

# List Management System

## Instruction:

Create a simple interface for adding items to a list and provide an option to clear the list entirely. This exercise aims to practice DOM manipulation, event handling, and basic JavaScript array operations.

## Don't edit the following files.

1. **index.html** :: an index page

Type your codes in the **script.js** file :: This file consists of three functions.

## Functions:

1. **init()**: Initializes the application's user interface.
  - **Input Field**: Creates an `<input>` element with `id="itemInput"` and a placeholder "Enter item". Appends this element directly to the `<body>`.
  - **Add Button**: Creates a `<button>` element with `id="addButton"` and label "Add". This button is appended to the `<body>` right after the input field.
  - **Clear All Button**: Creates another `<button>` element with `id="clearAllButton"` and label "Clear All". It is appended to the `<body>` following the add button.
  - **List Container**: Generates a `<ul>` element with `id="itemList"` to display the added items. This list container is appended to the `<body>`, below the clear all button.
  - Add a **"click"** event listener to `#addButton` that invokes **addItem**.
  - Add a **"click"** event listener to `#clearAllButton` that invokes **clearAll**.
2. **addItem()**: Processes adding a new item to the list.
  - Retrieves the user input from `#itemInput`.
  - **Validates** the input to ensure it is **not empty**. If valid, the input value is added to the items array.
  - **Invokes displayItems()** to refresh the list displayed to the user, including the newly added item.
  - **Clears** the input field in `#itemInput` to ready it for the next entry.
3. **clearAll()**: Clears the list of items.
  - **Empties** the items array, removing **all stored items**.
  - **Calls displayItems()** to update the user interface, effectively removing all items from the displayed list.
4. **displayItems()**: Refreshes the list displayed to the user.

- **Clears the current contents of #itemList** to ensure it's empty before repopulating.
- **Iterates** through the **items** array, **creating an <li> element** for each item. Each <li> element is then **appended to #itemList**, displaying the current list of items to the user.

#### script.js

```
let items = [];  
  
function init() {  
}  
  
function addItem() {  
}  
  
function clearAll() {  
}  
  
function displayItems() {  
}  
  
init();
```

#### index.html

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1.0">  
  <title>Dynamic Search Filter</title>  
</head>  
<body>  
  <script src="script.js"></script>  
</body>  
</html>
```