CSC 101 Lecture Notes Week 4

Loops

I. **What is a Loop?**

A. A way to perform repetitive execution.

B. Two types in C -- `while` and `for`.

What is a Loop?, cont'd

C. Looping involves a number of key concepts:

1. Knowing how to stop a loop.

2. Counting loop variables up or down.

3. Computations that accumulate a value.

4. Loops within other loops.

II. A First While Loop Example

```
examples/loops/stats-while.c
```

III. Up-Counting While Loop

```
examples/loops/
      loops/stats-while-count-up.c
```

IV. Program 1 Solution, with a Loop

```
examples/loops/
      make_change_with_loop.c
```

V. Program 1, with a Char Sentinel Loop

```
examples/loops/
     make_change_with_char_sentinel.c
```

VI. **for Loops**

```
examples/loops/stats-for.c
```

VII. **Shorter Version of `for` Loop Program**

```
examples/loops/
     stats-for-shorter.c
```

VIII. A Short and Ugly Version

```
examples/loops/
    stats-for-short-and-ugly.c
```

IX. Highlights of Chapter 5 in the Book