

Exercise 1,2, and 5 rory lange

Bit wise Masking

1) 1101 1000 1011 0001 erg.
 1011 1000 1011 1011 des.

2) 1101 1000 1011 0001 and
 0000 1111 1111 0000 and

3) 0000 1000 1011 0000 or
 1011 0000 0000 1011 or
 1011 1000 1011 1011

4) a) $(25)_{10} \wedge (18)_{10}$
 0110010
 010010
 001011
 $(11)_{10}$

b) $(64)_{10} \wedge (12)_{10}$
 01001000
 0001100
 0001100
 $(76)_{10}$

5) a) $(16)_{10} \wedge (15)_{10}$
 10000
 01111
 $(15)_{10}$

b) $(8421)_{10} \wedge (15)_{10}$
 11110000
 00001111
 $(15)_{10}$

Exercise 3

Code

Stop Simulation

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Bug

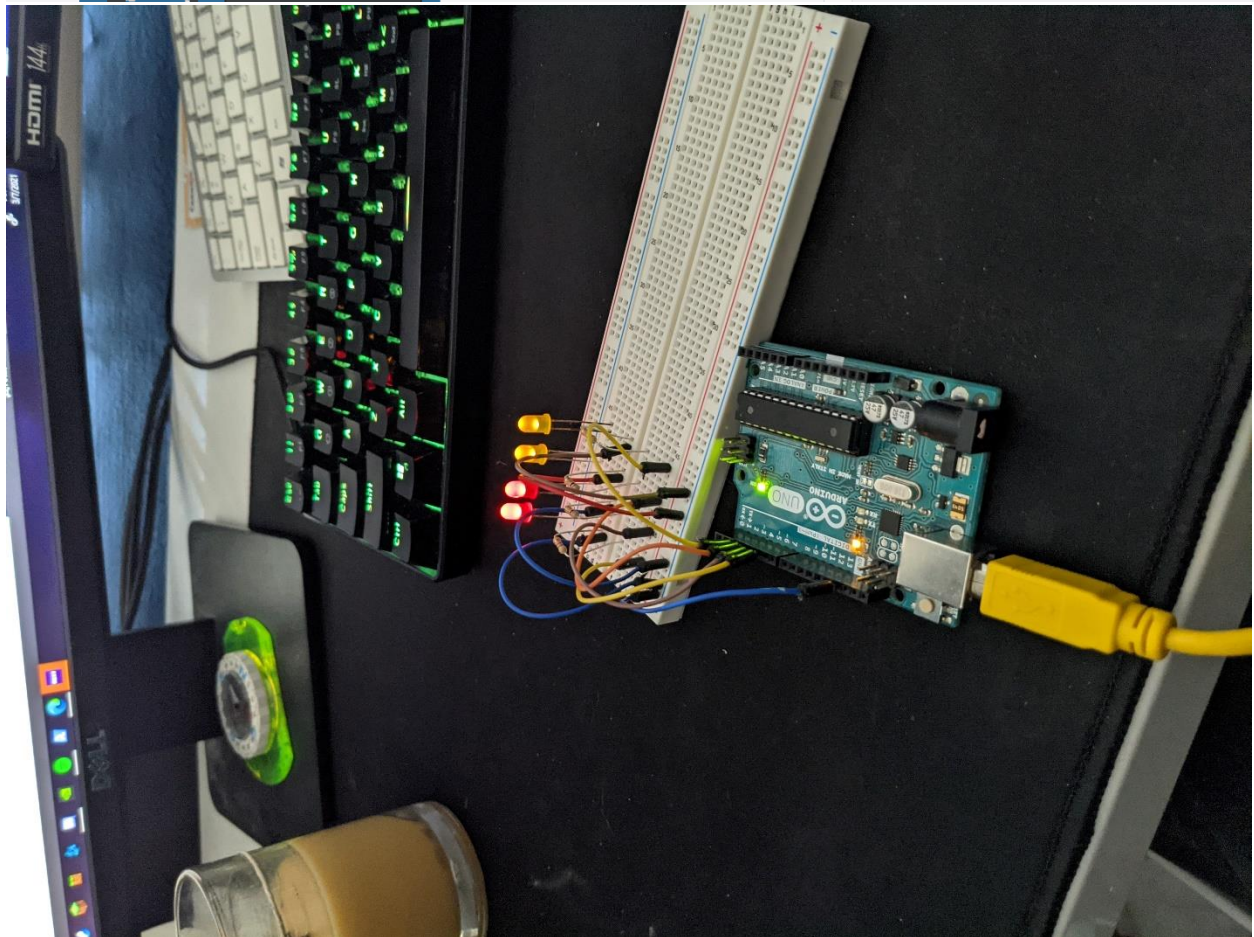
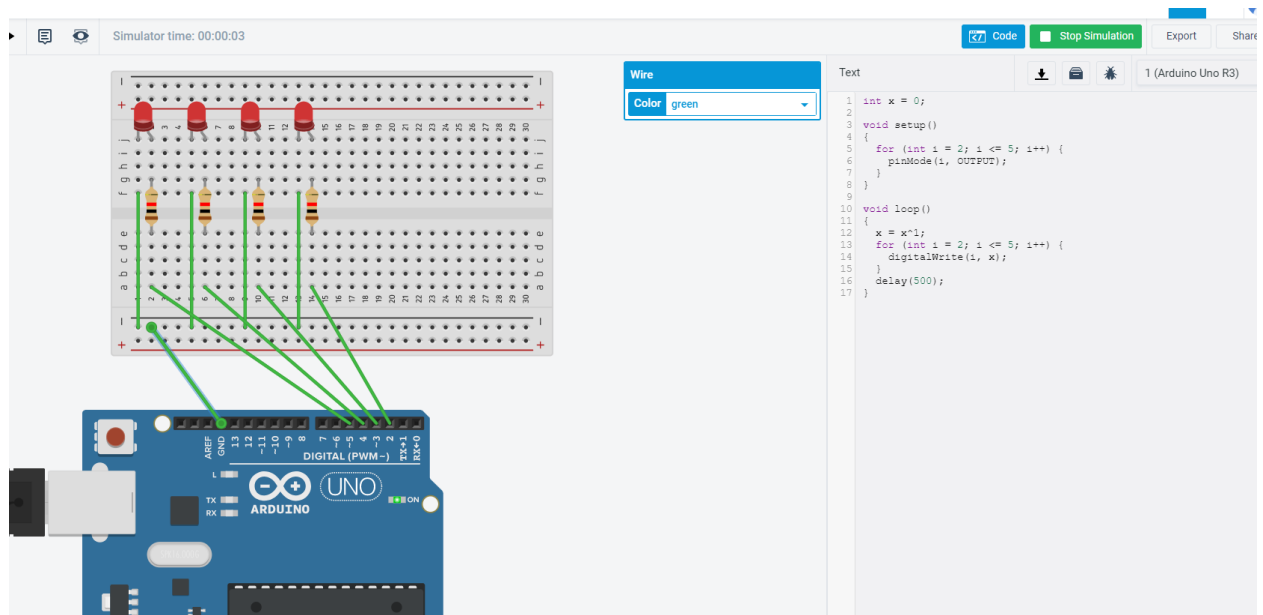
1 (Arduino Uno R3)

```
1 void setup()
2 {
3   byte A = B10010;
4   Serial.begin(9600);
5   A = A ^ B00100000; //Bitwise XOR
6   Serial.print("A^ B00100000 = ");
7   Serial.println(A,BIN); }
8 void loop(){ }
9
```

