

Exercise 10

Inventory Management System – Documentation

Overview

The Inventory Management System Visualization project aims to present inventory data effectively using interactive charts built with Chart.js.

This system provides a visual overview of inventory categories and stock levels through Pie Charts and Bar Graphs, improving clarity for inventory analysis.

Objective

- To visualize inventory data using modern JavaScript chart libraries.
- To make the distribution of items across various categories easily understandable.
- To allow quick assessment of stock availability across different product types.

Technologies Used

- HTML5 — Structure of the webpage
- CSS3 — Basic styling
- JavaScript — Logic for data handling and chart generation
- Chart.js — JavaScript library for building responsive charts

Project Structure

- `index.html` — Main webpage containing two `<canvas>` elements for Pie and Bar charts.
- `script.js` — JavaScript file containing data and chart logic.

Features

- Pie Chart representing the distribution of inventory across different categories.
- Bar Chart displaying the count of items in stock per category.
- Responsive Design — Charts adjust to different screen sizes.
- Color-coded categories for easy identification.

Inventory Categories and Data

Category	Items in Stock
Electronics	200
Clothing	150
Home Appliances	100
Books	80
Toys	50

## How It Works

HTML is used to create a basic page structure with two `<canvas>` elements.

Chart.js library is imported via CDN.

Inventory data is prepared in the `script.js` file.

Two charts are initialized:

Pie Chart (type: 'pie') for inventory distribution.

Bar Chart (type: 'bar') for stock quantity by category.

## Code Snippets

HTML (**index.html**) html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Inventory Management Visualization</title>  <script
src="https://cdn.jsdelivr.net/npm/chart.js"></script>
</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="script.js"></script>
</body>
</html>
```

JavaScript (**script.js**) javascript

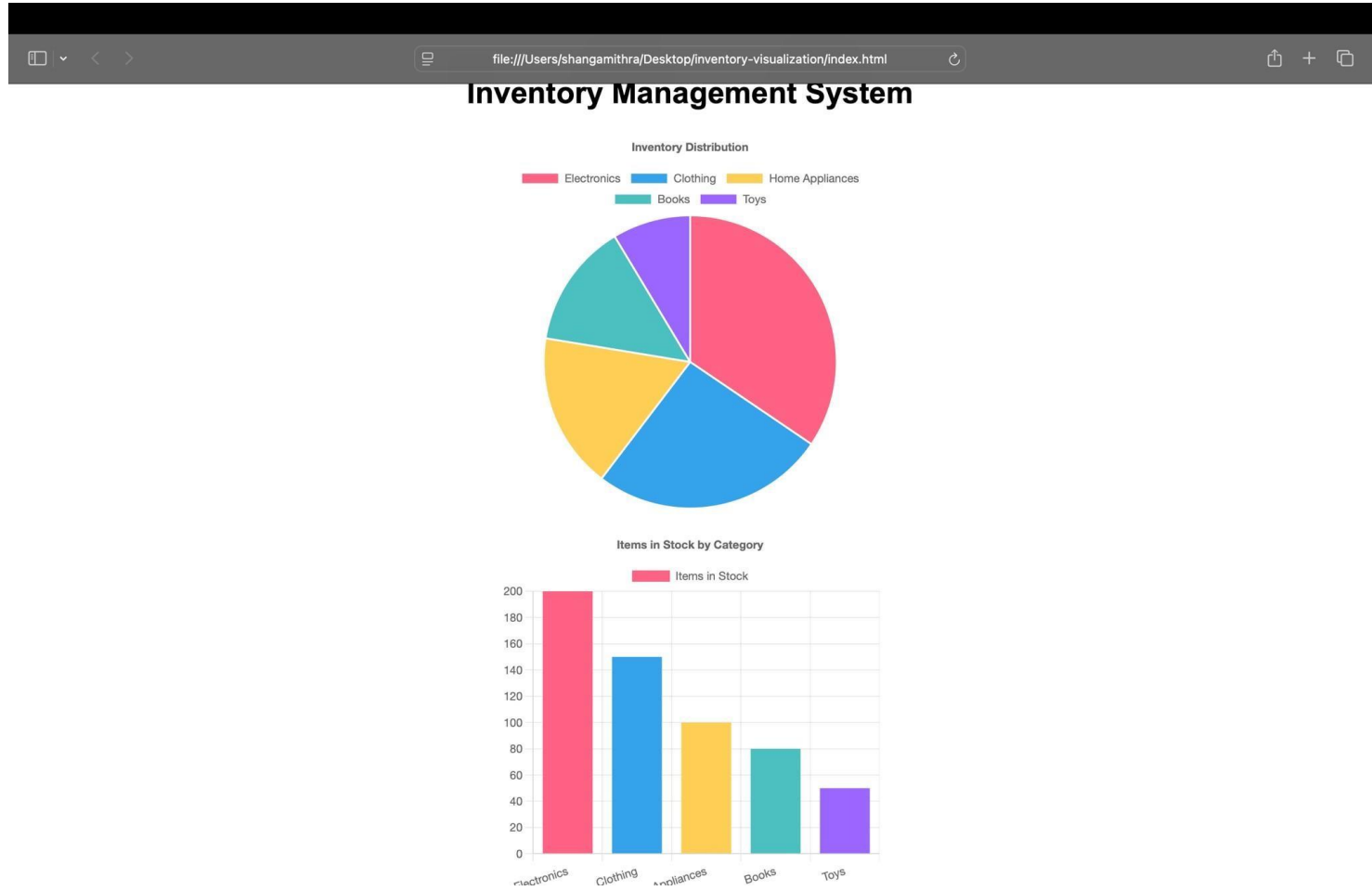
```
const inventoryData = {
  labels: ['Electronics', 'Clothing', 'Home Appliances', 'Books', 'Toys'],
  datasets: [{
    label: 'Items in Stock',
    data: [200, 150, 100, 80, 50],
    backgroundColor: ['#FF6384', '#36A2EB', '#FFCE56', '#4BC0C0', '#9966FF'],
  } ] };

// Pie Chart new
Chart(document.getElementById('pieChart'), {
  type: 'pie',  data: inventoryData,  options: {
  responsive: true,  title: {  display: true,
text: 'Inventory Distribution'
  }
}
});

// Bar Chart new
Chart(document.getElementById('barChart'), {
  type: 'bar',  data: inventoryData,  options: {
  responsive: true,  title: {  display: true,
text: 'Items in Stock by Category'
```

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

OUTPUT



Conclusion

The project successfully demonstrates how to visually manage and analyze inventory data using simple web technologies. It offers a quick and intuitive overview that could be extended for real-world inventory management systems.