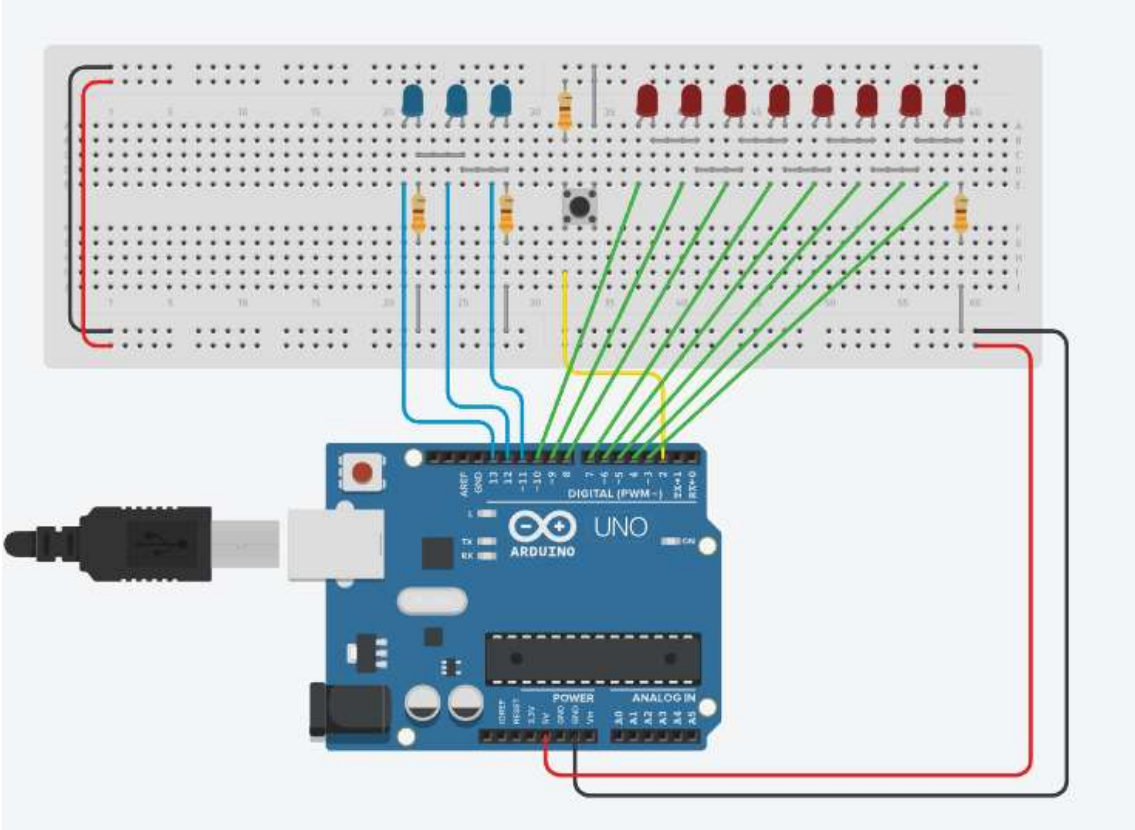
# Dépôt TP1,
# Tinkercad.

## Exercice 1




https://www.tinkercad.com/things/aD4F4X72cED-arnaud-tp1?sharecode=LO1cmTaCl6-iijF35n9kx6sqBFakq1SSai1KyyLgY4k

```ino
const int ledPins[] = {3, 4, 5, 6, 7, 8, 9, 10};
const int modeLedPins[] = {13, 12, 11};
const int buttonPin = 2;
int currentLed = 0;
unsigned long lastLedChangeTime = 0;
int actual_mode = 2;

void setup() {
  for (int i = 0; i < 8; i++) {
    pinMode(ledPins[i], OUTPUT);
  }
  for (int i = 0; i < 3; i++) {
    pinMode(modeLedPins[i], OUTPUT);
  }
  pinMode(buttonPin, INPUT_PULLUP);
  turnOffAllLeds();
  turnOnModeLed();
  lastLedChangeTime = millis();
}

void loop() {
  if (digitalRead(buttonPin) == LOW) {
    unsigned long buttonPressTime = millis();
    while (digitalRead(buttonPin) == LOW);
    unsigned long buttonPressDuration = millis() - buttonPressTime;
    if (buttonPressDuration < 1000) {
      turnOffAllLeds();
      digitalWrite(ledPins[currentLed], HIGH);
      if (actual_mode == 1) {
        currentLed++;
        if (currentLed == 8) {
          currentLed = 0;
        }
      }
    }
    else {
        changeMode();
    }
    delay(200);
  }

  if (actual_mode == 2 && millis() - lastLedChangeTime >= 500) {
    currentLed++;
    if (currentLed == 8) {
      currentLed = 0;
    }
    turnOffAllLeds();
    digitalWrite(ledPins[currentLed], HIGH);
    lastLedChangeTime = millis();
  } else if (actual_mode == 3 && millis() - lastLedChangeTime >= 100) {
    currentLed++;
    if (currentLed == 8) {
      currentLed = 0;
    }
    digitalWrite(ledPins[currentLed-6], LOW);
    digitalWrite(ledPins[currentLed], HIGH);
    lastLedChangeTime = millis();
  }
}

void turnOffAllLeds() {
  for (int i = 0; i < 8; i++) {
    digitalWrite(ledPins[i], LOW);
  }
}
```

```
void turnOffAllLeds() {
  for (int i = 0; i < 8; i++) {
    digitalWrite(ledPins[i], LOW);
  }
}

void turnOnModeLed() {
  for (int i = 0; i < 3; i++) {
    digitalWrite(modeLedPins[i], LOW);
  }
  digitalWrite(modeLedPins[actual_mode - 1], HIGH);
}

void changeMode() {
  turnOffAllLeds();
  while (digitalRead(buttonPin) == HIGH) {
    actual_mode++;
    if (actual_mode == 4) { actual_mode = 1; }
    turnOnModeLed();
    delay(750);
  }
}
```