



DEPARTMENT OF BASIC SCIENCE AND HUMANITIES
INSTITUTE OF ENGINEERING AND MANAGEMENT,
KOLKATA

“STUDENT DATA MANAGEMENT”

Submitted by:-

Name of the Student: Soumili Gupta
Enrolment Number: 12022002003101
Registration Number: 221040110733
Section: I
Class Roll Number: 13
Stream: Electronics and Communication (ECE)
Subject: Programming for Problem Solving
Subject Code: ESC-103 (Pr)

Under the supervision of:-
Prof. Swarnendu Ghosh

Academic Year: 2022-26
(PROJECT REPORT SUBMITTED IN FULFILLMENT OF THE
REQUIREMENTS FOR THE SECOND SEMESTER)



CERTIFICATE OF RECOMMENDATION

We hereby recommend that the project prepared under our supervision by **Soumili Gupta**, entitled **“Student Data Management”** be accepted in fulfillment of the requirements for the degree of fulfillment of the second semester.

Head of the Department
IEM, Kolkata

Project Supervisor
Basic Science and Humanities

1. Introduction:

This project is assigned to me for developing a Student Data Management with the help of basic C programming language.

2.PROGRAM:

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

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

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

```
struct Student {
```

```
    int rollNumber;
```

```
    char name[100];
```

```
    int age;
```

```
    float marks;
```

```
};
```

```
void addStudent(struct Student *students, int *count) {
```

```
    if (*count >= 100) {
```

```
        printf("Student database is full. Cannot add more students.\n");
```

```
        return;
```

```
    }
```

```
    struct Student newStudent;
```

```
    printf("Enter student details:\n");
```

```
    printf("Roll Number: ");
```

```
    scanf("%d", &newStudent.rollNumber);
```

```
    printf("Name: ");
```

```
    scanf(" %[^\n]", newStudent.name);
```



```
printf("Age: ");
scanf("%d", &newStudent.age);
printf("Marks: ");
scanf("%f", &newStudent.marks);

students[*count] = newStudent;
(*count)++;

printf("Student added successfully.\n");
}

void updateStudent(struct Student *students, int count) {
    int rollNumber;
    int found = 0;

    printf("Enter the roll number to update: ");
    scanf("%d", &rollNumber);

    for (int i = 0; i < count; i++) {
        if (students[i].rollNumber == rollNumber) {
            printf("Enter new details for the student:\n");
            printf("Name: ");
            scanf(" %[^\n]", students[i].name);
            printf("Age: ");
            scanf("%d", &students[i].age);
            printf("Marks: ");
```

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

```
printf("Student details updated successfully.\n");
```

```
found = 1;
```

```
break;
```

```
}
```

```
}
```

```
if (!found) {
```

```
    printf("Student not found.\n");
```

```
}
```

```
}
```

```
void deleteStudent(struct Student *students, int *count) {
```

```
    int rollNumber;
```

```
    int found = 0;
```

```
    printf("Enter the roll number to delete: ");
```

```
    scanf("%d", &rollNumber);
```

```
    for (int i = 0; i < *count; i++) {
```

```
        if (students[i].rollNumber == rollNumber) {
```

```
            for (int j = i; j < *count - 1; j++) {
```

```
                students[j] = students[j + 1];
```

```
            }
```

```

        (*count)--;
        printf("Student deleted successfully.\n");
        found = 1;
        break;
    }
}

if (!found) {
    printf("Student not found.\n");
}
}

void displayStudents(struct Student *students, int count) {
    if (count == 0) {
        printf("Student database is empty.\n");
        return;
    }

    printf("Student Database:\n");
    printf("Roll Number\tName\tAge\tMarks\n");
    for (int i = 0; i < count; i++) {
        printf("%d\t\t%s\t%d\t%.2f\n", students[i].rollNumber, students[i].name,
students[i].age, students[i].marks);
    }
}

int main() {

```

```
struct Student students[100];  
  
int count = 0;  
  
int choice;  
  
printf("Student Management System\n");  
  
while (1) {  
    printf("\nSelect an option:\n");  
    printf("1. Add a student\n");  
    printf("2. Update a student\n");  
    printf("3. Delete a student\n");  
    printf("4. Display students\n");  
    printf("5. Exit\n");  
    printf("Enter your choice: ");  
    scanf("%d", &choice);  
  
    switch (choice) {  
        case 1
```