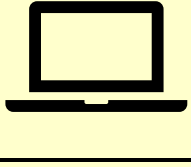


Web tech



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Task1] Develop a single page application for Shopping List. First develop a simple prototype using html and javascript. Gradually develop a MVC based prototype.

Code]

Simple Prototype

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Shopping List</title>

    <style>
        body {
            font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

            margin: 20px;
            background: linear-gradient(135deg, #f4f4f4, #d9e9ff);
        }

        h1 {
            color: #da5411;
            text-align: center;
            margin-bottom: 20px;
        }
    </style>

```

```
form {
  margin-bottom: 20px;
  background: linear-gradient(180deg, #ffffff, #f0f0f0);
  padding: 30px;
  border-radius: 16px;
  box-shadow: 0 0 20px rgba(0, 0, 0, 0.1);
}

label {
  display: block;
  margin-bottom: 16px;
  color: #555;
}

input, select {
  margin-bottom: 20px;
  padding: 16px;
  width: 100%;
  box-sizing: border-box;
  border: 1px solid #ccc;
  border-radius: 10px;
  font-size: 16px;
  outline: none;
}

button {
  padding: 14px;
  background: linear-gradient(135deg, #4CAF50, #45a049);
  color: white;
  border: none;
  border-radius: 10px;
  cursor: pointer;
  font-size: 16px;
  transition: background 0.3s ease;
  outline: none;
}

button:hover {
  background: linear-gradient(135deg, #45a049, #4CAF50);
}

table {
  width: 100%;
  border-collapse: collapse;
  margin-top: 20px;
}
```

```

        background: linear-gradient(180deg, #ffffff, #f0f0f0);
        box-shadow: 0 0 20px rgba(0, 0, 0, 0.1);
        border-radius: 16px;
        overflow: hidden;
    }

    th, td {
        border: 1px solid #ddd;
        padding: 20px;
        text-align: left;
    }

    #orderSummary {
        background: linear-gradient(180deg, #e6f7ff, #b3d9ff);
        color: #0066cc;
        font-weight: bold;
        padding: 16px;
        border-radius: 16px;
        margin-bottom: 20px;
        text-align: center;
    }
</style>

</head>
<body>

    <h1>Shopping List</h1>

    <form id="itemForm">
        <label for="itemName">Item Name:</label>
        <input type="text" id="itemName" placeholder="Enter item name"
required>

        <label for="itemQuantity">Quantity:</label>
        <input type="number" id="itemQuantity" placeholder="1"
value="1" min="1" required>

        <label for="itemPriority">Priority:</label>
        <select id="itemPriority" required>
            <option value="low">Low</option>
            <option value="medium">Medium</option>
            <option value="high">High</option>
        </select>

        <label for="storeName">Store Name:</label>

```

```

        <input type="text" id="storeName" placeholder="Enter store
name" required>

        <label for="storeSection">Store Section:</label>
        <input type="text" id="storeSection" placeholder="Enter store
section" required>

        <label for="itemPrice">Price:</label>
        <input type="number" id="itemPrice" placeholder="Enter price"
min="0" step="0.01" required>

        <button type="button" onclick="addItem()">Add Item</button>
    </form>

    <table id="itemList">
        <thead>
            <tr>
                <th>Item</th>
                <th>Quantity</th>
                <th>Store</th>
                <th>Section</th>
                <th>Price</th>
            </tr>
        </thead>
        <tbody id="orderSummary">
            <h3>Summary of your order is displayed here</h3>
        </tbody>
    </table>

    <script>
        function addItem() {
            var itemName = document.getElementById("itemName").value;
            var itemQuantity =
document.getElementById("itemQuantity").value;
            var itemPriority =
document.getElementById("itemPriority").value;
            var storeName = document.getElementById("storeName").value;
            var storeSection =
document.getElementById("storeSection").value;
            var itemPrice = document.getElementById("itemPrice").value;

            var table =
document.getElementById("itemList").getElementsByTagName('tbody')[0];
            var newRow = table.insertRow(table.rows.length);

            var cell1 = newRow.insertCell(0);

```

```

        var cell2 = newRow.insertCell(1);
        var cell3 = newRow.insertCell(2);
        var cell4 = newRow.insertCell(3);
        var cell5 = newRow.insertCell(4);

        cell1.innerHTML = itemName;
        cell2.innerHTML = itemQuantity;
        cell3.innerHTML = storeName;
        cell4.innerHTML = storeSection;
        cell5.innerHTML = '$' + parseFloat(itemPrice).toFixed(2);

        // Update the summary
        var summaryTable = document.getElementById("orderSummary");
        var summaryRow = summaryTable.insertRow(0);
        var summaryCell = summaryRow.insertCell(0);

