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T1. Develop prototype 3 continuing with the last lab. Confirm that the app now remembers
your list even after a page refresh.

HTML Code:

```
<!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>
    <div class="container">
        <h1>Shopping List</h1>
        <input type="text" id="itemInput" placeholder="Add new item">
        <button onclick="addItem()">Add Item</button>
        <ul id="itemList"></ul>
    </div>

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

CSS code:

```
.container {
    max-width: 600px;
    margin: 50px auto;
    padding: 0 20px;
}

h1 {
    text-align: center;
}

input[type="text"] {
    width: 70%;
    padding: 8px;
    margin-bottom: 10px;
}

button {
    padding: 8px 15px;
    background-color: #4CAF50;
    color: white;
    border: none;
```

```
    cursor: pointer;
}

button:hover {
    background-color: #45a049;
}

ul {
    list-style-type: none;
    padding: 0;
}

li {
    margin-bottom: 5px;
    padding: 8px;
    background-color: #f2f2f2;
    border-radius: 5px;
}
```

Javascript Code:
script .js

```
// Function to add item to the list
function addItem() {
    var itemInput = document.getElementById('itemInput');
    var itemValue = itemInput.value.trim();

    if (itemValue !== '') {
        var itemList = document.getElementById('itemList');
        var listItem = document.createElement('li');
        listItem.textContent = itemValue;
        itemList.appendChild(listItem);
        saveListToStorage(); // Save list to localStorage
        itemInput.value = '';
    } else {
        alert('Please enter a valid item!');
    }
}

// Function to save the list to localStorage
function saveListToStorage() {
    var itemList = document.getElementById('itemList');
    var items = [];

    // Get all list items
    for (var i = 0; i < itemList.children.length; i++) {
        items.push(itemList.children[i].textContent);
    }

    // Save items to localStorage
    localStorage.setItem('shoppingList', JSON.stringify(items));
}

// Function to load the list from localStorage
```

```
function loadListFromStorage() {
    var itemList = document.getElementById('itemList');
    var storedItems = localStorage.getItem('shoppingList');

    if (storedItems) {
        var items = JSON.parse(storedItems);

        // Add items to the list
        items.forEach(function(item) {
            var listItem = document.createElement('li');
            listItem.textContent = item;
            itemList.appendChild(listItem);
        });
    }
}

// Load list from localStorage when the page loads
window.addEventListener('load', loadListFromStorage);
```

model.js

```
var shoppingListModel = {
    items: [],
    addItem: function(item) {
        this.items.push(item);
    }
};
```

controller.js

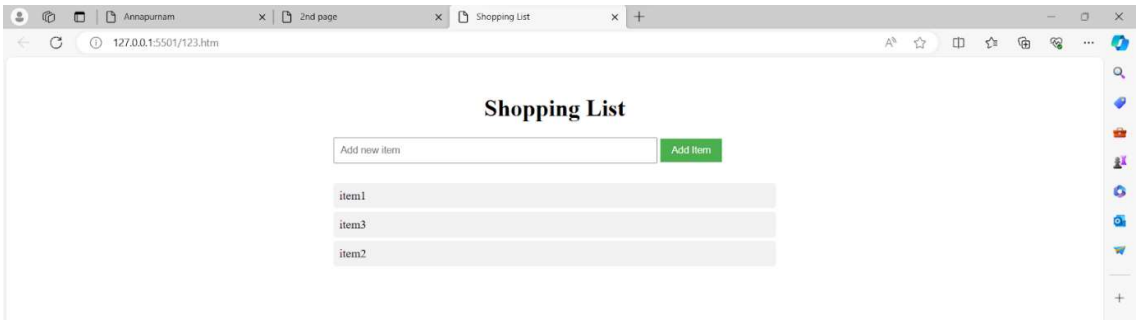
```
var shoppingListController = {
    addItem: function() {
        var itemInput = document.getElementById('itemInput');
        var itemValue = itemInput.value.trim();

        if (itemValue !== '') {
            shoppingListModel.addItem(itemValue);
            itemInput.value = '';
            shoppingListView.displayItems();
        } else {
            alert('Please enter a valid item!');
        }
    },
    init: function() {
        this.setupEventListeners();
        shoppingListView.displayItems();
    },
    setupEventListeners: function() {
        var addButton = document.querySelector('button');
        addButton.addEventListener('click', this.addItem);
        var itemInput = document.getElementById('itemInput');
        itemInput.addEventListener('keypress', function(event) {
            if (event.key === 'Enter') {
                shoppingListController.addItem();
            }
```

```
        });
    }
};

shoppingListController.init();
```

view.js

```
var shoppingListView = {
    displayItems: function() {
        var itemList = document.getElementById('itemList');
        itemList.innerHTML = '';

        shoppingListModel.items.forEach(function(item) {
            var listItem = document.createElement('li');
            listItem.textContent = item;
            itemList.appendChild(listItem);
        });
    }
};
```

OUTPUT:-



T2. Create a local storage that saves the number of times you have accessed the page and
displays it.

HTML code:-

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Page Access Counter</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Page Access Counter</h1>
  <p>You have accessed this page <span id="accessCount"></span> times.</p>
  <button id="incrementButton">Increment Access Count</button>
  <script src="script.js"></script>
</body>
</html>
```

CSS Code:-

```
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    text-align: center;
  }

  h1 {
    margin-top: 50px;
  }

  p {
    font-size: 18px;
  }
```

Javascript Code:-

```
function updateAccessCount() {
    if (typeof(Storage) !== "undefined") {
```

```
    if (localStorage.pageAccessCount) {
      localStorage.pageAccessCount = Number(localStorage.pageAccessCount) + 1;
    } else {
      localStorage.pageAccessCount = 1;
    }
    document.getElementById("accessCount").innerText = localStorage.pageAccessCount;
  } else {
    document.getElementById("accessCount").innerText = "Sorry, your browser does not support web
storage...";
  }
 }

 function initializeAccessCount() {
  if (typeof(Storage) !== "undefined") {
    if (!localStorage.pageAccessCount) {
      localStorage.pageAccessCount = 0;
    }
    document.getElementById("accessCount").innerText = localStorage.pageAccessCount;
  } else {
    document.getElementById("accessCount").innerText = "Sorry, your browser does not support web
storage...";
  }
 }

 window.onload = initializeAccessCount;

 document.getElementById("incrementButton").addEventListener("click", updateAccessCount);
```

OUTPUT:-