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#include <iostream>
#include <iomanip>
#include <vector>
using namespace std;
int main()
{
int numCourses;
double totalCredits = 0.0, totalGradePoints = 0.0;
cout << "Enter the number of courses: ";
cin >> numCourses;
while (numCourses <= 0)
{
    cout << "Please enter a valid number of courses (greater than 0): ";
    cin >> numCourses;
}
vector<double> grades(numCourses);
vector<double> credits(numCourses);
for (int i = 0; i < numCourses; i++)
{
    cout << "\nCourse " << i + 1 << ":\n";
    cout << "Enter grade (0-10 scale): ";
    cin >> grades[i];
    while (grades[i] < 0 || grades[i] > 10) {
        cout << "Invalid grade. Enter grade (0-10): ";
        cin >> grades[i];
    }
    cout << "Enter credit hours: ";
    cin >> credits[i];
    while (credits[i] <= 0) {
        cout << "Invalid credit hours. Enter positive value: ";
        cin >> credits[i];
    }
    totalCredits += credits[i];
    totalGradePoints += grades[i] * credits[i];
}
double gpa = (totalCredits > 0) ? totalGradePoints / totalCredits : 0.0;
cout << "\n=== Semester Grade Report ===\n";
cout << fixed << setprecision(2);
for (int i = 0; i < numCourses; i++) {
    cout << "Course " << i + 1 << ": Grade = " << grades[i]
        << ", Credits = " << credits[i] << endl;
}
cout << "\nTotal Credits: " << totalCredits << endl;
cout << "Total Grade Points: " << totalGradePoints << endl;

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cout << "Semester GPA/CGPA: " << gpa << endl;  
return 0;  
}
```