PROJET ARDUINO MECHA SKARNER

2021-2022

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Groupe 4

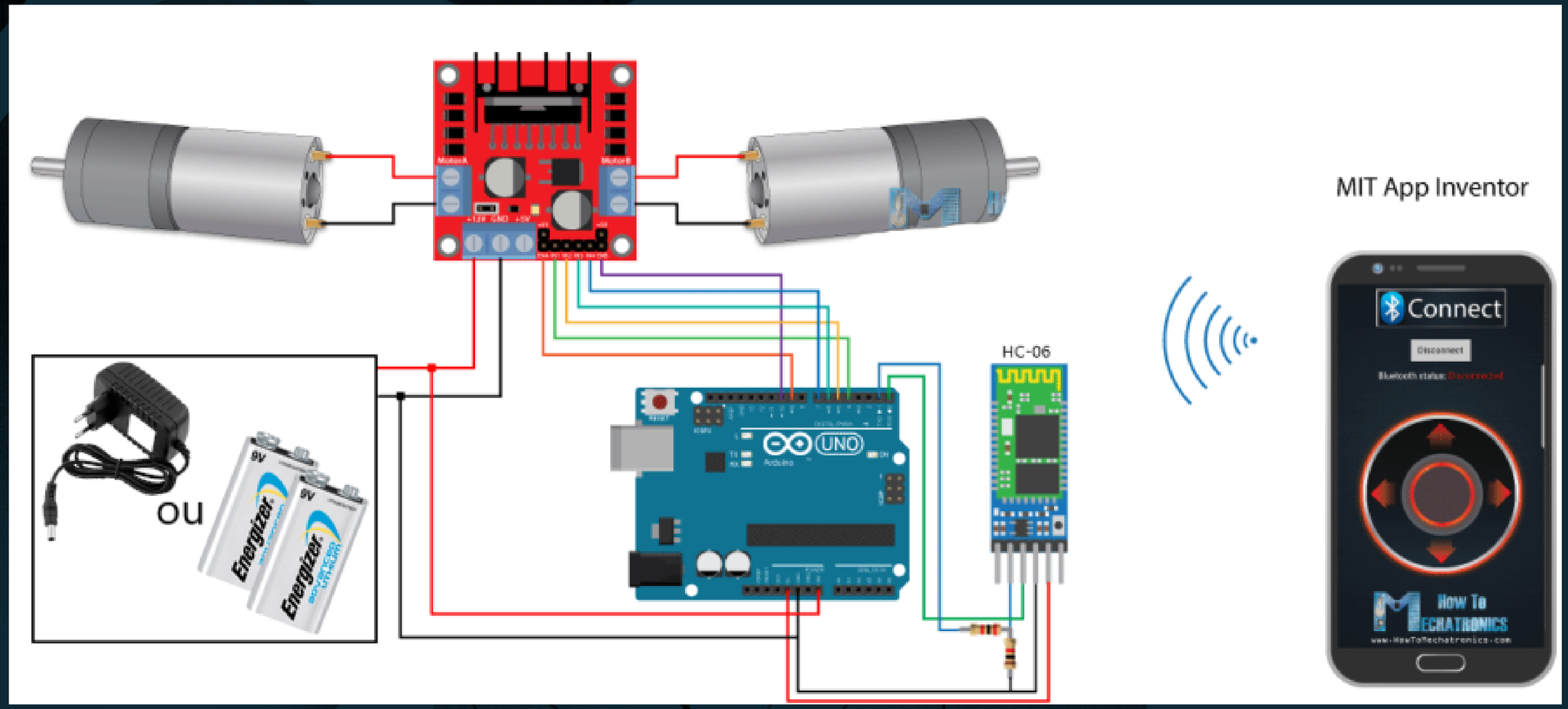
https://github.com/Jokrem/MechaSkarner-Remi-Maxime

