

Serial - Timing Code

1.

```
int red = 11;
int blue = 10;
int green = 9;

void setup()
{
  pinMode(red, OUTPUT);
  pinMode(blue, OUTPUT);
  pinMode(green, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  if (Serial.available() > 0)
  {
    String input = Serial.readString();
    if(input == "yellow") {
      analogWrite(red,255);
      analogWrite(green,255);
      analogWrite(blue,0); }
    else if (input == "purple") {
      analogWrite(red,168);
      analogWrite(green,0);
      analogWrite(blue,255);}
    else
      Serial.println("ERROR");
  }
}
```

2.

```
#define led 13

void setup()
{
  pinMode(led, OUTPUT);
}

void loop()
{
  // turn the LED on (HIGH is the voltage level)
  digitalWrite(led, HIGH);
  delay(500); // Wait for 500 millisecond(s)
  // turn the LED off by making the voltage LOW
  digitalWrite(led, LOW);
  delay(500); // Wait for 500 millisecond(s)
}
```

3.

```
#define led1 12
#define led2 8

    // time of latest change
uint64_t lastMillis1 = 0;
uint64_t lastMillis2 = 0;

    // periods
int period1 = 1000;
int period2 = 300;

// state of the LED
bool state1 = false;
bool state2 = false;

void setup(){
    pinMode(led1, OUTPUT);
    pinMode(led2, OUTPUT);
}

void loop(){
    digitalWrite(led1, state1);
    digitalWrite(led2, state2);

    // check for led1
    if(millis() > lastMillis1 + period1){
        lastMillis1 = millis();
        state1 = !state1;
    }

    // check for led2
    if(millis() > lastMillis2 + period2){
        lastMillis2 = millis();
        state2 = !state2;
    }
}
```