S.No: 1	Exp. Name: ***Project Module***	**Date: 2024-06-14**

Aim:

Project Module

Source Code:

hello.c

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

#define MAX_ROUTES 100

struct Route {
    char name[50];
    char origin[50];
    char destination[50];
    int distance;
};

struct Route routes[MAX_ROUTES];
int routeCount = 0;

void insertRoute() {
    if (routeCount < MAX_ROUTES) {
        printf("Enter route name: ");
        scanf("%s", routes[routeCount].name);
        printf("Enter origin: ");
        scanf("%s", routes[routeCount].origin);
        printf("Enter destination: ");
        scanf("%s", routes[routeCount].destination);
        printf("Enter distance: ");
        scanf("%d", &routes[routeCount].distance);
        routeCount++;
        printf("Route added successfully.\n");
    } else {
        printf("Route database full. Cannot add more routes.\n");
    }
}

void displayRoutes() {
    printf("Flight Routes:\n");
    for (int i = 0; i < routeCount; i++) {
        printf("Name: %s, %s -> %s (Distance: %d)\n", routes[i].name,
routes[i].origin, routes[i].destination, routes[i].distance);
    }
}

int findRouteIndex(char name[]) {
    for (int i = 0; i < routeCount; i++) {
        if (strcmp(routes[i].name, name) == 0) {
            return i;
        }
    }
    return -1;
}

void updateRoute() {
    char name[50];
    printf("Enter route name to update: ");
    scanf("%s", name);

    int index = findRouteIndex(name);
    if (index != -1) {
```

```
        printf("Enter new origin: ");
        scanf("%s", routes[index].origin);
        printf("Enter new destination: ");
        scanf("%s", routes[index].destination);
        printf("Enter new distance: ");
        scanf("%d", &routes[index].distance);
        printf("Route updated successfully.\n");
    } else {
        printf("Route not found.\n");
    }
}

void deleteRoute() {
    char name[50];
    printf("Enter route name to delete: ");
    scanf("%s", name);

    int index = findRouteIndex(name);
    if (index != -1) {
        for (int i = index; i < routeCount - 1; i++) {
            routes[i] = routes[i + 1];
        }
        routeCount--;
        printf("Route deleted successfully.\n");
    } else {
        printf("Route not found.\n");
    }
}

int main() {
    int choice;

    do {
        printf("\nFlight Route Planner Menu:\n");
        printf("1. Insert Route\n");
        printf("2. Display Routes\n");
        printf("3. Update Route\n");
        printf("4. Delete Route\n");
        printf("5. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                insertRoute();
                break;
            case 2:
                displayRoutes();
                break;
            case 3:
                updateRoute();
                break;
            case 4:
                deleteRoute();
                break;
            case 5:
                printf("Exiting...\n");
```

```
                break;
            default:
                printf("Invalid choice. Please try again.\n");
        }
    } while (choice != 5);

    return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Hello World