

Week Ten: Data Visualization for Inventory Management System using JavaScript

Ritika Taphasvi G | CSE FC | 230701266

Aim

To create data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript.

Procedure

1. Set up the HTML file with two `<canvas>` elements for pie chart and bar chart.
 2. Include **Chart.js** library for creating the charts.
 3. Write JavaScript code (`script.js`) to define inventory data and render both charts.
 4. Style the page using basic internal CSS.
-

Program Code

1. HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form Validation</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <div class="container">
    <form id="myForm">
      <label for="email">Email:</label>
      <input type="email" id="email" name="email" required>
      <span id="emailError" class="error"></span>

      <label for="phone">Phone Number:</label>
      <input type="text" id="phone" name="phone" required>
      <span id="phoneError" class="error"></span>
    </form>
  </div>
</body>
</html>
```

```
    <button type="submit">Submit</button>
  </form>
</div>
```

```
<script
src="https://cdnjs.cloudflare.com/ajax/libs/validator/13.6.0/validator.min.js"></script>
  <script src="script.js"></script>
</body>
</html>
```

2. JavaScript

```
// 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,
    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,
    title: {
      display: true,
```

```

        text: 'Items in Stock by Category'
      },
      scales: {
        yAxes: [{
          ticks: {
            beginAtZero: true
          }
        }]
      }
    }
  }
});

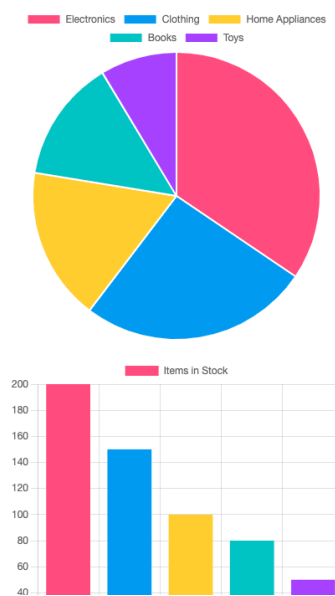
```

Output

- Pie Chart showing the distribution of inventory items.



Inventory Management System



- Bar Chart showing the number of items in each category.



Result

Successfully created pie and bar charts for visualizing inventory data using Chart.js and JavaScript.
