**CGPA CALCULATOR**

* **CODE :-**

#include <iostream>

#include <limits>

using namespace std;

double calculateCGPA(double grades[], double credits[], int totalSubjects) {

double weightedSum = 0;

double totalCredits = 0;

for (int i = 0; i < totalSubjects; ++i) {

weightedSum += grades[i] \* credits[i];

totalCredits += credits[i];

}

return weightedSum / totalCredits;

}

double getValidInput(string prompt) {

double input;

while (true) {

cout << prompt;

cin >> input;

if (cin.fail() || input < 0) {

cin.clear();

cin.ignore(numeric\_limits<streamsize>::max(), '\n');

cout << "Invalid input. Please enter a valid positive number." << endl;

} else {

return input;

}

}

}

int main() {

int numSubjects;

cout << "Enter the number of subjects: ";

cin >> numSubjects;

double grades[100], credits[100];

for (int i = 0; i < numSubjects; ++i) {

grades[i] = getValidInput("Enter grade for subject " + to\_string(i + 1) + ": ");

credits[i] = getValidInput("Enter credits for subject " + to\_string(i + 1) + ": ");

}

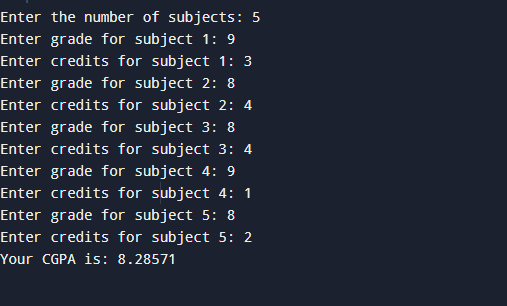
double cgpa = calculateCGPA(grades, credits, numSubjects);

cout << "Your CGPA is: " << cgpa << endl;

return 0;

}

**OUTPUT :-**

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