        summaryCell.innerHTML = "Added: " + itemQuantity + " " +
        itemName + "(s) to your order for $" +
        parseFloat(itemPrice).toFixed(2);
    }
</script>
</body>
</html>

```

Output]

The screenshot shows a web browser window with the title 'Shopping List'. The address bar displays '127.0.0.1:5500/T1.html'. The page content is a form titled 'Shopping List' in orange text. The form consists of several input fields, each with a light blue header: 'Item Name:' (containing 'Turtle Neck sweater'), 'Quantity:' (containing '1'), 'Priority:' (a dropdown menu with 'Medium' selected), 'Store Name:' (containing 'H&M'), 'Store Section:' (containing '1'), and 'Price:' (containing '70'). At the bottom of the form is a green button labeled 'Add Item'.

Summary of your order is displayed here

Item	Quantity	Store	Section	Price
Added: 2 Turtle Neck sweater(s) to your order for \$69.98				
Added: 1 Bag(s) to your order for \$20.00				
Bag	1	getReady	3	\$20.00
Turtle Neck sweater	2	H&M	4	\$69.98

Model view Controller:

T1MVC.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Shopping List</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

  <h1>Shopping List</h1>

  <form id="itemForm">
    <label for="itemName">Item Name:</label>
    <input type="text" id="itemName" placeholder="Enter item name"
required>

    <label for="itemQuantity">Quantity:</label>
    <input type="number" id="itemQuantity" placeholder="1"
value="1" min="1" required>

    <label for="itemPriority">Priority:</label>
    <select id="itemPriority" required>
      <option value="low">Low</option>
      <option value="medium">Medium</option>
      <option value="high">High</option>
    </select>

    <label for="storeName">Store Name:</label>
```

```

        <input type="text" id="storeName" placeholder="Enter store
name" required>

        <label for="storeSection">Store Section:</label>
        <input type="text" id="storeSection" placeholder="Enter store
section" required>

        <label for="itemPrice">Price:</label>
        <input type="number" id="itemPrice" placeholder="Enter price"
min="0" step="0.01" required>

        <button type="button" onclick="addItem()">Add Item</button>
    </form>

    <table id="itemList">
        <thead>
            <tr>
                <th>Item</th>
                <th>Quantity</th>
                <th>Store</th>
                <th>Section</th>
                <th>Price</th>
            </tr>
        </thead>
        <tbody id="orderSummary">
            Summary of your order is displayed here
        </tbody>
    </table>

    <script src="model.js"></script>
    <script src="view.js"></script>
    <script src="controller.js"></script>
</body>
</html>

```

Styles.css

```

body {
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    margin: 20px;
    background: linear-gradient(135deg, #f4f4f4, #d9e9ff);
}

h1 {
    color: #da5411;
    text-align: center;
}

```

```
    margin-bottom: 20px;
}

form {
    margin-bottom: 20px;
    background: linear-gradient(180deg, #ffffff, #f0f0f0);
    padding: 30px;
    border-radius: 16px;
    box-shadow: 0 0 20px rgba(0, 0, 0, 0.1);
}

label {
    display: block;
    margin-bottom: 16px;
    color: #555;
}

input,
select {
    margin-bottom: 20px;
    padding: 16px;
    width: 100%;
    box-sizing: border-box;
    border: 1px solid #ccc;
    border-radius: 10px;
    font-size: 16px;
    outline: none;
}

button {
    padding: 14px;
    background: linear-gradient(135deg, #4CAF50, #45a049);
    color: white;
    border: none;
    border-radius: 10px;
    cursor: pointer;
    font-size: 16px;
    transition: background 0.3s ease;
    outline: none;
}

button:hover {
    background: linear-gradient(135deg, #45a049, #4CAF50);
}

table {
```



```

width: 100%;
border-collapse: collapse;
margin-top: 20px;
background: linear-gradient(180deg, #ffffff, #f0f0f0);
box-shadow: 0 0 20px rgba(0, 0, 0, 0.1);
border-radius: 16px;
overflow: hidden;
}

th,
td {
border: 1px solid #ddd;
padding: 20px;
text-align: left;
}

#orderSummary {
background: linear-gradient(180deg, #e6f7ff, #b3d9ff);
color: #0066cc;
font-weight: bold;
padding: 16px;
border-radius: 16px;
margin-bottom: 20px;
text-align: center;
}

```

Model.js

```

class ShoppingItem {
  constructor(name, quantity, priority, storeName, storeSection,
price) {
    this.name = name;
    this.quantity = quantity;
    this.priority = priority;
    this.storeName = storeName;
    this.storeSection = storeSection;
    this.price = price;
  }
}

class ShoppingListModel {
  constructor() {
    this.items = [];
  }

  addItem(item) {

```

```

        this.items.push(item);
    }
}

const shoppingListModel = new ShoppingListModel();

```

view.js

```

class ShoppingListView {
    constructor() {
        this.itemList =
document.getElementById("itemList").getElementsByTagName('tbody')[0];
        this.orderSummary = document.getElementById("orderSummary");
        this.itemForm = document.getElementById("itemForm");
    }

    renderItemList(item) {
        const newRow =
this.itemList.insertRow(this.itemList.rows.length);

        for (let key in item) {
            const cell = newRow.insertCell();
            cell.innerHTML = item[key];
        }
    }

    renderOrderSummary(item) {
        const summaryRow = this.orderSummary.insertRow(0);
        const summaryCell = summaryRow.insertCell(0);
        summaryCell.innerHTML = `Added: ${item.quantity}
${item.name}(s) to your order for
$${parseFloat(item.price).toFixed(2)}`;
    }
}

const shoppingListView = new ShoppingListView();

```

controller.js

```

function addItem() {
    const itemName = document.getElementById("itemName").value;
    const itemQuantity = document.getElementById("itemQuantity").value;
    const itemPriority = document.getElementById("itemPriority").value;
    const storeName = document.getElementById("storeName").value;
    const storeSection = document.getElementById("storeSection").value;

```

```

    const itemPrice = document.getElementById("itemPrice").value;

    const newItem = new ShoppingItem(itemName, itemQuantity,
itemPriority, storeName, storeSection, itemPrice);
    shoppingListModel.addItem(newItem);

    shoppingListView.renderItemList(newItem);
    shoppingListView.renderOrderSummary(newItem);
}

```

Output

Shopping List

Item Name:
Turtle Neck sweater

Quantity:
2

Priority:
High

Store Name:
H&M

Store Section:
4

Price:
200

Add Item

Summary of your order is displayed here

Item	Quantity	Store	Section	Price
Added: 2 Turtle Neck sweater(s) to your order for \$200.00				
Turtle Neck sweater	2	high	H&M	200