Computer Science I Lab (CSC 2111)

Lab 02

Objectives

1. Use looping and branching control structures

2. Construct counter, sentinel, flag, and EOF controlled repetition structures.

3. Debug repetition structures

Example 1

Write a program that prompts the user to input a positive integer n, and then calculates the sum from 1 to n.

Example 1

```cpp
#include<iostream>
using namespace std;

int main(void) {
    int n, N = 0;
    cout << "Input a positive integer: ";
    cin >> n;

    for (int i = 1; i <= n; i++) {
        N += i;
    }
    cout << "The sum from 1 to " << n << " is " << N << endl;
    return 0;
}
```

Example 2

Write a program that reads a set of integers, terminated by pressing CTRL-D then enter.

It then prints the sum of the even integers.

Example 2

```cpp
#include<iostream>
using namespace std;

int main(void) {
      int n, N = 0;

      cout << "Input integers newline separated, "
            << "followed by CTRL-D <ENTER>" << endl;
      while (cin) {
            cin >> n;
            if (n % 2 == 0) {
                  N += n;
            }
      }
      cout << "The sum of the evens is: " << N << endl;
      return 0;
}
```