Cognifyz

Where Data Meets Intelligence

INTERNSHIP PROGRAM

C / C++

Task 10:

Task: Simple Inventory Management System
Description:
Create a simple inventory management system that allows users to add items, display the list of items, and search for items by name or ID. Implement the necessary methods to handle these operations.
Skills: Structs or classes, arrays or linked lists, user input.

Source Code in C:

```c
#include <stdio.h>
#include <string.h>

#define MAX_ITEMS 100

// Creating a structure for inventory item
typedef struct {
    int id;
    char name[50];
    int quantity;
} item;

item inventory[MAX_ITEMS];
int Count = 0;

// Function to add an item to inventory
void addItem() {
    if (Count >= MAX_ITEMS) {
        printf("Inventory full! Cannot add more items.\n");
        return;
    }

    printf("Enter item ID: ");
    scanf("%d", &inventory[Count].id);
    getchar(); // Consume the newline left by scanf

    printf("Enter item name: ");
    fgets(inventory[Count].name, sizeof(inventory[Count].name), stdin);
    inventory[Count].name[strcspn(inventory[Count].name, "\n")] = '\0'; // Remove
newline

    printf("Enter item quantity: ");
    scanf("%d", &inventory[Count].quantity);

    Count++;
    printf("Item added successfully!\n");
}

// Function to display all items
void displayItems() {
    if (Count == 0) {
        printf("Inventory is empty!\n");
        return;
    }
```

```c
    printf("\nInventory List:\n");
    printf("ID\tName\tQuantity\n");
    for (int i = 0; i < Count; i++) {
        printf("%d\t%s\t%d\n", inventory[i].id, inventory[i].name,
inventory[i].quantity);
    }
}

// Function to search for an item by ID or name
void searchItem() {
    char name[50];
    int id, choice;

    printf("Search by: 1. ID  2. Name\n");
    scanf("%d", &choice);
    getchar(); // Consume newline left by scanf

    if (choice == 1) {
        printf("Enter item ID: ");
        scanf("%d", &id);

        for (int i = 0; i < Count; i++) {
            if (inventory[i].id == id) {
                printf("Item found: %s, Quantity: %d\n", inventory[i].name,
inventory[i].quantity);
                return;
            }
        }
    } else if (choice == 2) {
        printf("Enter item name: ");
        fgets(name, sizeof(name), stdin);
        name[strcspn(name, "\n")] = '\0'; // Remove newline

        for (int i = 0; i < Count; i++) {
            if (strcmp(inventory[i].name, name) == 0) {
                printf("Item found: ID: %d, Quantity: %d\n", inventory[i].id,
inventory[i].quantity);
                return;
            }
        }
    }

    printf("Item not found!\n");
}

int main() {
    int choice;
    do {
```

```
        printf("\nInventory Management System\n");
        printf("1. Add Item\n2. Display Items\n3. Search Item\n4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);
        getchar(); // Consume newline left by scanf

        switch (choice) {
            case 1:
                addItem();
                break;
            case 2:
                displayItems();
                break;
            case 3:
                searchItem();
                break;
            case 4:
                printf("Exiting program.\n");
                break;
            default:
                printf("Invalid choice! Please try again.\n");
        }
    } while (choice != 4);

    return 0;
}
```

OUTPUT:

```
Last login: Wed Feb 26 19:18:12 on ttys002
/Users/ayushghosh/Desktop/Cognifyz_C\:C++\ Programming\ internship_Tasks/TASK\ 10/Simple_Inventory_Management_System ; exit;
ayushghosh@Ayushs-MacBook-Air ~ % /Users/ayushghosh/Desktop/Cognifyz_C\:C++\ Programming\ internship_Tasks/TASK\ 10/Simple_Inventory_Management_System ; exit;

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 1
Enter item ID: 001
Enter item name: Milk
Enter item quantity: 10
Item added successfully!

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 1
Enter item ID: 002
Enter item name: Butter
Enter item quantity: 26
Item added successfully!

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 1
Enter item ID: 003
Enter item name: Cheese
Enter item quantity: 8
Item added successfully!

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 1
Enter item ID: 004
Enter item name: Egg
Enter item quantity: 190
Item added successfully!

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 2

Inventory List:
ID      Name    Quantity
1       Milk    10
2       Butter  26
3       Cheese  8
4       Egg     190
```

```
Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 3
Search by: 1. ID  2. Name
1
Enter item ID: 002
Item found: Butter, Quantity: 26

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 3
Search by: 1. ID  2. Name
2
Enter item name: Egg
Item found: ID: 4, Quantity: 190

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 3
Search by: 1. ID  2. Name
1
Enter item ID: 000
Item not found!

Inventory Management System
1. Add Item
2. Display Items
3. Search Item
4. Exit
Enter your choice: 4
Exiting program.

Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```