Lab 10

Sanjana R – CSE C

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

PROCEDURE:

In this exercise two files are required.

Code editor used: VSCode

1. index.html

- Sets up the webpage structure
- Creates two empty chart areas – Pie chat & Bar chart
- Includes the chart.js library from CDN which helps to draw the charts
- Adds simple styling

```
<!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>

2. script.js

- Defines **inventory data** with:
    - Categories (Electronics, Clothing, Books)
    - Number of items available in each category
    - Background colors for chart visuals
- Uses Chart.js to create:
    1. **Pie Chart**: shows the share of each category
    2. A **Bar Chart**: shows the exact quantity of items in each category
- Both charts are made **responsive** and have titles.

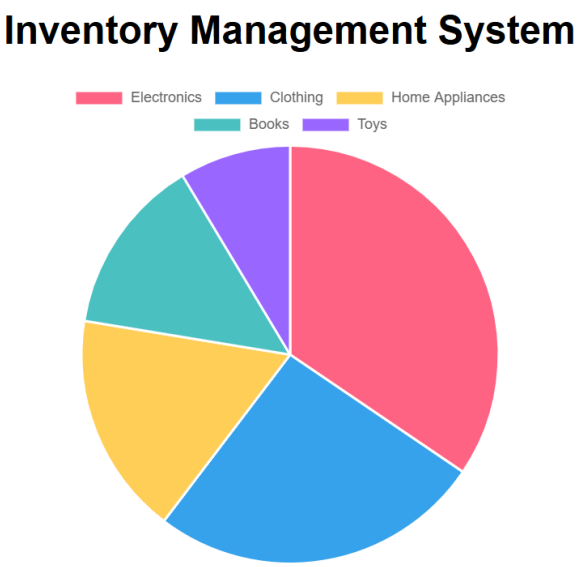
```
// Data for the inventory
const inventoryData = {
  labels: ['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],
  datasets: [
  {
  label: 'Items in Stock',
  data: [200, 150, 100, 80, 50],
  backgroundColor: [
  '#FF6384',
  '#36A2EB',
  '#FFCE56',
  '#4BC0C0',
  //
```

```
'#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'
},
```

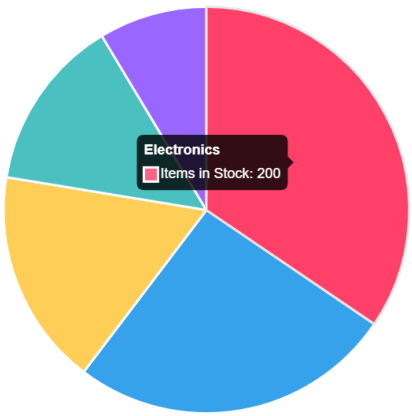
```
scales: {
yAxes: [{
ticks: {
beginAtZero: true
}
}]
}
}
});
```

After running the code:

The pie chart is as follows:



Displays the count when user hovers on a tile.



The bar chart is as follows:

It also displays the exact count when user hovers on the tile