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Lab 7

T1

```
<!-- index.html -->
<!DOCTYPE html>
<html lang="en">

<head>
  <script>
    // view.js
    class ShoppingListView {
      constructor() {
        this.itemInput = document.getElementById('itemInput');
        this.shoppingList = document.getElementById('shoppingList');
        this.addItemButton = document.querySelector('button');

        this.addItemButton.addEventListener('click', () =>
this.controller.addItem());
      }

      bindRemoveItem(handler) {
        this.shoppingList.addEventListener('click', (event) => {
          if (event.target.tagName === 'LI') {
            const index =
Array.from(this.shoppingList.children).indexOf(event.target);
            handler(index);
          }
        });
      }

      updateItemList(items) {
        this.shoppingList.innerHTML = "";
        items.forEach(item => {
          const listItem = document.createElement("li");
          listItem.textContent = item;
          this.shoppingList.appendChild(listItem);
        });
      }

      getItemInputValue() {
        return this.itemInput.value.trim();
      }

      clearItemInput() {
        this.itemInput.value = '';
      }
    }
    // data.js
    class ShoppingListModel {
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    constructor() {
        this.items = [];
    }

    addItem(itemName) {
        this.items.push(itemName);
        this.saveItemsToStorage();
    }

    removeItem(index) {
        this.items.splice(index, 1);
        this.saveItemsToStorage();
    }

    getItems() {
        return this.items;
    }

    loadItemsFromStorage() {
        const storedItems =
JSON.parse(localStorage.getItem("shoppingList")) || [];
        this.items = storedItems;
    }

    saveItemsToStorage() {
        localStorage.setItem("shoppingList", JSON.stringify(this.items));
    }
}
// controller.js
class ShoppingListController {
    constructor(model, view) {
        this.model = model;
        this.view = view;
        this.updateView();

        this.view.addItemButton.addEventListener('click', () =>
this.addItem());
    }

    addItem() {
        const itemName = this.view.getItemInputValue();

        if (itemName !== '') {
            this.model.addItem(itemName);
            this.updateView();
            this.view.clearItemInput();
        }
    }

    updateView() {
        const items = this.model.getItems();

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        this.view.updateItemList(items);
    }

    bindRemoveItem() {
        this.view.bindRemoveItem(index => {
            this.model.removeItem(index);
            this.updateView();
        });
    }
}
</script>

<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Shopping List MVC</title>
<style> </style>
</head>

<body>
    <h1>Shopping List</h1>

    <div>
        <input type="text" id="itemInput" placeholder="Enter item">
        <button>Add Item</button>
    </div>

    <ul id="shoppingList"></ul>

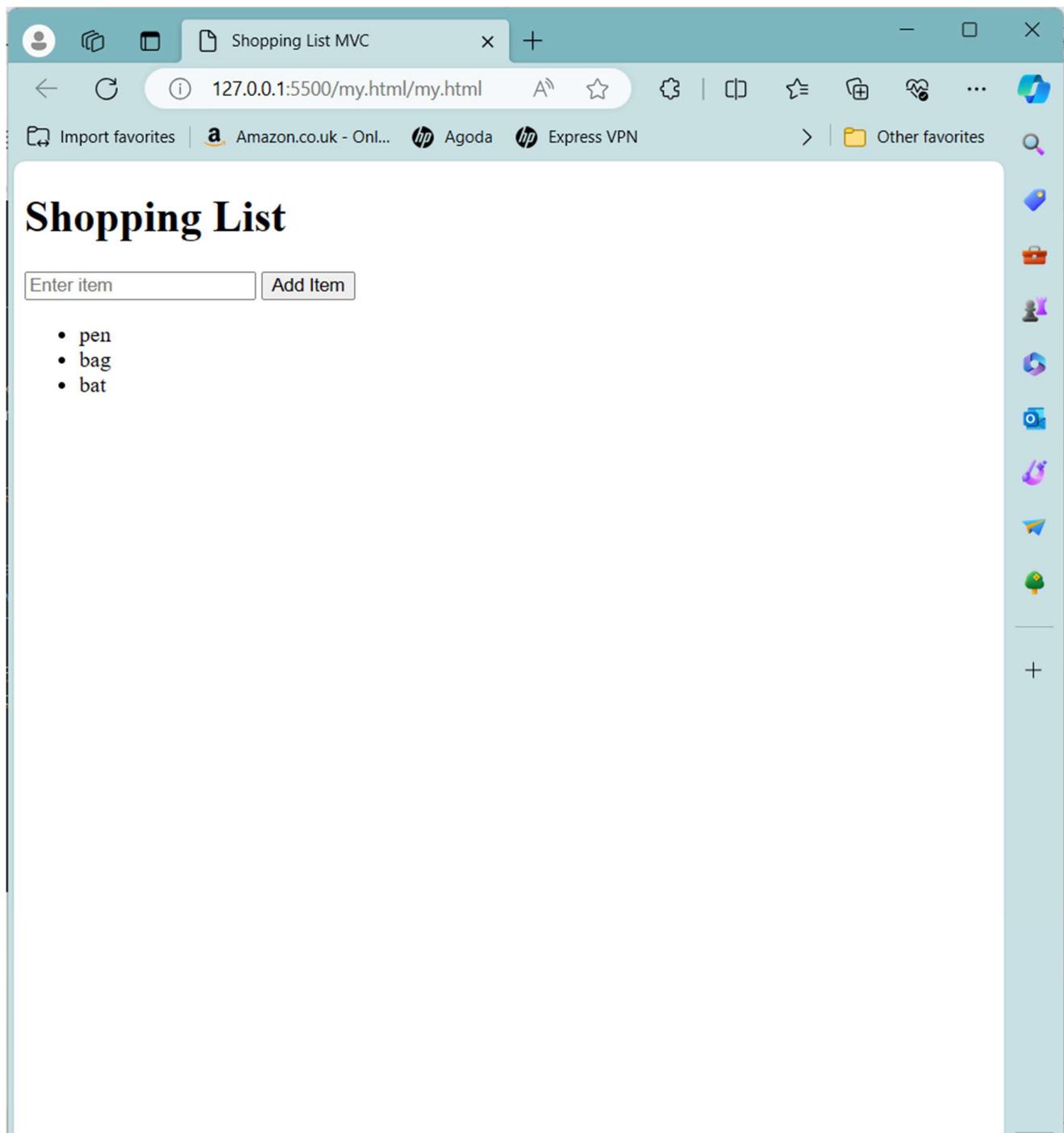
    <script>
        const model = new ShoppingListModel();
        const view = new ShoppingListView();
        const controller = new ShoppingListController(model, view);

        model.loadItemsFromStorage();
        controller.updateView();
    </script>
</body>

</html>
</body>

</html>

