LOOPS!

Types:
- while
- do-while
- for

Syntax:
- while
```
while ( condition )
{
   //Put code that you want repeated here
}
```
- do-while
```
do
{
   //Put code that you want repeated here.
} while ( condition );
```

Differences:
- While loops check the guard (condition) and then does the code if the guard is true. After the code completes, it checks the guard again.
- Do-while loops first does the code once. Then it checks the guard and may do the code again if the guard is true.

Infinite Loops:
- Watch out for loops that go forever!

Questions / Exercises:
1. Write a a guard for an infinite loop (just give me the "while (something)" part).
2. Write a loop that counts to 10 (prints 0 – 10).
3. Give a description of the output of this code:
```
int a = 0, b = 10;
while (!(a = b))
{
   printf("%d, %d\n", a, b);
   a += 2;
}
```
4. Justify you answer to number 3.

Program:
Make a program that finds the largest integer that a user entered.
Specs:

- Prompt the user to enter integer(s). You can either do this once at the beginning or every time that the user wants to enter a number.
- Continue to get the integers **until** you see a -1.
- After the user entered a -1, print out the largest number that the user entered.
- You can assume that the user will enter at least one integer.

Runs (inputs are in **bold**):

```
Please enter some integers! 1 2 3 4 5 6 7 8 9 0 −1
The highest number you entered was 9.

Please enter some integers! 1 2 −1 3 4 5 6 7
The highest number you entered was 2.

Please enter some integers! −10 −11 −123123 −1
The highest number you entered was −1.
```