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<u>LAB Assignment - 6</u>

<u>Question 1</u>

<u>Code</u> :

<u>Simple prototype using HTML & Javascript</u>

```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>
<style>
    /* Some basic styling for the shopping list */
    body {
        font-family: Arial, sans-serif;
    }
    #container {
        width: 300px;
        margin: 20px auto;
    }
    ul {
        list-style-type: none;
        padding: 0;
    }
    li {
        margin-bottom: 5px;
    }
    .purchased {
        text-decoration: line-through;
    }
</style>
</head>
<body>
<div id="container">
    <h1>Shopping List</h1>
    <input type="text" id="item" placeholder="Enter item...">
    <button onclick="addItem()">Add Item</button>
    <ul id="shopping-list"></ul>
</div>
```

```
<script>
    function addItem() {
        var itemInput = document.getElementById("item");
        var itemName = itemInput.value.trim();

        if (itemName !== "") {
            var listItem = document.createElement("li");
            listItem.textContent = itemName;

            listItem.onclick = function() {
                listItem.classList.toggle("purchased");
            };

            document.getElementById("shopping-list").appendChild(listItem);
            itemInput.value = "";
        }
    }
</script>
</body>
</html>
```
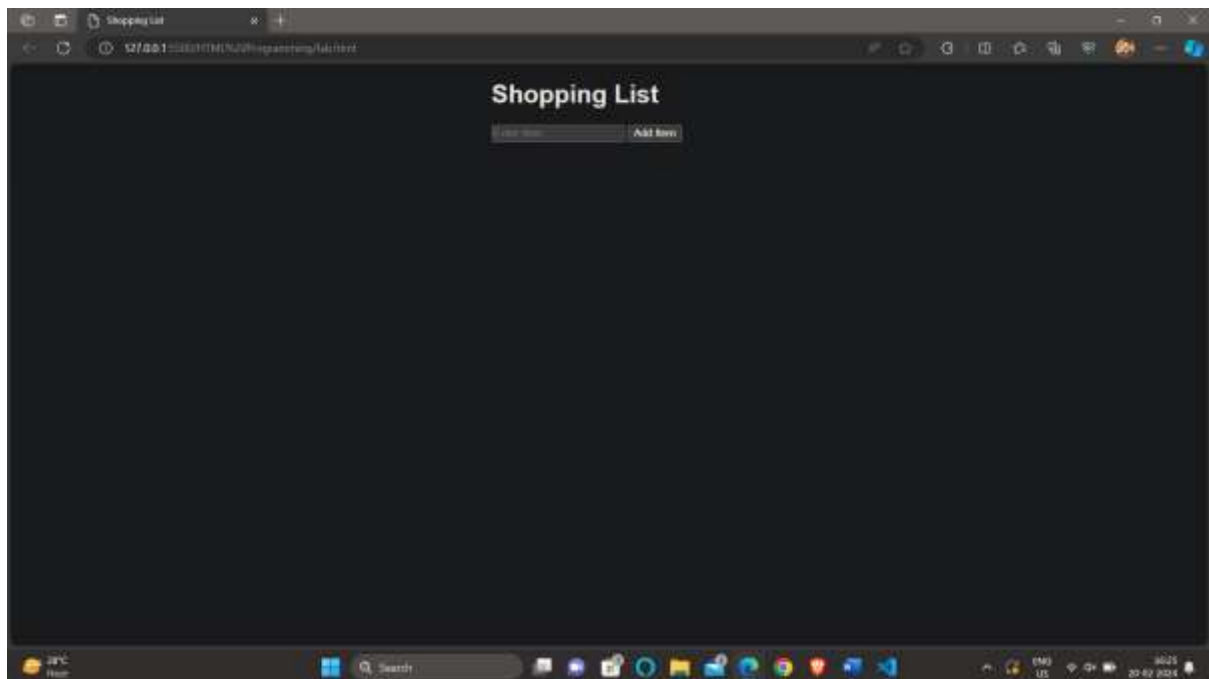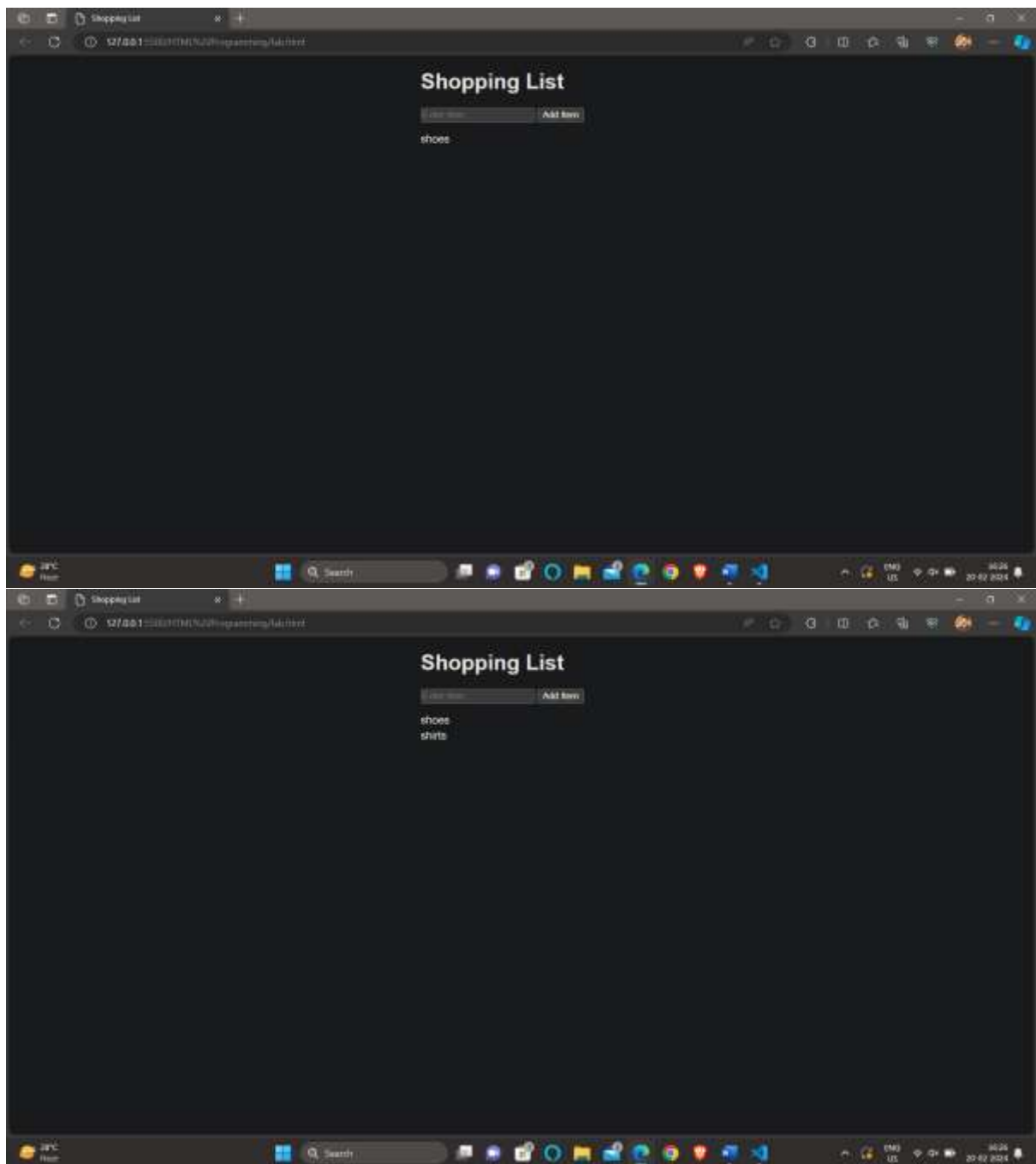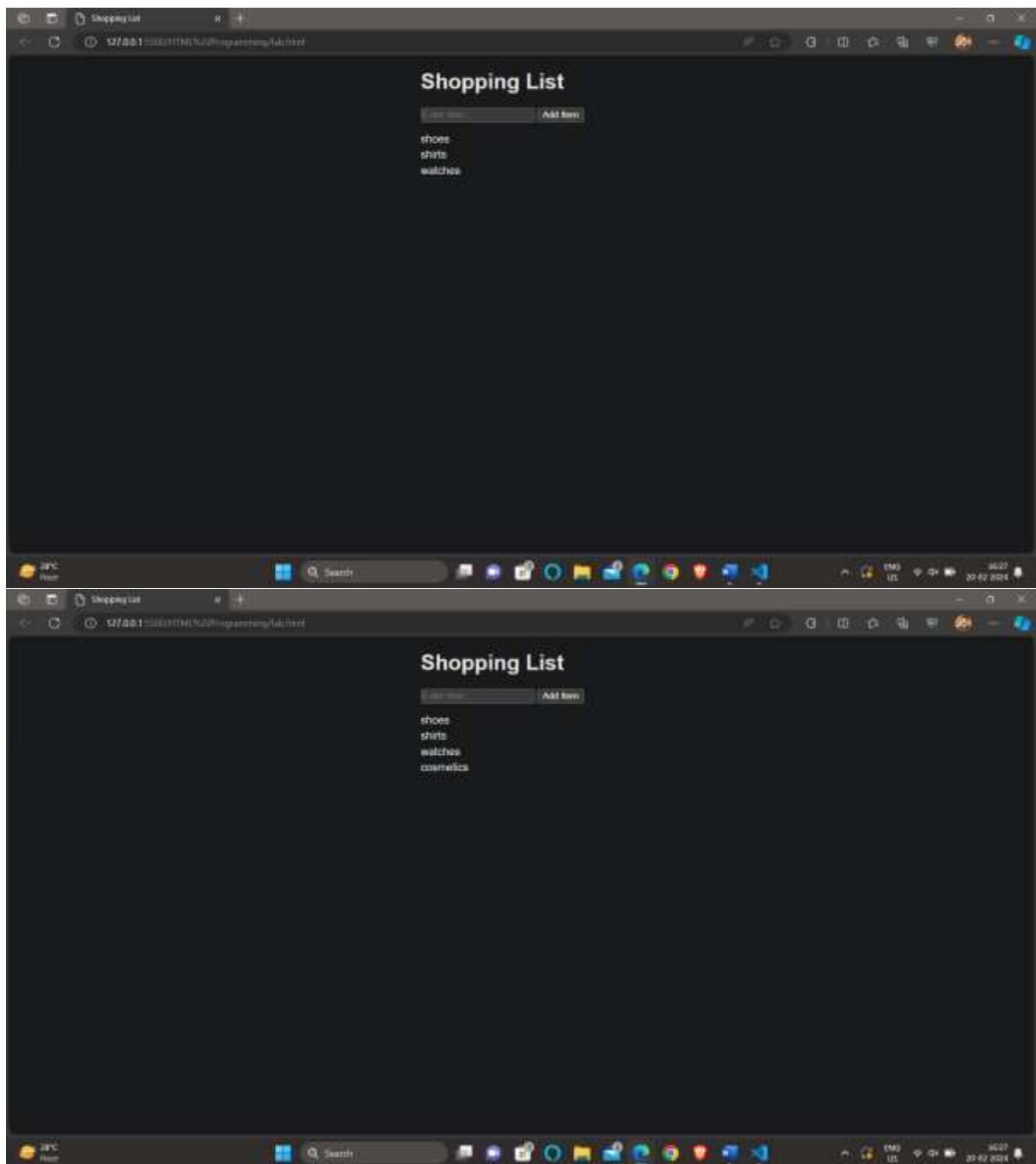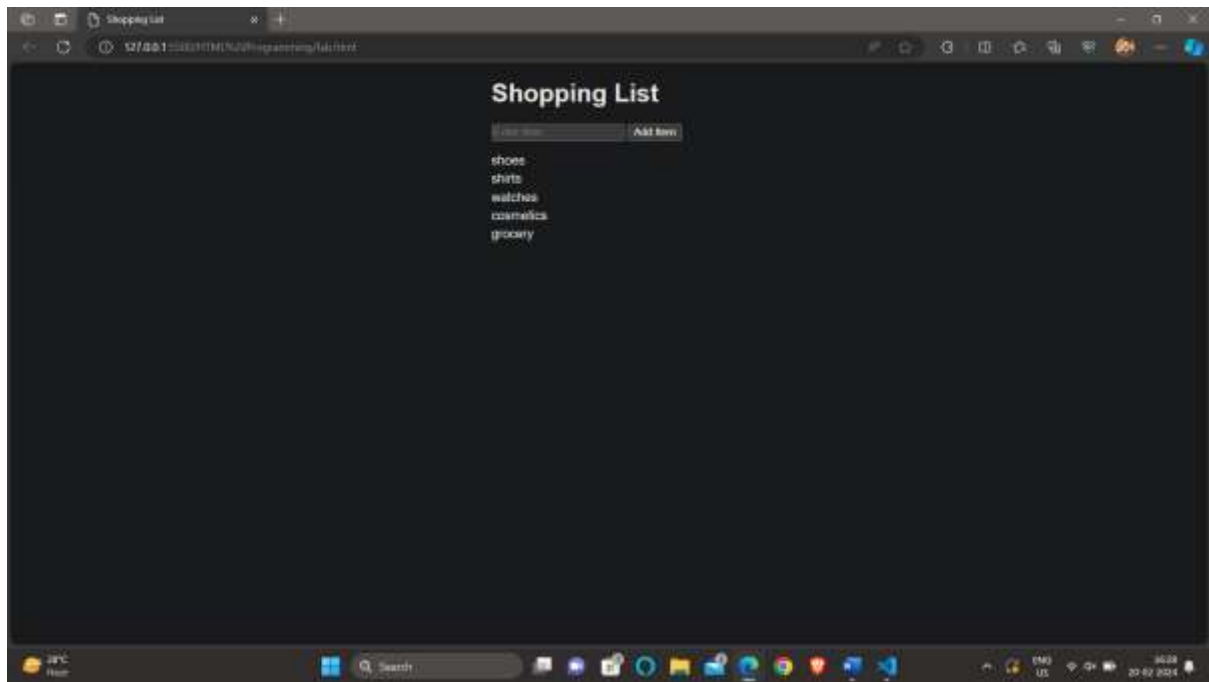
Output :