```



T2

```
<!-- index.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> </style>
</head>

<body>
```

```

<h1>Shopping List</h1>

<div>
  <input type="text" id="itemInput" placeholder="Enter item">
  <button>Add Item</button>
</div>

<ul id="shoppingList"></ul>

<p id="accessCount">Page accessed: <span id="count"></span> times</p>

<script>
  // controller.js
  class ShoppingListController {
    constructor(model, view) {
      this.model = model;
      this.view = view;
      this.view.setController(this);
      this.updateView();
      this.updateAccessCount(); // Add this line to update access count
on initialization

      this.view.addItemButton.addEventListener('click', () =>
this.addItem());
    }

    addItem() {
      const itemName = this.view.getItemInputValue();

      if (itemName !== '') {
        this.model.addItem(itemName);
        this.updateView();
        this.view.clearItemInput();
      }
    }

    updateView() {
      const items = this.model.getItems();
      this.view.updateItemList(items);
    }

    bindRemoveItem() {
      this.view.bindRemoveItem(index => {
        this.model.removeItem(index);
        this.updateView();
      });
    }

    updateAccessCount() {
      const accessCount = this.model.getAccessCount();
      console.log('Updating access count:', accessCount);
    }
  }

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        this.view.updateAccessCount(accessCount);
    }

}

// data.js
class ShoppingListModel {
    constructor() {
        this.items = [];
        this.accessCount = 0;
    }

    addItem(itemName) {
        this.items.push(itemName);
        this.saveItemsToStorage();
    }

    removeItem(index) {
        this.items.splice(index, 1);
        this.saveItemsToStorage();
    }

    getItems() {
        return this.items;
    }

    loadItemsFromStorage() {
        const storedItems =
JSON.parse(localStorage.getItem("shoppingList")) || [];
        this.items = storedItems;
    }

    saveItemsToStorage() {
        localStorage.setItem("shoppingList", JSON.stringify(this.items));
    }

    loadAccessCountFromStorage() {
        this.accessCount = parseInt(localStorage.getItem("accessCount"))
|| 0;
    }

    incrementAccessCount() {
        this.accessCount++;
        this.saveAccessCountToStorage();
    }

    getAccessCount() {
        return this.accessCount;
    }

    saveAccessCountToStorage() {
        localStorage.setItem("accessCount", this.accessCount.toString());
    }
}

```

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    }
  }
  // view.js
  class ShoppingListView {
    constructor() {
      this.itemInput = document.getElementById('itemInput');
      this.shoppingList = document.getElementById('shoppingList');
      this.addItemButton = document.querySelector('button');
      this.accessCountDisplay = document.getElementById('count');
      this.controller = null;

      this.addItemButton.addEventListener('click', () =>
this.controller.addItem());
    }

    bindRemoveItem(handler) {
      this.shoppingList.addEventListener('click', (event) => {
        if (event.target.tagName === 'LI') {
          const index =
Array.from(this.shoppingList.children).indexOf(event.target);
          handler(index);
        }
      });
    }

    updateItemList(items) {
      this.shoppingList.innerHTML = '';
      items.forEach(item => {
        const listItem = document.createElement("li");
        listItem.textContent = item;
        this.shoppingList.appendChild(listItem);
      });
    }

    getItemInputValue() {
      return this.itemInput.value.trim();
    }

    clearItemInput() {
      this.itemInput.value = '';
    }

    updateAccessCount(count) {
      this.accessCountDisplay.textContent = count;
    }

    setController(controller) {
      this.controller = controller;
    }
  }
</script>

```

```
<script>
  const model = new ShoppingListModel();
  const view = new ShoppingListView();
  const controller = new ShoppingListController(model, view);

  // Load items and access count from localStorage on page load
  model.loadItemsFromStorage();
  model.loadAccessCountFromStorage();
  controller.updateView();

  // Update access count and display
  model.incrementAccessCount();
  controller.updateAccessCount();
</script>
</body>
</html>
```



