
Loops

section 5.7

Running totals (5.7)

- Write a snippet of code that will calculate the sum of all the integers from 0 to 5.
- Write a snippet of code that will ask the user for a number. Print the *sum* of all the integers from 0 to the number the user supplied.

Example

- How many inches of rain did we get last week?

```
const int DAYS_IN_A_WEEK = 7;
int currentDay = 1;           // initialize the counter
double totalRain = 0.0;     // initialize the total
double currentRain;

// loop for each day in a week
while (currentDay <= DAYS_IN_A_WEEK) // test the counter
{
    cout << "How much rain fell on day " << currentDay << ": ";
    cin >> currentRain;
    totalRain += currentRain;

    currentDay ++;           // update the counter
}
cout << "The total rainfall last week was ";
cout << fixed << setprecision(2) << totalRain;
```

Practice

- Write a snippet of code that will ask the user for a number. Print the sum of all the *even* numbers from 0 to the square of the number the user supplied.

Practice

- Write a snippet of code that will ask the user for an integer. Print all the integers from 0 to the number the user supplied as well as the running total of the integers.

```
Enter a number: 3
counter running total
      0           0
      1           1
      2           3
      3           6
```

Exercise

- Write a snippet of code that will ask for a student's exam score and then print the appropriate letter grade (A,B,C,D,F).
- Continue asking for exam scores and printing letter grades until the user enters a negative exam score

```
double examScore;
```