CIS 1.5 Fall 2009 Lab III.3

In thia lab we will revisit the program `roomba.cpp` and write some functions for it.

1. A function to move forward

   As it stands, the program adds 1 to y. Re-write the program so that it includes a function called `goForward`.

   The function should take an integer as its argument, and return an integer. that is the argument increased by 1.

   In `main`, instead of

   ```
   y = y + 1;
   ```

   have:

   ```
   y = goForward(y);
   ```

2. More going forward

   Now extend `goForward` so that the world "wraps around" when y gets to the value 10.

3. Position

   Write a function `displayPosition` which prints out the location of the robot.

   The function should take two integers as parameters, and should not return a value.

   Use the function to rewrite `main` so that all printing of the robot position is done using `displayPosition`.

4. A menu

   Write a function `printMenu` that displays on the screen the options that the user has.

   ```
   You can control  the robot to:
   F) go forward
   B) go backwards
   L) go left
   R) go right
   Q) quit
   Which do you can to do? Enter your choice =>
   ```

   The function should take no arguments and should not return a value.

   Use the function to rewrite `main` so that all printing of the commands is done using `printMenu`.

5. Teleport

   Use *call-by-reference* to create a function `teleport`.

   This function should ask the user for an x and a y value, and then set to robot to that position.