

**Name:M.Fayaz**

**Roll No:2430-0089**

**Project:PF**

#include <iostream>

#include <map>

#include <string>

#include <algorithm>

using namespace std;

<int, string> studentDatabase;

void addStudent()

{

int id;

string name;

cout << "Enter Student ID: ";

cin >> id;

cin.ignore();

cout << "Enter Student Name: ";

getline(cin, name);

if (studentDatabase.find(id) != studentDatabase.end())

{

cout << "Student ID already exists. Please try again." << endl;

}

else {

studentDatabase[id] = name;

cout << "Student " << name << " added successfully!" << endl;

}

}

void removeStudent()

{

cout << "1. Remove by Student ID" << endl;

cout << "2. Remove by Student Name" << endl;

cout << "Enter your choice (1 or 2): ";

int choice;

cin >> choice;

cin.ignore();

if (choice == 1)

{­

int id;

cout << "Enter Student ID to remove: ";

cin >> id;

if (studentDatabase.find(id) != studentDatabase.end())

{

cout << "Student " << studentDatabase[id] << " removed successfully!" << endl;

studentDatabase.erase(id);

}

else {

cout << "Student ID not found." << endl;

}

}

else if (choice == 2) {

string name;

cout << "Enter Student Name to remove: ";

getline(cin, name)

bool found = false;

for (auto it = studentDatabase.begin(); it != studentDatabase.end(); )

{

if (it->second == name)

{

cout << "Student " << name << " removed successfully!" << endl;

it = studentDatabase.erase(it);

found = true;

}

else {

++it;

}

}

if (!found) {

cout << "Student Name not found." << endl;

}

} else {

cout << "Invalid choice. Please try again." << endl;

}

}

void displayStudents()

{

if (studentDatabase.empty())

{

cout << "No students in the database." << endl;

} else

{

cout << "Student Database:" << endl;

for (const auto& student : studentDatabase)

{

cout << "ID: " << student.first << ", Name: " << student.second << endl;

}

}

}

int main()

{

while (true) {

cout << "\nStudent Database Menu" << endl;

cout << "1. Add New Student" << endl;

cout << "2. Remove Student" << endl;

cout << "3. Display All Students" << endl;

cout << "4. Exit" << endl;

cout << "Enter your choice: ";

int choice;

cin >> choice;

switch (choice)

{

case 1:

addStudent();

break;

case 2:

removeStudent();

break;

case 3:

displayStudents();

break;

case 4:

cout << "Exiting the program. Goodbye!" << endl;

return 0;

default:

cout << "Invalid choice. Please select a valid option." << endl;

}

}

}

