**AIM:**

**To implement a program to store student records (name, roll number, marks) using structures and dynamic memory allocation in C that allow the user to enter details for ‘n’ students at runtime and display the records.**

**PROGRAM:**

#include <stdio.h>

#include <stdlib.h>

// Define a structure for student

struct Student {

char name[50];

introllNumber;

float marks;

};

int main() {

struct Student \*students;

int n, i;

// Ask user for number of students

printf("Enter the number of students: ");

scanf("%d", &n);

// Allocate memory for n students

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

// Check if memory allocation was successful

if (students == NULL) {

printf("Memory allocation failed.\n");

return 1;

}

// Input details for each student

for (i = 0; i< n; i++) {

printf("\nEnter details for student %d:\n", i + 1);

printf("Name: ");

scanf(" %[^\n]", students[i].name); // to read string with spaces

printf("Roll Number: ");

scanf("%d", &students[i].rollNumber);

printf("Marks: ");

scanf("%f", &students[i].marks);

}

// Display student records

printf("\nStudent Records:\n");

for (i = 0; i< n; i++) {

printf("\nStudent %d\n", i + 1);

printf("Name : %s\n", students[i].name);

printf("Roll Number: %d\n", students[i].rollNumber);

printf("Marks : %.2f\n", students[i].marks);

}

// Free allocated memory

free(students);

return 0;

}

**RESULT:**

Thus the program to store student records (name, roll number, marks) using structures and dynamic memory allocation in C that allow the user to enter details for ‘n’ students at runtime and display the records was executed.

**Sample Output**

Enter the number of students: 2

Enter details for student 1:

Name: Sachin Tendulkar

Roll Number: 101

Marks: 89.5

Enter details for student 2:

Name: Rahul Dravid

Roll Number: 102

Marks: 92.0

Student Records:

Student 1

Name : Sachin Tendulkar

Roll Number: 101

Marks : 89.50

Student 2

Name : Rahul Dravid

Roll Number: 102

Marks : 92.00