Shopping List

shoes
shirts
watches

Shopping List

shoes
shirts
watches
cosmetics

Code :

MVC Based prototype :

HTML Structure for our MVC Prototype:

In this HTML file, I have removed the JavaScript code and added a reference to a controller.js file, which will contain our controller logic.

```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 MVC</title>
<style>
    /* Some basic styling for the shopping list */
    body {
        font-family: Arial, sans-serif;
    }
    #container {
        width: 300px;
        margin: 20px auto;
    }
    ul {
        list-style-type: none;
        padding: 0;
    }
```

```html
    li {
        margin-bottom: 5px;
    }
    .purchased {
        text-decoration: line-through;
    }
</style>
</head>
<body>
<div id="container">
    <h1>Shopping List MVC</h1>
    <input type="text" id="item" placeholder="Enter item...">
    <button id="addItemBtn">Add Item</button>
    <ul id="shopping-list"></ul>
</div>

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

controller.js file:

```javascript
// Controller Logic

// Initialize the shopping list model
var shoppingList = [];

// Function to add item to the shopping list
function addItem(itemName) {
    if (itemName.trim() !== "") {
        shoppingList.push({
            name: itemName,
            purchased: false
        });
    }
}

// Function to toggle item's purchased status
function togglePurchased(index) {
    shoppingList[index].purchased = !shoppingList[index].purchased;
}

// Function to render the shopping list
function renderShoppingList() {
    var shoppingListElement = document.getElementById("shopping-list");
    shoppingListElement.innerHTML = "";
```

```javascript
    shoppingList.forEach(function(item, index) {
        var listItem = document.createElement("li");
        listItem.textContent = item.name;
        if (item.purchased) {
            listItem.classList.add("purchased");
        }

        listItem.onclick = function() {
            togglePurchased(index);
            renderShoppingList();
        };

        shoppingListElement.appendChild(listItem);
    });
}

// Function to handle adding item event
function handleAddItem() {
    var itemInput = document.getElementById("item");
    var itemName = itemInput.value;
    addItem(itemName);
    renderShoppingList();
    itemInput.value = "";
}

// Event listener for adding item button click
document.getElementById("addItemBtn").addEventListener("click",
handleAddItem);

// Initial rendering of the shopping list
renderShoppingList();
```

Output :

Shopping List

Shopping List

shoes

Shopping List

shoes
shirts

Shopping List

Enter item   Add Item

shoes
shirts
watches

Shopping List

Enter item   Add Item

shoes
shirts
watches
cosmetics

Shopping List

Enter item | Add item

shoes
shirts
watches
cosmetics
grocery