BUT DU PROJET

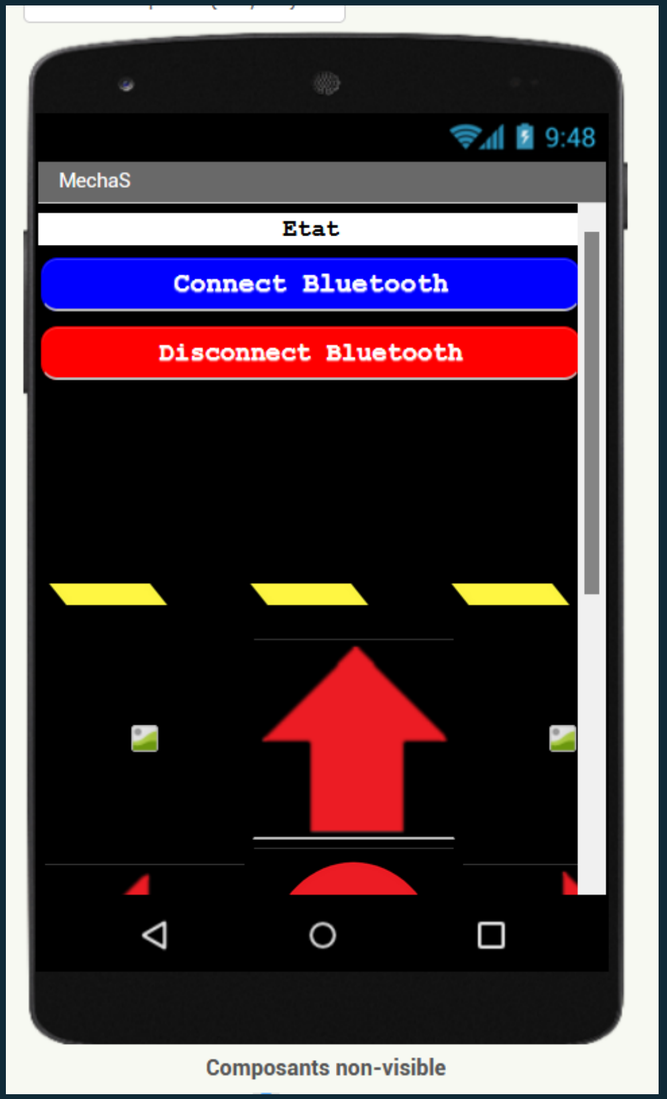
ROUGE / ORANGE / JAUNE / VERT /
BLEU / VIOLET / MARRON

