Programming Design for Food Gardening Website

# Problem Statement

The goal of this project is to develop an interactive website to promote food gardening as a solution for sustainable food security in communities. As part of the programming team, my task is to design the logical structure that supports this goal, ensuring that the interaction is user-friendly and that all necessary information is delivered effectively.

# IPO Table – Menu System Design

|  |  |  |  |
| --- | --- | --- | --- |
| Menu Option | Input | Processing | Output |
| View Gardening Tips | User selects option 1 | Fetch tips from stored content | Display tips on screen |
| View Challenges | User selects option 2 | Fetch list of common gardening challenges | Display list of challenges |
| View Recommendations | User selects option 3 | Fetch strategies and solutions | Display community-based suggestions |
| Exit | User selects option 4 | End the program | Display exit message |
| Invalid Input | Wrong input entered | Detect invalid input | Display error message |

# Pseudocode – Menu Program Logic

Start  
Display "Welcome to Food Gardening Guide"  
Display "Menu:"  
Display "1. Gardening Tips"  
Display "2. Challenges in Gardening"  
Display "3. Recommendations"  
Display "4. Exit"  
  
Get user\_input  
  
IF user\_input == 1 THEN  
 Display "Tips for Successful Gardening"  
ELSE IF user\_input == 2 THEN  
 Display "Common Challenges in Gardening"  
ELSE IF user\_input == 3 THEN  
 Display "Recommendations to Improve Food Security"  
ELSE IF user\_input == 4 THEN  
 Display "Thank you for using the Gardening Guide"  
 End program  
ELSE  
 Display "Invalid Input. Please enter a number from 1 to 4"  
 Return to Menu  
END IF  
End

# Error Handling

Expected Input: Numbers 1 to 4  
Invalid Input: Any other number, letter, or symbol  
Handling: Display an error message and return to the menu  
  
Example:  
IF user\_input is NOT a number between 1 and 4  
 THEN Display "Invalid input. Please try again."  
 RETURN to menu

# Computations/Actions in IPO Table

|  |  |
| --- | --- |
| Action | Description |
| Display Menu | Print out all options for user |
| Handle Valid Input | Display correct info based on option selected |
| Handle Invalid Input | Show error message and loop back |
| Fetch Data (optional later) | Pull content from arrays/lists (future feature) |
| End Program | Close program with thank-you message |