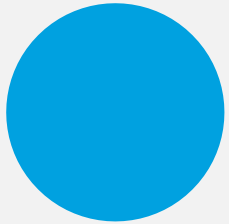
Knowledge Check





Knowledge Check

- How can we get session object?
    1. request.getSession()
    2. response.getSession()

- Which of the following bootstrap class styling is used to apply border to the table?
    1. border
    2. table-bordered

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Knowledge Check

- How can we include the bootstrap.min.css file?
    1. Using <link> tag
    2. Using <script> tag

- How can we import Java classes in a JSP file?
    1. Using meta tag
    2. Using page directive

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Exercise

Exercise-1

1. Create a ViewDetails.jsp page containing a form - text box and submit button
2. User will input a salary
3. On submission, display all the employee records who are receiving salary more than the amount entered
4. Create an employee_table and add records in the backend
5. If no employee record is found, display a nice bootstrap alert box with proper alert message

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Thank you

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