Problem Statement:

Design a webpage using angular js, that displays a table of planets with columns for name, type, distance from the sun, and number of moons. The user can search for planets using the search box, and sort the table by name, type, distance, or number of moons using the dropdown menu. The table data should be stored in an array of objects in the controller.

Solution:

```
<!DOCTYPE html>
<html ng-app="planetApp">
<head>
  <meta charset="UTF-8">
  <title>Planets in the Solar System</title>
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.9/angular.min.js"></script>
  <script src="app.js"></script>
</head>
<body ng-controller="planetController">
 <div class="container">
   <h1>Planets in the Solar System</h1>
    <div class="row">
    <div class="col-md-3">
```

```html
  <input type="text" ng-model="searchTerm" class="form-control" placeholder="Search Planets...">
    </div>
    <div class="col-md-3">
      <select class="form-control" ng-model="sortBy" ng-init="sortBy='name'">
        <option value="name">Name</option>
        <option value="type">Type</option>
        <option value="distance">Distance</option>
        <option value="moons">Number of Moons</option>
      </select>
    </div>
  </div>

  <table class="table table-striped table-hover">
   <thead>
     <tr>
       <th>Name</th>
       <th>Type</th>
       <th>Distance (AU)</th>
       <th>Number of Moons</th>
     </tr>
   </thead>
   <tbody>
     <tr ng-repeat="planet in planets | filter:searchTerm | orderBy:sortBy">
       <td>{{ planet.name }}</td>
       <td>{{ planet.type }}</td>
       <td>{{ planet.distance }}</td>
```

```html
      <td>{{ planet.moons }}</td>
    </tr>
  </tbody>
</table>
</div>
</body>
</html>
```

Code:app.js

```javascript
angular.module('planetApp', [])
  .controller('planetController', function($scope) {
    $scope.planets = [
      { name: 'Mercury', type: 'Terrestrial', distance: 0.39, moons: 0 },
      { name: 'Venus', type: 'Terrestrial', distance: 0.72, moons: 0 },
      { name: 'Earth', type: 'Terrestrial', distance: 1.00, moons: 1 },
      { name: 'Mars', type: 'Terrestrial', distance: 1.52, moons: 2 },
      { name: 'Jupiter', type: 'Gas Giant', distance: 5.20, moons: 79 },
      { name: 'Saturn', type: 'Gas Giant', distance: 9.58, moons: 82 },
      { name: 'Uranus', type: 'Ice Giant', distance: 19.18, moons: 27 },
      { name: 'Neptune', type: 'Ice Giant', distance: 30.07, moons: 14 }
    ];
  });
```

Output:

Planets in the Solar System

Search Planets...   Name ⌄

Name	Type	Distance (AU)	Number of Moons
Earth	Terrestrial	1	1
Jupiter	Gas Giant	5.2	79
Mars	Terrestrial	1.52	2
Mercury	Terrestrial	0.39	0
Neptune	Ice Giant	30.07	14
Saturn	Gas Giant	9.58	82
Uranus	Ice Giant	19.18	27
Venus	Terrestrial	0.72	0