Aim: Student Report Application using AngularJS

Theory:

AngularJS is a JavaScript-based open-source front-end framework used for developing dynamic web applications. It follows the MVC (Model-View-Controller) architecture and facilitates two-way data binding, making it efficient for handling dynamic data updates.

In this project, we use AngularJS to:

- Create an interactive student report system.
- Implement features like adding, editing, and deleting student records.
- Use AngularJS directives such as ng-model, ng-repeat, and ng-click for handling UI interactions.
- Store and retrieve student data using JSON.

Code:

HTML (index.html):

```
<!DOCTYPE html>
<html lang="en" ng-app="StudentApp">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Student Report</title>
    <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js">
</script>
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
">
</head>
<body ng-controller="StudentController">
    <div class="container mt-4">
        <h2 class="text-center">Student Report Application</h2>
        <form ng-submit="addStudent()">
            <input type="text" ng-model="newStudent.name"
placeholder="Student Name" class="form-control mb-2" required>
            <input type="number" ng-model="newStudent.marks"
placeholder="Marks" class="form-control mb-2" required>
            <button type="submit" class="btn btn-primary">Add
Student</button>
        </form>
        <table class="table table-bordered mt-3">
            <thead>
                <tr>
                    <th>Name</th>
                    <th>Marks</th>
                    <th>Actions</th>
                </tr>
            </thead>
            <tbody>
                <tr ng-repeat="student in students">
                    <td>{{ student.name }}</td>
```

```
                <td>{{ student.marks }}</td>
                <td>
                    <button class="btn btn-danger" ng-
click="deleteStudent($index)">Delete</button>
                </td>
            </tr>
        </tbody>
    </table>
</div>
<script src="app.js"></script>
</body>
</html>
```

JavaScript (app.js):

```
var app = angular.module("StudentApp", []);
app.controller("StudentController", function($scope) {
    $scope.students = [];

    $scope.addStudent = function() {
        if ($scope.newStudent) {
            $scope.students.push({
                name: $scope.newStudent.name,
                marks: $scope.newStudent.marks
            });
            $scope.newStudent = {};
        }
    };

    $scope.deleteStudent = function(index) {
        $scope.students.splice(index, 1);
    };
});
```

Conclusion:

The Student Report Application demonstrates the core functionality of AngularJS, such as two-way data binding, user interaction handling, and dynamic updates to the DOM. This project provides a foundation for developing more advanced student management systems with additional features like authentication and database integration.