Mike Loeven

HW3

1) Draw the flowchart using RFF Flow and a nested if statement to check to see if number1 is greater than 5 and if true then check to see if number2 = 7. If both are true then send a decimal 100 to the lights.



2) In the above program if both are true what lights are on?

* a PORTL value of 100 Dec means that the lights representing 64,32 and 4 would be on.

or B01100100.

3) Name the three logical operators and their symbols.

* and = &&
* or = ||
* not = !

4) Hand draw the symbol for the AND gate and fill in the truth table.



5) Hand draw the symbol for the OR gate and fill in the truth table.



6) Hand draw the symbol for the NOT gate and fill in the truth table.



7) in the statement    Serial.print(variable)

Serial is a

* object

print is a

* method

     variable is a

8) What would you see being transmitted back when you execute the following code?

* Serial.print(70, BYTE) displays BYTE formatting is not listed in the manual
* Serial.print(58, BIN) displays 111010
* Serial.print(88, DEC) displays 88
* Serial.print(66, HEX) displays   42
* Serial.print(2.7926, 3) displays 2.792
* Serial.print(7.4136248, 5) displays 7.41362

9)  *Write the code* to perform the following:

                                                                                                       Program code

Bring bit 4 low in the variable answer             answer

Bring bit 7 high in the variable answer            answer = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Toggle bit 0 in the variable answer                  answer = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

bit shift 2 places to the left the variable answer   answer = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

bit shift 1 place to the right the variable answer  answer = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10) a) What operation is used if you want to bring a particular bit low?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

      b) What operation is used if you want to bring a particular bit high?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) What operation is used to toggle a bit? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11)  Write the RFF flowchart and program that will count from 25 to 100 and display on the serial window the following:   The decimal value, 5 spaces, the hex value, 5 spaces, and the ASCII character.

12) Write a flowchart and program to display your first name and then on a second line display your last name. Use two arrays to hold your name. Use one array to hold your first name and the other array to hold your second name. If you press switch 1 it will stop transmitting. If you release the switch it will start transmitting again. Run continuously.