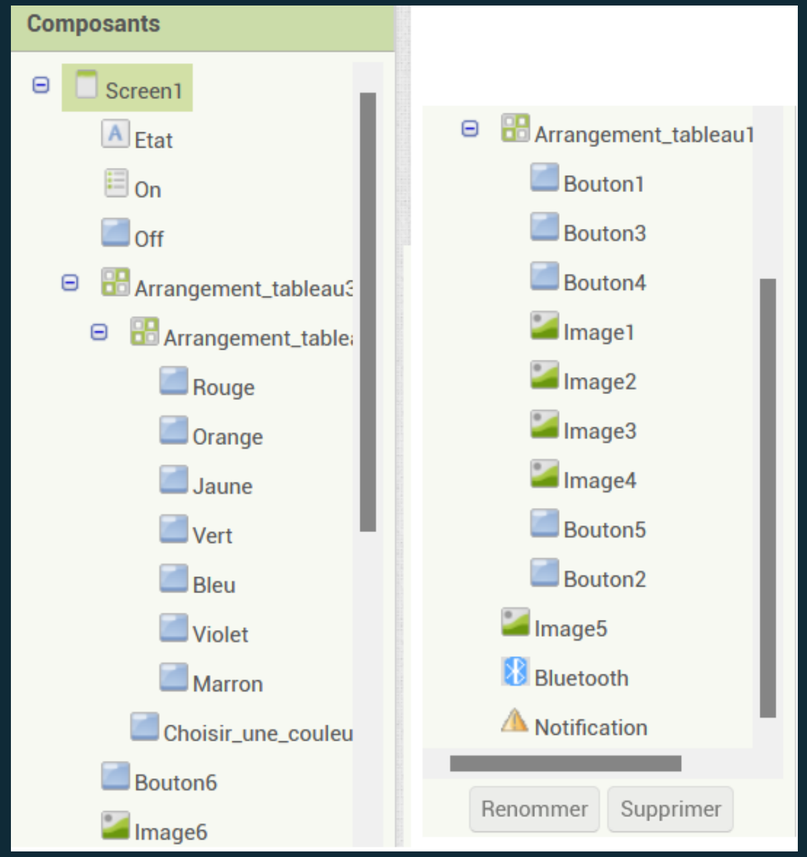
DÉPLACEMENT

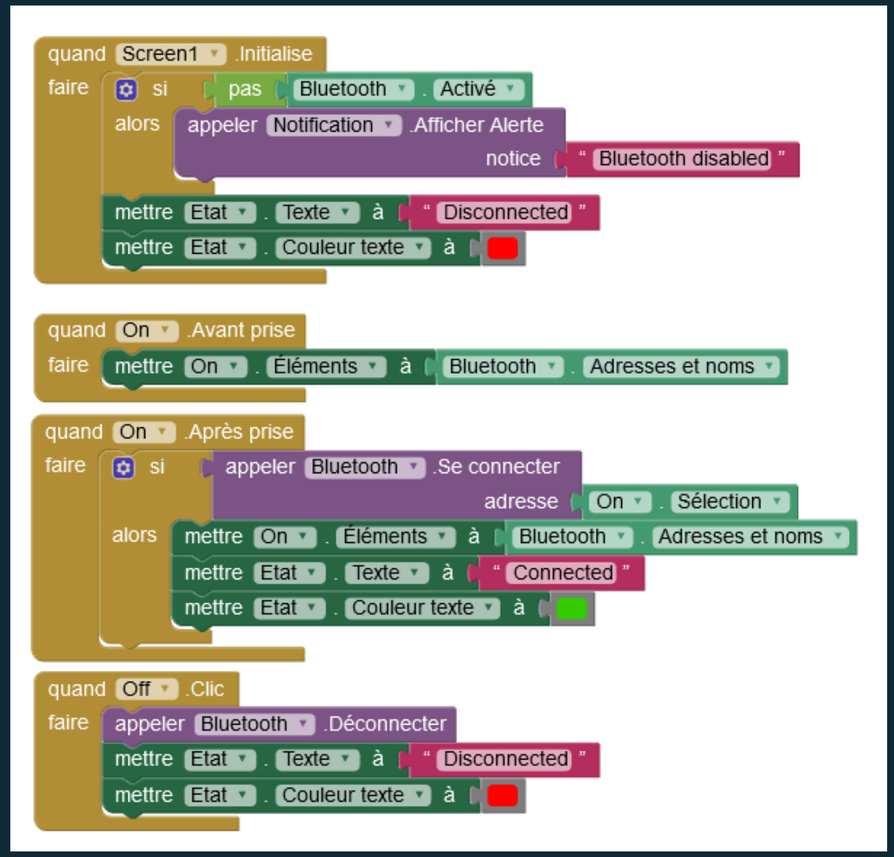
-Chenilles/moteurs
-Application Bluetooth
-Boite



