/\* Confirm button sketch that allows a person to select how many times they want to LED to blink at 10%, 50%, or 100% intensity  
 \*  using Pulse Wave Modulation. A confirm button is pressed when the cycle is selected \*/  
  
int delay\_value = 500;  
int filter\_delay = 200;  
const int kled\_pin = 9;  
  //a 1 second delay between blinks, pin 9 to handle analog input  
const int kcycleButton = 12; //digital pin 12 pushed repeatedly to indicate number of blinks  
const int kbutton1 = 7; //digital pin 7  
const int kbutton2 = 4; //digital pin 4  
const int kbutton3 = 2; //digital pin 2  
const int kconfirmButton = 13; //digital pin 13 //button must be pushed to start cycles  
int cycles\_r = 0; //the number of running cycles  
int percent = 0;  //the intensity of the LED  
String pass="";  
  
void setup()   
{  
   pinMode(kled\_pin, OUTPUT);  
   pinMode(kcycleButton, INPUT);  
   pinMode(kbutton1, INPUT);  
   pinMode(kbutton2, INPUT);  
   pinMode(kbutton3, INPUT);  
   pinMode(kconfirmButton, INPUT);   
   Serial.begin(9600);  
}                                                                                                                                                                                                                                                                                              
void loop()   
{   
   while( digitalRead(kconfirmButton) != 1)  
  {  
  //count the number of cycles chosen  
  counter\_cycles();  
  //select the intensity of the LED output  
  select\_percent();   
  }  
    //run the routine      
  run\_routine();   
}  
  
void counter\_cycles()  
{  
          
  //check to see how many time cycleButton is pushed  
   if ( digitalRead(kcycleButton) == 1)  
    {  
      delay(filter\_delay);  
      cycles\_r = cycles\_r + 1;  
      //cycles\_r++;      
      Serial.println(pass+"Cycles= " + cycles\_r);  
        while (digitalRead(kcycleButton) == 1)  
        {}  
        
      }  
}  
  
void select\_percent()  //choose the intensity of the output  
{  
     
  // intensity 10%  
  if ( digitalRead(kbutton1) == 1)  
  {  
    delay (filter\_delay);  
    percent = 25;  
  }  
    
     // intensity 50%  
  if ( digitalRead(kbutton2) == 1)  
  {  
    delay (filter\_delay);  
    percent = 128;  
  }  
    
    // intensity 100%  
  if ( digitalRead(kbutton3) == 1)  
  {  
    delay (filter\_delay);  
    percent = 255;  
  }  
}  
  
void run\_routine()  
{  
  Serial.println(pass+"Run " + cycles\_r + " times with " + percent+ " % of intensity");  
  for (int i = 1; i<= cycles\_r; i++)   
  {  
    //Activate PWM  
    analogWrite(kled\_pin, percent);  
    delay(delay\_value);  
    //turn off LED  
    digitalWrite(kled\_pin, 0);   
    delay(delay\_value);   
  }  
  //Reset Cycles & Percent  
  cycles\_r = 0;  
  percent = 0;  
}