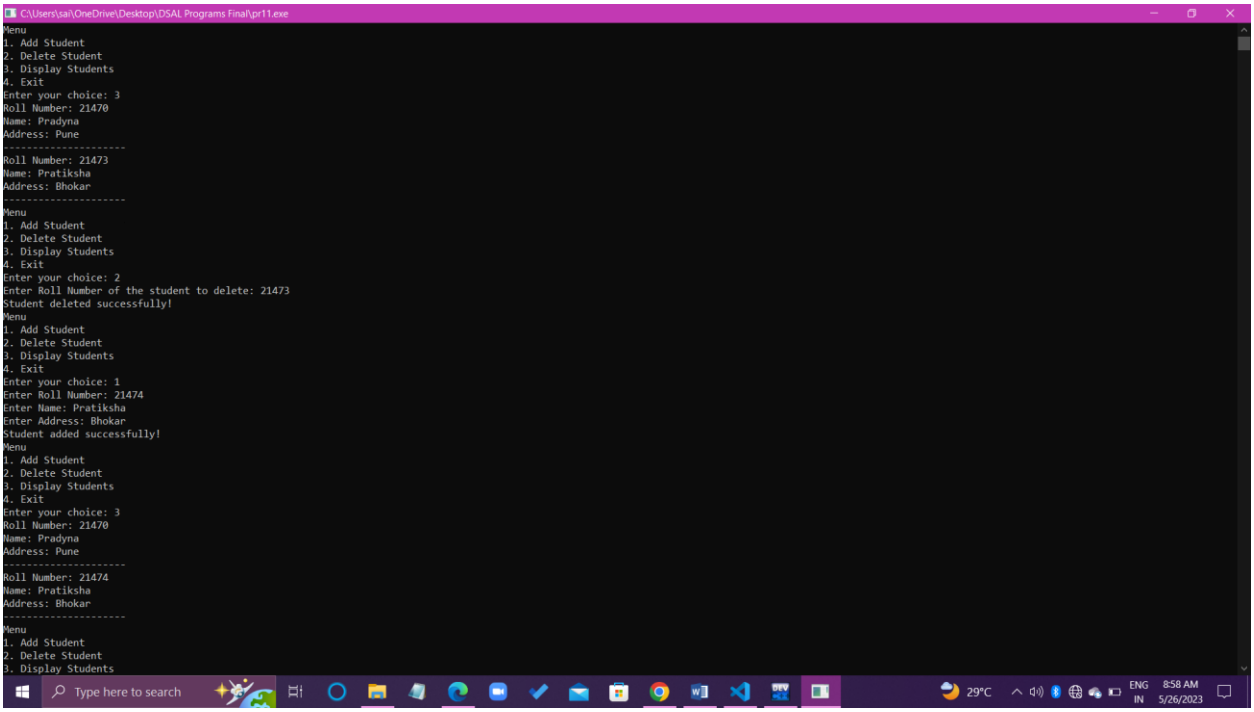
ASSIGNMENT NO – 11

Department maintains a student information. The file contains roll number, name, division and address. Allow user to add, delete information of student. Display information of particular employee. If record of student does not exist an appropriate message is displayed. If it is, then the system displays the student details. Use sequential file to main the data.

```
#include <iostream>
#include <fstream>
#include <cstring>
using namespace std;
const int MAX_RECORDS = 100;

class Student {
    int rollNumber;
    char name[50];
    char address[100];

public:
    void readData() {
        cout << "Enter Roll Number: ";
        cin >> rollNumber;
        cin.ignore(); // Ignore the newline character left by cin
        cout << "Enter Name: ";
        cin.getline(name, 50);

        cout << "Enter Address: ";
        cin.getline(address, 100);
    }

    void displayData() {
        cout << "Roll Number: " << rollNumber << endl;
        cout << "Name: " << name << endl;
        cout << "Address: " << address << endl;
        cout << "----------------------" << endl;
    }

    int getRollNumber() const {
        return rollNumber;
    }
};
class StudentManagement {
    ofstream file;
    ifstream inputFile;
public:
    void addStudent() {
```

```
    file.open("students.txt", ios::binary | ios::app);

    Student s1;
    s1.readData();
    file.write(reinterpret_cast<char*>(&s1), sizeof(Student));
    file.close();
    cout << "Student added successfully!" << endl;
}

void deleteStudent() {
    int rollNumber;
    cout << "Enter Roll Number of the student to delete: ";
    cin >> rollNumber;

    inputFile.open("students.txt", ios::binary);
    if (!inputFile) {
        cout << "File not found!" << endl;
        return;
    }

    ofstream tempFile;
    tempFile.open("temp.txt", ios::binary);

    Student s1;
    while (inputFile.read(reinterpret_cast<char*>(&s1), sizeof(Student))) {
        if (s1.getRollNumber() != rollNumber) {
            tempFile.write(reinterpret_cast<char*>(&s1), sizeof(Student));
        }
    }

    inputFile.close();
    tempFile.close();

    remove("students.txt");
    rename("temp.txt", "students.txt");

    cout << "Student deleted successfully!" << endl;
}

void displayStudents() {
    inputFile.open("students.txt", ios::binary);
    if (!inputFile) {
        cout << "File not found!" << endl;
        return;
    }
```

```
        Student s1;
        while (inputFile.read(reinterpret_cast<char*>(&s1), sizeof(Student))) {
            s1.displayData();
        }

        inputFile.close();
    }
};
int main() {
    StudentManagement s;
        int choice;

        do {
            cout << "Menu" << endl;
            cout << "1. Add Student" << endl;
            cout << "2. Delete Student" << endl;
            cout << "3. Display Students" << endl;
            cout << "4. Exit" << endl;
            cout << "Enter your choice: ";
            cin >> choice;

            switch (choice) {
                case 1:
                    s.addStudent();
                    break;
                case 2:
                    s.deleteStudent();
                    break;
                case 3:
                    s.displayStudents();
                    break;
                case 4:
                    exit(0);
                default:
                    cout << "Invalid choice!" << endl;
            }
        }while(choice!=5);
        return 0;
    }
```


C:\Users\sai\OneDrive\Desktop\DSAL Programs Final\pr11.exe
Menu
1. Add Student
2. Delete Student
3. Display Students
4. Exit
Enter your choice: 3
Roll Number: 21470
Name: Pradyna
Address: Pune

Roll Number: 21473
Name: Pratiksha
Address: Bhokar

Menu
1. Add Student
2. Delete Student
3. Display Students
4. Exit
Enter your choice: 2
Enter Roll Number of the student to delete: 21473
Student deleted successfully!
Menu
1. Add Student
2. Delete Student
3. Display Students
4. Exit
Enter your choice: 1
Enter Roll Number: 21474
Enter Name: Pratiksha
Enter Address: Bhokar
Student added successfully!
Menu
1. Add Student
2. Delete Student
3. Display Students
4. Exit
Enter your choice: 3
Roll Number: 21470
Name: Pradyna
Address: Pune

Roll Number: 21474
Name: Pratiksha
Address: Bhokar

Menu
1. Add Student
2. Delete Student
3. Display Students
Type here to search
29°C
ENG
IN
8:58 AM
5/26/2023