Serial Monitor

A^ B00100000 = 110010

Exercise 4



Exercise 6

Code

Stop Simulation

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1 (Arduino Uno R3)

```
1 void setup()
2 {
3   Serial.begin(9600);
4
5   int a = 40;
6   int c = 0;
7
8   Serial.print("a = ");
9   Serial.println(a, BIN);
10
11  c = a >> 1;
12  Serial.print("c = ");
13  Serial.println(c, BIN);
14
15  Serial.print("c = ");
16  Serial.println(c);
17 }
18
19 void loop()
20 {
21
22 }
```

Serial Monitor

a = 101000
c = 10100
c = 20

Send

Clear

Text



1 (Arduino Uno R3) ▼

```
1 void setup()
2 {
3   int a = 40;
4   int b = 24;
5
6   Serial.begin(9600);
7
8   Serial.print("a = ");
9   Serial.println(a);
10  Serial.print("b = ");
11  Serial.println(b);
12  Serial.print("a & b = ");
13  Serial.println(a & b);
14  Serial.print("a | b = ");
15  Serial.println(a | b);
16  Serial.print("a >> 2 = ");
17  Serial.println(a>>2);
18  Serial.print("a << 3 = ");
19  Serial.println(a<<3);
20 }
21
22 void loop()
23 {
24
25 }
```



Serial Monitor ▼

```
a = 40
b = 24
a & b = 8
a | b = 56
a >> 2 = 10
a << 3 = 320
```

Send

Clear

