

USER INTERFACE DESIGN

EXERCISE 10

Creation of data visualization for an inventory management system using JS

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This exercise is about data visualization with the help Java Script language.

It uses a very simple code to showcase a beautiful pie chart and bar chart.

The code is run on a platform (eg: Visual Studio Code) where it then opens a browser (users choice) and it displays the pie chart and the bar graph.

These charts have an animation initially right after running the code. This makes the user more visually engaged to the data shown.

HTML code:

```
<!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>

  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
  <script src="script.js"></script>
</body>
</html>

```

JS code:

```

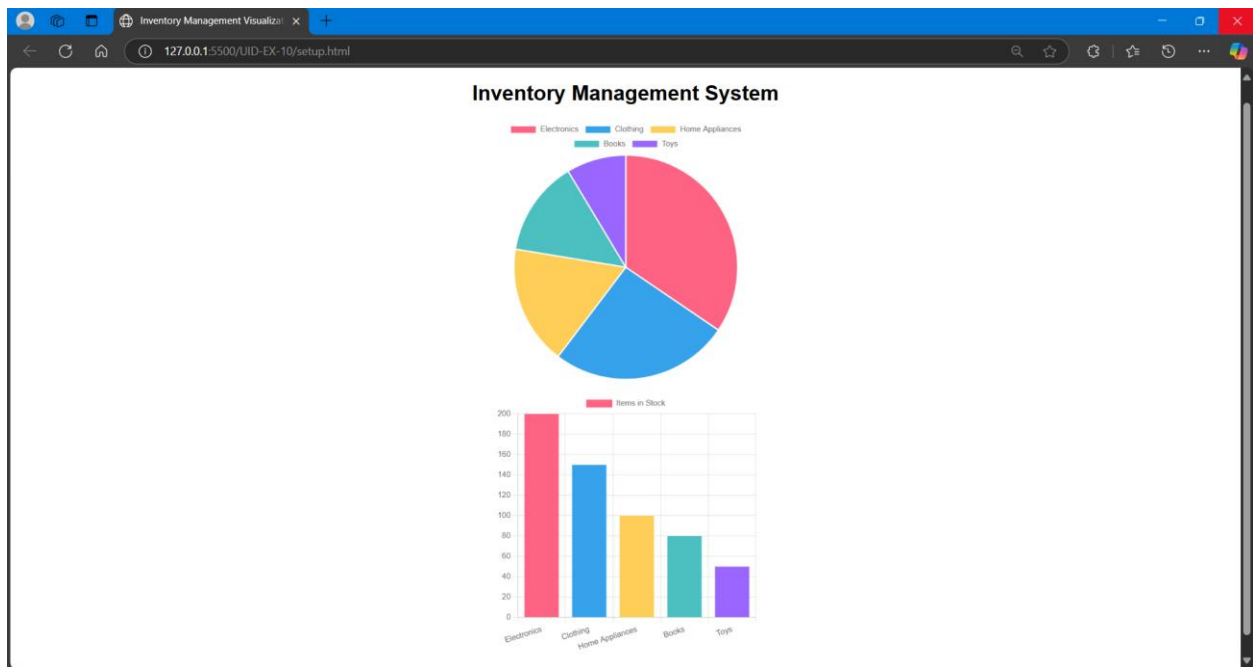
const inventoryData = {
  labels: ['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],
  datasets: [
    {
      label: 'Items in Stock',
      data: [200, 150, 100, 80, 50],
      backgroundColor: [
        '#FF6384',
        '#36A2EB',
        '#FFCE56',
        '#4BC0C0',
        '#9966FF'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

// 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:



This is the output we get after running the code on a desired browser. It is a very colorful and informative pie and bar chart.

Hence data visualization is applied through HTML and JavaScript languages.