S.No: 1	Exp. Name: Project Module	Date: 2024-05-09

Aim:

Project Module

Source Code:

hello.c

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

#define MAX_CONTACTS 100
#define NAME_LENGTH 50
#define PHONE_LENGTH 15

// Define a structure to represent a contact
typedef struct {
    char name[NAME_LENGTH];
    char phone[PHONE_LENGTH];
} Contact;

// Declare an array to store the contacts
Contact phonebook[MAX_CONTACTS];
int contact_count = 0;

// Function to add a contact
void addContact(char name[], char phone[]) {
    if (contact_count < MAX_CONTACTS) {
        strcpy(phonebook[contact_count].name, name);
        strcpy(phonebook[contact_count].phone, phone);
        contact_count++;
        printf("Contact added successfully.\n");
    } else {
        printf("Phonebook is full. Cannot add more contacts.\n");
    }
}

// Function to display all contacts
void displayContacts() {
    printf("Phonebook:\n");
    for (int i = 0; i < contact_count; i++) {
        printf("Name: %s, Phone: %s\n", phonebook[i].name, phonebook[i].phone);
    }
}

// Function to search for a contact by name
void searchContact(char name[]) {
    for (int i = 0; i < contact_count; i++) {
        if (strcmp(phonebook[i].name, name) == 0) {
            printf("Contact found: Name: %s, Phone: %s\n", phonebook[i].name,
phonebook[i].phone);
            return;
        }
    }
    printf("Contact not found.\n");
}

// Function to delete a contact by name
void deleteContact(char name[]) {
    int found = 0;
    for (int i = 0; i < contact_count; i++) {
        if (strcmp(phonebook[i].name, name) == 0) {
            found = 1;
```

```
                phonebook[j] = phonebook[j + 1];
            }
            contact_count--;
            printf("Contact deleted successfully.\n");
            break;
        }
    }
    if (!found) {
        printf("Contact not found.\n");
    }
}

int main() {
    int choice;
    char name[NAME_LENGTH];
    char phone[PHONE_LENGTH];

    while (1) {
        printf("\nPhonebook Menu:\n");
        printf("1. Add Contact\n");
        printf("2. Display Contacts\n");
        printf("3. Search Contact\n");
        printf("4. Delete Contact\n");
        printf("5. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                printf("Enter name: ");
                scanf("%s", name);
                printf("Enter phone: ");
                scanf("%s", phone);
                addContact(name, phone);
                break;
            case 2:
                displayContacts();
                break;
            case 3:
                printf("Enter name to search: ");
                scanf("%s", name);
                searchContact(name);
                break;
            case 4:
                printf("Enter name to delete: ");
                scanf("%s", name);
                deleteContact(name);
                break;
            case 5:
                return 0;
            default:
                printf("Invalid choice. Please try again.\n");
        }
    }
```

```
    return 0;
}
```

Execution Results – All test cases have succeeded!

Test Case – 1
User Output
Hello World