

// Terran Blake / Lab 2 / 7:30am Wednesday / ECE 241

```
// Variables will change :
int LedTimer = LOW;      // Integer used to set up LED
int shortTimer = LOW;
unsigned long oldMillis = 0;    // will store last time LED was updated
```

```
// constants won't change :
const long interval = 20;    // How often LED will blink
const long shortinterval = 10;
```

```
void setup()
{
  // Makes pin 13 as an OUTPUT
  pinMode(13, OUTPUT);
  pinMode(10, OUTPUT);
}
```

```
void loop()
{

  // Will use the timer to find whether it is time to blink or not
  unsigned long currentMillis = millis();

  if(currentMillis - oldMillis >= interval)
  {
    // save the last time you blinked the LED
    oldMillis = currentMillis;

    // if the LED is off turn it on and vice-versa:
    if (LedTimer == LOW)
      LedTimer = HIGH;
    PORTB |= 0x10; // Force bit 2, pin 12, high
  }
  else
    LedTimer = LOW;

  // set the LED with the ledState of the variable:
  digitalWrite(13, LedTimer);
  PORTB &= ~0x10; // Force bit 2, Pin 12, low

  //Same idea as the last counter but on a much faster pace and must be tested with Logic Probe
  if(currentMillis - oldMillis >= shortinterval)
  {
    oldMillis = currentMillis;
```

```
if (shortTimer == LOW)
{
    shortTimer = HIGH;
    PORTB |= 0x10; // Force bit 2, pin 12, high
}
else
{
    shortTimer = LOW;
}
//Assigns timer to pin
digitalWrite(12, shortTimer);
PORTB &= ~0x10; // Force bit 2, Pin 12, low
}
} //end of loop
} //end of program
```