CSCI-105 Review
Lectures 10-11

1. Determine if the following code fragments breaks scope rules.

```
int x = 0;
if (x == 3)
        int y = 1;
y = 2;
----
int x = 0;
while(x < 10) {
        int y = 0;
        if (y < 10)
                y++;
        y = 5;
        x++;
}
----
int x = 0;
while (x < 10) {
        if (x == 2)
                int y = 4;
        if (x == 3)
                int y = 5;
        x++;
}
```

2. List the precedence of the following operators.

   (), =, ++, --, |, *, /, %, &, +, -, ==, !=, >, <, >=, <=

3. Write a while loop that prints the numbers between 1 and 100, each on a new line.
4. Write a while loop that sums the numbers 2, 4, 6, 8, ..., 100.
5. Write a while loop that counts the number of integers between 1 and 100 that are divisible by 3.
6. Write a fragment of code that has an *infinite-loop*. Within the loop, the program asks the user to enter an integer then reads in the integer. If the value of the number read is **0**, the program exits the loop, otherwise the program continues in the loop.
7. Write a while loop that adds the first *k* numbers of the Fibonacci sequence: {1, 1, 2, 3, 5, 8, 13, 21, ...}.