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

Aim:

Project Module

Source Code:

hello.c

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

#define NAME_LENGTH 100

typedef struct Patient {
    char name[NAME_LENGTH];
    int age;
    char disease[NAME_LENGTH];
    struct Patient* next;
} Patient;
Patient* createPatient(char* name, int age, char* disease) {
    Patient* newPatient = (Patient*)malloc(sizeof(Patient));
    if (!newPatient) {
        printf("Memory allocation failed\n");
        return NULL;
    }
    strncpy(newPatient->name, name, NAME_LENGTH);
    newPatient->age = age;
    strncpy(newPatient->disease, disease, NAME_LENGTH);
    newPatient->next = NULL;
    return newPatient;
}
void addPatient(Patient** head, char* name, int age, char*
disease) {
    Patient* newPatient = createPatient(name, age, disease);
    if (!newPatient) return;
    newPatient->next = *head;
    *head = newPatient;
}
Patient* searchPatient(Patient* head, char* name) {
    Patient* current = head;
    while (current != NULL) {
        if (strcmp(current->name, name) == 0) {
            return current;
        }
        current = current->next;
    }
    return NULL;
}
int main() {
    Patient* head = NULL;

    addPatient(&head, "nousath", 30, "Flu");
    addPatient(&head, "senthil", 25, "Cold");
```

```
    addPatient(&head, "aris", 45, "Diabetes");

    char searchName[NAME_LENGTH];
    printf("Enter patient name to search: ");
    fgets(searchName, NAME_LENGTH, stdin);
    searchName[strcspn(searchName, "\n")] = '\0';  // Remove
trailing newline

    Patient* patient = searchPatient(head, searchName);
    if (patient) {
        printf("Patient found: \n");
        printf("Name: %s\n", patient->name);
        printf("Age: %d\n", patient->age);
        printf("Disease: %s\n", patient->disease);
    } else {
        printf("Patient not found\n");
    }

    // Free the allocated memory (not shown here for brevity)
    return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Hello World