

PROJECT

Done : Navaneethan.R

1. Java-Based Employee Management System : A MVC Approach

Description

- Develop a Student Information System using Java technologies (JDBC,Servlets, JSP) following the MVC design pattern. The system will provide a user-friendly interface for student login, data entry,storage in a JDBC database, and display of student details in a grid format.

Key Features

1. Login Page:
 - Create a simple login page for students to enter their credentials (e.g., username and password).
 - Implement authentication to ensure only authorized users can access the system.
2. Student Details Form (JSP):
 - Design a JSP page with a form to capture student details, including fields such as Name, Roll Number, Course, and Grade.
 - Ensure proper validation for the form inputs to maintain data integrity.
3. Servlets (Controller):
 - Implement a servlet acting as the controller to handle requests from the JSP pages.
 - Use the servlet to process login requests, validate user credentials.
4. DAO Layer (Data Access Object):
 - Develop a DAO layer to interact with the database.
 - Include methods to insert student details into the database and retrieve student information for display.
5. JDBC Database:
 - Set up a relational database (e.g., MySQL) to store student information.
 - Create a table to store student details with appropriate columns (e.g., ID, Name, Roll Number, Course, Grade).
6. Insertion of Student Details:
 - Upon form submission, use the servlet to capture the entered data.
 - Call the DAO layer to insert the student details into the database.

7. Display Students in Grid Format (JSP):
 - Create a JSP page to display student information in a grid format.
8. MVC Design Pattern:
 - Model: Represent the student data structure and database interactions in the DAO layer.
 - View: Use JSP pages for the user interface.
 - Controller: Implement servlets to manage the flow of data between the view and the model.
9. Exception Handling:
 - Implement proper exception handling throughout the application to manage errors gracefully.
 - Display meaningful error messages to users in case of any issues.