Solution Review: Calculate the Sum and Absolute Difference

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

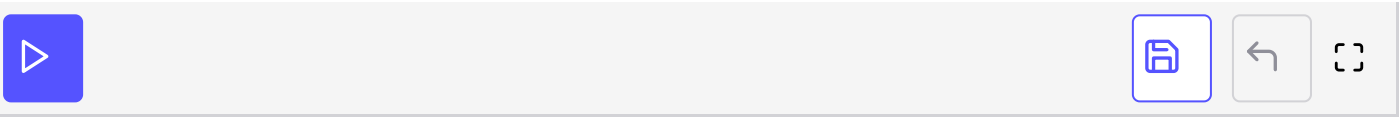
We'll cover the following

Solution

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

```
#include <iostream>

using namespace std;

// sum_difference function
void sum_difference (int * value1, int * value2) {
  // Initialize variables to 0
  int diff = 0, sum = 0;
  // Calculate sum
  sum = * value1 + * value2;
  // Calculate difference
  diff = * value1 - * value2;
  // Check if difference is negative
  if (diff < 0) {
    // Multiply it by -1 to make it positive
    diff = diff * - 1;
  }
  // Store sum in memory location pointed out by value1
  * value1 = sum;
  // Store diff in memory location pointed out by value2
  * value2 = diff;

}
int main() {
  // Initialize value1 and value2
  int value1 = 5;
  int value2 = 4;

  // Print values before calling function
  cout << "Values before calling function:" << endl;
  cout << value1 << endl;
  cout << value2 << endl;
```

```
  // Call function sum_diff
  sum_difference( & value1, & value2);
  // Print values after calling function

  cout << "Values after calling function:" << endl;
  cout << value1 << endl;
  cout << value2 << endl;

  return 0;
}
```



Explanation

sum_difference function

The function `sum_difference` takes two pointers of type `int` in its input parameters.

Add the two pointer values and store them in `sum`. In order to calculate the absolute difference, subtract the 2nd value from the 1st one. If the answer is negative, multiply by `-1` to take the absolute of an answer and store it in `diff`. Point the `value1` and `value2` to `sum` and `diff`, respectively.

Let’s wrap up this chapter by completing a quiz in the upcoming lesson.