Exercise 10:

Create a data visualization (e.g., pie charts, bar graphs) for an inventory management system using javascript.

Aim:

The aim is to create data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript.

Procedure:

Step 1: Set Up Your HTML File

1. Create a file and name it index.html.
2. Add a <canvas> element for the Pie Chart and Bar Chart.
3. Include the Chart.js library and link your JavaScript file (script.js).

Code (index.html)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>Inventory Management Visualization</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin: 50px;
```

```
    }
    canvas {
      margin: 20px auto;
    }
  </style>
</head>
<body>
  <h1>Inventory Management System</h1>
  <canvas id="pieChart" width="400" height="400"></canvas>
  <canvas id="barChart" width="400" height="400"></canvas>

  <!-- Chart.js Library -->
  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
  <!-- Link to JavaScript File -->
  <script src="script.js"></script>
</body>
</html>
```

Step 2: Create the JavaScript File for Charts

1. Create a new file named script.js.
2. Add the inventory data.
3. Create a **Pie Chart** for category distribution.
4. Create a **Bar Chart** for items in stock.

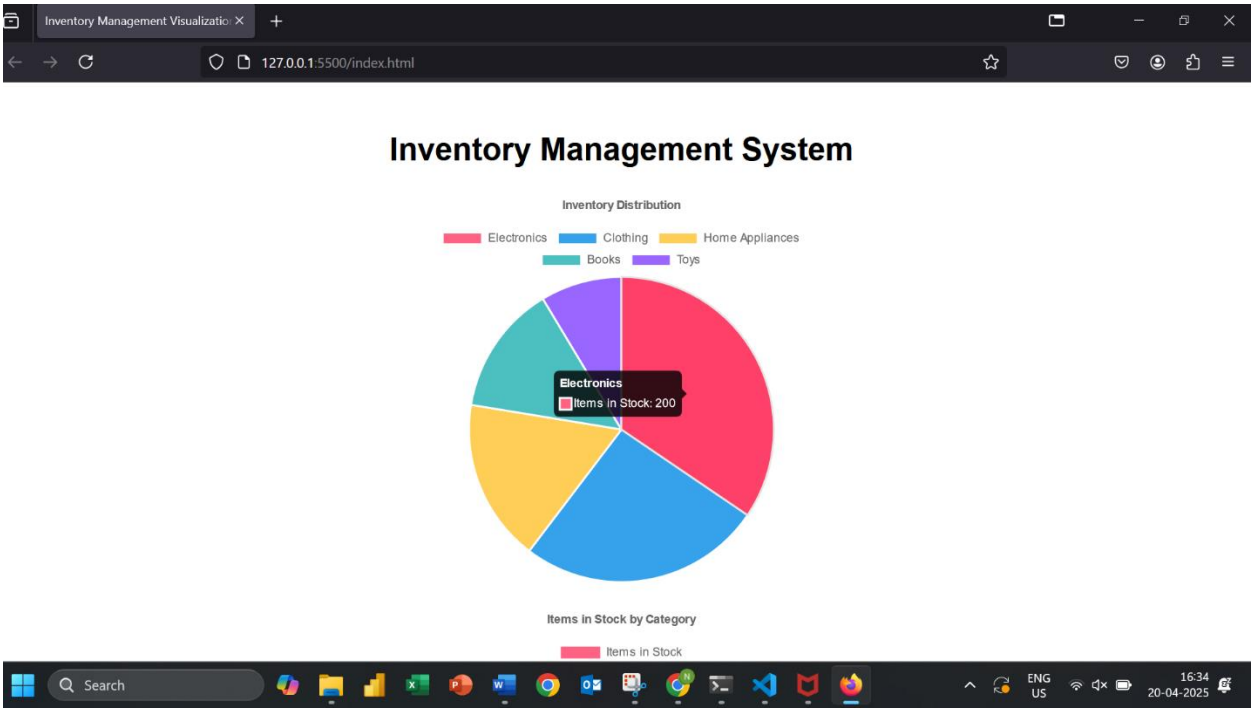
Code (script.js)

```
// Data for the inventory
const inventoryData = {
  labels: ['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],
  datasets: [
    {
      label: 'Items in Stock',
      data: [200, 150, 100, 80, 50],
      backgroundColor: [
        '#FF6384',
        '#36A2EB',
        '#FFCE56',
        '#4BC0C0',
        '#9966FF'
      ]
    }
  ]
};

// Creating the Pie Chart
const ctxPie = document.getElementById('pieChart').getContext('2d');
const pieChart = new Chart(ctxPie, {
  type: 'pie',
  data: inventoryData,
```

```
  options: {
    responsive: true,
    plugins: {
      title: {
        display: true,
        text: 'Inventory Distribution'
      }
    }
  }
});

// Creating the Bar Chart
const ctxBar = document.getElementById('barChart').getContext('2d');
const barChart = new Chart(ctxBar, {
  type: 'bar',
  data: inventoryData,
  options: {
    responsive: true,
    plugins: {
      title: {
        display: true,
        text: 'Items in Stock by Category'
      }
    },
```

```
    scales: {
      y: {
        beginAtZero: true
      }
    }
  }
});
```

Output:



Result:

Successfully created data visualizations (Pie and Bar charts) using Chart.js to represent the stock levels in different inventory categories for an inventory management system.