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CS23A34
USER INTERFACE AND DESIGN LAB

Laboratory Observation Notebook

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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

First, create an HTML file to hold your canvas for the chart and include Chart.js.

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

Step 2: Create the JavaScript File for Charts

Next, create a JavaScript file (script.js) to handle the data visualization logic.

javascript

// script.js

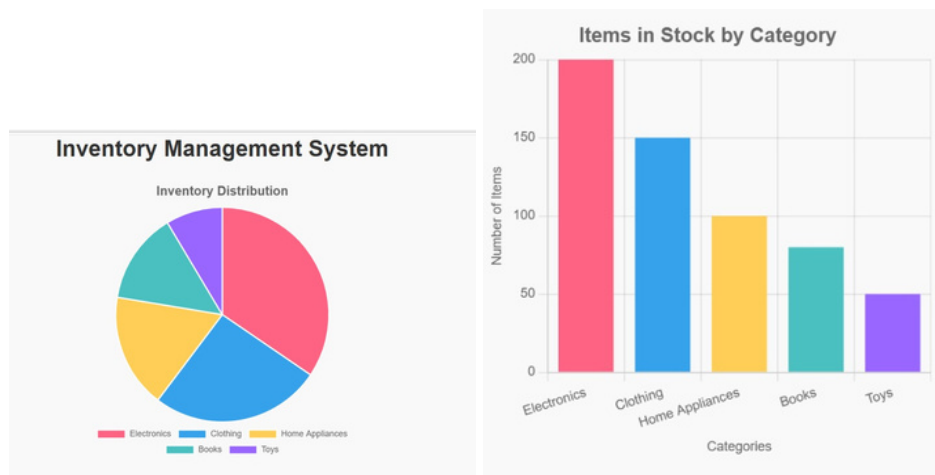
```
// Data for the inventory const inventoryData = { labels:  
['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],  
datasets: [  
  { label: 'Items in Stock',  
    data: [200, 150, 100, 80, 50],  
    backgroundColor: [  
      '#FF6384',  
      '#36A2EB',  
      '#FFCE56',  
     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



RESULT:

Hence we have created data visualizations, such as pie charts and bar graphs, for an inventory management system using JavaScript