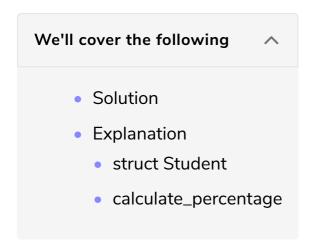
Solution Review: Calculate Overall Percentage of Student's Mark

Let's go over the solution review of the challenge given in the previous lesson.



Solution

Press the **RUN** button and see the output!

```
#include <iostream>
using namespace std;
// Student structure
struct Student {
  // Stores the name of Student
  string name;
  // Stores the marks of student in 4 subjects
  double marks[4];
};
// calculate_percentage function
double calculate percentage(struct Student s) {
  // Initialize variables
  double total = 0, percentage = 0;
  // for loop to traverse marks of Student
  for (int i = 0; i < 4; i++) {
    // Add marks of Student in total
    total = total + s.marks[i];
  // Calculate percentage
  percentage = (total / 400) * 100;
  // Return percentage of Student
  return percentage;
// print_Student function
void print_Student(struct Student s) {
```

```
cout << "Name of student = " << s.name << endl;</pre>
  cout << "Student marks:" << endl;</pre>
 for (int i = 0; i < 4; i++) {
    cout << "Student marks in subject" << i + 1 << "=" << s.marks[i] << endl;</pre>
// main function
int main() {
  // Declare structure variable s of type Student
 struct Student s;
 // Declare variable of type double
 double result;
  // Initialize members of s
 s = {\text{"John"}, {30.5, 49.7, 22.3, 32.9}};
 // Call function calculate_percentage and store output in result
 result = calculate percentage(s);
 // Call print_Student function to print members of s
  print_Student(s);
  // Print percentage of Student
 cout << "percentage = " << result << "%";</pre>
  return 0;
```







[]

Explanation

struct Student

We define the structure Student on **Line No. 6** that stores the names and marks of a student in 4 subjects.

Line No. 8: name stores the name of a student.

Line No. 10: marks is an array of type double whose size is **4**. It stores the marks of a student in **4** subjects.

calculate_percentage

The <alculate_percentage function takes the structure variable of type Student in its input parameters. It returns the value of type double in its output.

We can calculate the percentage by dividing the sum of all marks obtained with total marks and multiplying by 100. As there are four subjects, initialize i from 0 to 3, traverse the marks, and add their sum to total. Calculate the percentage by dividing the total by 400 and multiplying it by 100. In the end, we return percentage to the calling point.

Let's solve a slightly more difficult challenge in the upcoming lesson.