Practical No 04:

Aim: Write a program to create and implement modules and controllers in AngularJS.

Step 1: To create folder **module** and view page **viewpage.html** in root directory.

Step 2: Editing view page **viewpage.html** file

Code:

```
<html>

<head>
    <title>Angular JS Modules</title>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.8.2/angular.min.js"><
/script>
    <script src="module/mainApp.js"></script>
    <script src=" module/studentController.js"></script>
    <style>
        table,
        th,
        td {
            border: 1px solid grey;
            border-collapse: collapse;
            padding: 5px;
        }

        table tr:nth-child(odd) {
            background-color: #f2f2f2;
        }

        table tr:nth-child(even) {
            background-color: #ffffff;
        }
    </style>
</head>

<body>
    <h2>AngularJS Sample Application</h2>
    <div ng-app="mainApp" ng-controller="studentController">
        <table border="0">
            <tr>
                <td>Enter first name:</td>
                <td><input type="text" ng-model="student.firstName"></td>
            </tr>
            <tr>
                <td>Enter last name: </td>
```

```
                <td><input type="text" ng-model="student.lastName"></td>
            </tr>
            <tr>
                <td>Name: </td>
                <td>{{student.fullName()}}</td>
            </tr>
            <tr>
                <td>Subject:</td>
                <td>
                    <table>
                        <tr>
                            <th>Name</th>
                            <th>Marks</th>
                        </tr>
                        <tr ng-repeat="subject in student.subject">
                            <td>{{ subject.name }}</td>
                            <td>{{ subject.marks }}</td>
                        </tr>
                    </table>
                </td>
            </tr>
        </table>
    </div>
</body>

</html>
```

Step 3:To create **mainApp.js file** inside module folder and editing script file

Code:

```
var mainApp = angular.module("mainApp", []);
```

Step 4: To create **studentController.js** inside module folder and editing script file

Code:

```
mainApp.controller("studentController", function ($scope) {
    $scope.student = {
        fname: "Abdul",
        lname: "Sk",
        fees: 150,
        subject: [
            { name: "Advance app devlopment", marks: 80 },
            { name: "Android App Dev", marks: 80 },
            { name: "S/w Engineering", marks: 80 },
            { name: "Theory of Computation", marks: 80 },
            { name: "Research Methodolgy", marks: 80 },
```

```
            { name: "Internet of Things", marks: 80 },
            { name: "Comp Networks", marks: 80 },
        ],

        fullName: function () {
            var stud = $scope.student;
            return stud.fname + " " + stud.lname;
        },
    };
});
```

OUTPUT:

1. Open Terminal in VS Code
2. Type ***npm init***
3. After Creating *package.json* File, Type ***start viewpage.html***

Practical No 05:

Aim: Write a program to implement Error Handling in Angular JS

```
<!DOCTYPE html>
<html>

<head>
    <title>Error Handling in AngularJS</title>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.8.2/angular.min.js"><
/script>
</head>

<body ng-app="errorHandlingApp" ng-controller="MainController">

    <h2>Error Handling in AngularJS</h2>

    <div ng-show="loading">Loading data...</div>

    <div ng-show="error" style="color: red;">
        {{ error }}
    </div>

    <div ng-show="data">
        <h3>Data Loaded Successfully:</h3>
        <pre>{{ data | json }}</pre>
    </div>
```

```
    <script>
        var app = angular.module('errorHandlingApp', []);

        app.controller('MainController', function ($scope, $timeout) {
            $scope.loading = true;
            $scope.error = null;
            $scope.data = null;

            // Simulate asynchronous operation (loading data from server)
            $timeout(function () {
                try {
                    // Simulate an error during the operation
                    throw new Error('Error loading data from server');
                } catch (error) {
                    // Handle the error
                    $scope.handleError(error);
                }
            }, 2000);

            $scope.handleError = function (error) {
                // Log the error
                console.error('An error occurred:', error);

                // Display the error to the user
                $scope.error = 'An error occurred: ' + error.message;
                $scope.loading = false;
            };
        });
    </script>

</body>

</html>
```

Practical No 06:

