CIS 1.5 Fall 2009 Lab II.4

Start to get in the habit of writing down what code ou ned to write for each program before you start to type. Doing the design of the program first becomes more and more important as the programs you write get more complex.

1. Again with the `for` loop

   Write a program that asks the user to input a number (an `int` or a `double`, you decide), and then uses a `for` loop to multiply that number by 2, 4, 6, 8 and so on up to 20.

2. While you wait

   Now write a program that does the same, but uses a `while` loop.

3. And now loop as you like.

   Write a program that asks the user to input two numbers, a and b.

   If a is greater than b, then the program should just print out a message and stop.

   If a is less than b, multiply a by 2, and check whether it is greater than b. If so, print a message and stop. Otherwise, multiply by two again, and continue to do this until a is greater than b.

4. The roomba again.

   Modify the program `rooomba.cpp` to get the commands that tell the robot what to do from a file.

   Instead of having the program ask the user what to make the robot do, and then read in that information. Have the program:

   1. Open a file
   2. Read a character from the file
   3. Handle that character just like the character `c` that `roomba` has the user input.

   Hint: You can use editor in Code::Blocks to create a file with a sequence of instructions like `BBRRFFRQ`.

   Another Hint: Make sure that your program halts. Make the last instruction a Q for "quit".