

Institute of Computer Technology  
B. Tech. Computer Science and Engineering  
Sub: ESFP – II  
Course Code: 2CSE203

Practical – 1

Name: Jaymin Gondaliya  
Enrollment No: 23162171007  
Sem - 2  
Branch: CS  
Class: B  
Batch: 25

**Objective:**

To learn DMA (Dynamic memory allocation)

**Problem Definition-1:**

Lords Universal College, which is situated at Mumbai. College authority decides to come up with a new idea for handling examination section seating arrangements for different-different courses. For that, college wants separate records, those who one is giving a remedial exam for the semester-II. For that, the college wants to take all the information related to students like rollno, name, class, semester, subject, and exam fee. So, whenever is required to search records by id, or by name or by class, he can search randomly and make a proper seating arrangement as per the rules of the examination committee. So, for the fulfilment of the above said requirement make a proper DMA program using C.

**Code:**

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

struct Student
```

```
{
    int rollno;
    char name[50];
    char class[20];
    char semester[10];
    char subject[30];
    int fee;
};

int main()
{
    int n;

    printf("Enter how many records you want to store: ");
    scanf("%d", &n);

    struct Student *students = (struct Student *)malloc(n * sizeof(struct
Student));

    for (int i = 0; i < n; i++)
    {
        printf("Enter student information (RollNo Name Class Semester Subject
fee): ");
        scanf("%d %s %s %s %s %d", &students[i].rollno, students[i].name,
students[i].class, students[i].semester, students[i].subject,
&students[i].fee);
    }

    printf("=====Output of student
information=====\\n");
    for (int i = 0; i < n; i++)
    {
        printf("%d %s %s %s %s %d\\n", students[i].rollno, students[i].name,
students[i].class, students[i].semester, students[i].subject,
students[i].fee);
    }

    char search[50];
    printf("\\nFind the student record by name:\\nEnter student name: ");
    scanf("%s", search);

    int found = 0;
    for (int i = 0; i < n; i++)
    {
        if (strcmp(students[i].name, search) == 0)
        {
```

```
        printf("%d %s %s %s %s %d\n", students[i].rollno,
students[i].name, students[i].class, students[i].semester,
students[i].subject, students[i].fee);
        found = 1;
        break;
    }
}

if (!found)
{
    printf("Student with name '%s' not found.\n", search);
}

free(students);

return 0;
}
```

## Output:

```
● PS C:\ICT\SEM-2\ESFP-II> cd 'c:\ICT\SEM-2\ESFP-II\Practical-1\output'
● PS C:\ICT\SEM-2\ESFP-II\Practical-1\output> & .\'main.exe'
Enter how many records you want to store: 3
Enter student information (RollNo Name Class Semester Subject fee): 15 Jaimin fifteen II ESFP 800
Enter student information (RollNo Name Class Semester Subject fee): 74 Karan ten I Maths 600
Enter student information (RollNo Name Class Semester Subject fee): 4 Aditi four III IT 650
=====Output of student information=====
15 Jaimin fifteen II ESFP 800
74 Karan ten I Maths 600
4 Aditi four III IT 650

Find the student record by name:
Enter student name: Karan
74 Karan ten I Maths 600
○ PS C:\ICT\SEM-2\ESFP-II\Practical-1\output> █
```