```
#define enB 10 // Speed enB
PWMspeedPinB
#define in4 12 // in4 LOW =
Foward (Red) PWMoutnB
#define in3 13 // in3 HIGH =
Forward (Black) PWMoutpB

#define butto 3
#define changeDir 2

int buttonState = 0;
int changeState = 0;

int curDir = 0; // UP

void setup() {
  Serial.begin(19200);
```

```
  // Initialize pin mode of the
motor control pins
  pinMode(enB, OUTPUT);
  pinMode(in3, OUTPUT);
  pinMode(in4, OUTPUT);

  // Initialize the button pins
  pinMode(butto, INPUT_PULLUP);
  pinMode(changeDir,
INPUT_PULLUP);

  // Utilize an interrupt to
change the direction of the
motor rotation

attachInterrupt(digitalPinToInte
rrupt(changeDir), chang,
FALLING);
```

```
}

void loop() {
  buttonState =
digitalRead(butto);

  if (curDir == 1){
    // UP
    digitalWrite(in4, LOW);
    digitalWrite(in3, HIGH);
  }
  else if (curDir == 0){
    // DOWN
   digitalWrite(in3, LOW);
   digitalWrite(in4, HIGH);
  }

  // Input pullup outputs LOW
```

```
when the blue button is pressed
  if (buttonState == LOW){
    if (curDir == 0){ // DOWN
      analogWrite(enB, 60);
    }
    else if (curDir == 1){ // UP
      analogWrite(enB,255);
    }
  }
  else{
    analogWrite(enB,0);
  }

}

// Interrupt function to change
the direction of the motor
void chang(){
```

```
  if (curDir == 0){
    curDir = 1;
  }
  else if (curDir == 1){
    curDir = 0;
  }

}
```