Aim: Create an application for Customer / Students records using AngularJS

```
<!DOCTYPE html>
<html lang="en" ng-app="customerApp">

<head>
    <meta charset="UTF-8">
    <title>Customer/Student Records</title>
```

```
    <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></s
cript>
</head>

<body>
    <div ng-controller="MainController">
        <h2>Customer/Student Records</h2>
        <form ng-submit="addCustomer()">
            <input type="text" ng-model="newCustomer.name" placeholder="Enter
name" required>
            <input type="text" ng-model="newCustomer.email" placeholder="Enter
email" required>
            <button type="submit">Add Customer/Student</button>
        </form>

        <ul>
            <li ng-repeat="customer in customers">
                {{ customer.name }} - {{ customer.email }}
                <button ng-click="deleteCustomer(customer)">Delete</button>
            </li>
        </ul>
    </div>

    <script>
        var app = angular.module('customerApp', []);

        app.controller('MainController', function ($scope) {
            $scope.customers = [];

            $scope.addCustomer = function () {
                $scope.customers.push({
                    name: $scope.newCustomer.name,
                    email: $scope.newCustomer.email
                });
                $scope.newCustomer = {}; // Clear input fields after adding
            };

            $scope.deleteCustomer = function (customer) {
                var index = $scope.customers.indexOf(customer);
                $scope.customers.splice(index, 1);
            };
        });
    </script>
</body>

</html>
```

Practical No 06:

Aim: Write a program to create a simple web application using Express, Node JS and Angular JS

Steps:

1. Make directory for that practical
2. Go into that directory, ***cd your_folder_name***
3. Initialize npm, ***npm init***
4. Install Dependencies, ***npm install express angular@1.x –save***
5. Create a file named ***app.js*** which will serve as your Express server.

   Code:

```
// app.js

const express = require('express');
const app = express();
const path = require('path');

// Serve static files from the Angular app
app.use(express.static(path.join(__dirname, 'public')));

// Start the server
const port = process.env.PORT || 3000;
app.listen(port, () => {
  console.log(`Server is running on port ${port}`);
});
```

6. Make ***new folder*** for angularJS in that project folder
7. Create an ***index.html*** file inside the new folder for your AngularJS frontend.

   Code:

```
<!-- public/index.html -->

<!DOCTYPE html>
<html lang="en" ng-app="myApp">
<head>
  <meta charset="UTF-8">
  <title>Node Angular WebApp</title>
  <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></s
cript>
</head>
<body>
```

```
  <div ng-controller="MainController">
    <h1>Welcome to Node Angular WebApp</h1>

    <h2>Unit Conversion</h2>
    <form ng-submit="convertUnits()">
      <label for="inputValue">Input Value:</label>
      <input type="number" ng-model="inputValue" id="inputValue" required>

      <label for="inputUnit">Input Unit:</label>
      <select ng-model="inputUnit" id="inputUnit" required>
        <option value="meter">Meter</option>
        <option value="centimeter">Centimeter</option>
      </select>

      <label for="outputUnit">Output Unit:</label>
      <select ng-model="outputUnit" id="outputUnit" required>
        <option value="meter">Meter</option>
        <option value="centimeter">Centimeter</option>
      </select>

      <button type="submit">Convert</button>
    </form>

    <div ng-if="convertedValue">
      <p>{{ inputValue }} {{ inputUnit }} is equal to {{ convertedValue }} {{
outputUnit }}</p>
    </div>
  </div>

  <script>
    angular.module('myApp', [])
    .controller('MainController', function($scope) {
      $scope.convertUnits = function() {
        if ($scope.inputUnit === 'meter' && $scope.outputUnit ===
'centimeter') {
          $scope.convertedValue = $scope.inputValue * 100;
        } else if ($scope.inputUnit === 'centimeter' && $scope.outputUnit ===
'meter') {
          $scope.convertedValue = $scope.inputValue / 100;
        }
      };
    });
  </script>
</body>
</html>
```

*You can visit **http://localhost:3000** in your browser to see your AngularJS frontend.*

Practical No 07:

Aim: Create a simple HTML “Hello World” Project using AngularJS Framework and apply ng-controller, ng-model and expressions

```
<!DOCTYPE html>
<html lang="en" ng-app="helloWorldApp">
<head>
    <meta charset="UTF-8">
    <title>Hello World with AngularJS</title>
    <script
src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></s
cript>
</head>
<body>

<div ng-controller="HelloWorldController">
    <h1>{{ greeting }}</h1>
    <input type="text" ng-model="name" placeholder="Enter your name">
    <p>Your name is: {{ name }}</p>
</div>

<script>
    var app = angular.module('helloWorldApp', []);

    app.controller('HelloWorldController', function($scope) {
        $scope.greeting = 'Hello, World!';
        $scope.name = '';
    });
</script>

</body>
</html>
```