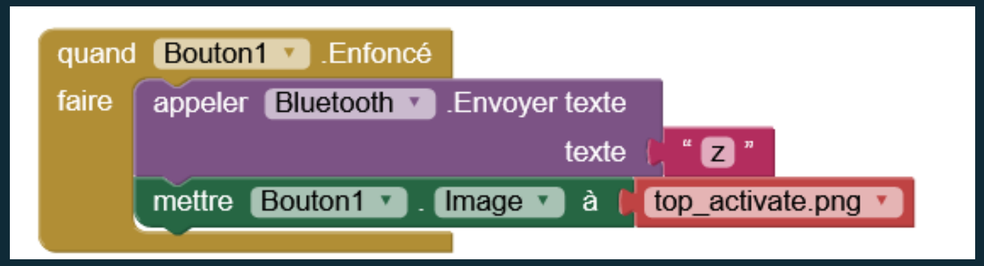
MIT APP INVENTOR 2





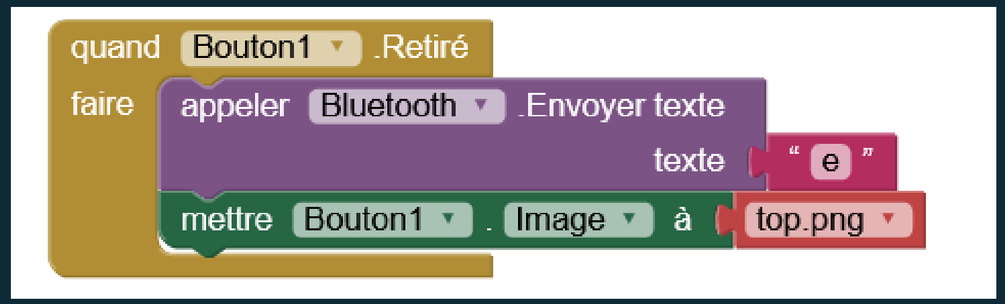


Exemple : avancer



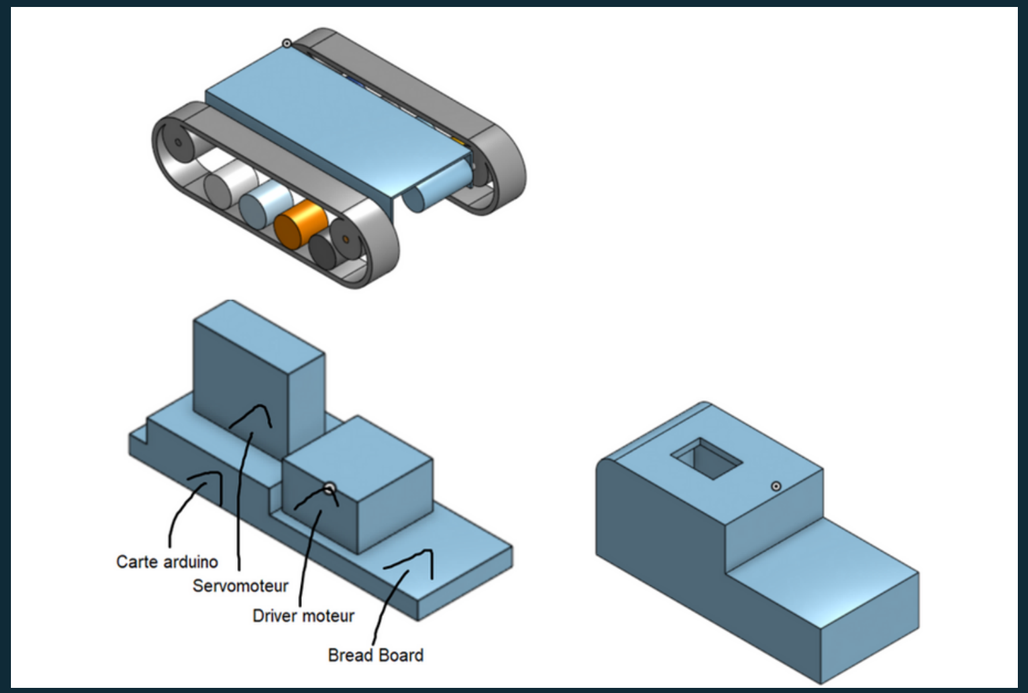

```
void loop() {

  if (hc06.available()) {
     message = hc06.read();
     if (message != -1) {

        if (message == 'z') {
          GoTop();
        }
```

```
void GoTop() {
  Serial.println("forward");

  //Motor A direction
  digitalWrite(IN1,LOW);
  digitalWrite(IN2,HIGH);

  //Motor B direction
  digitalWrite(IN3,LOW);
  digitalWrite(IN4,HIGH);

  //Speed
  analogWrite(ENA,255);
  analogWrite(ENB,255);
}
```

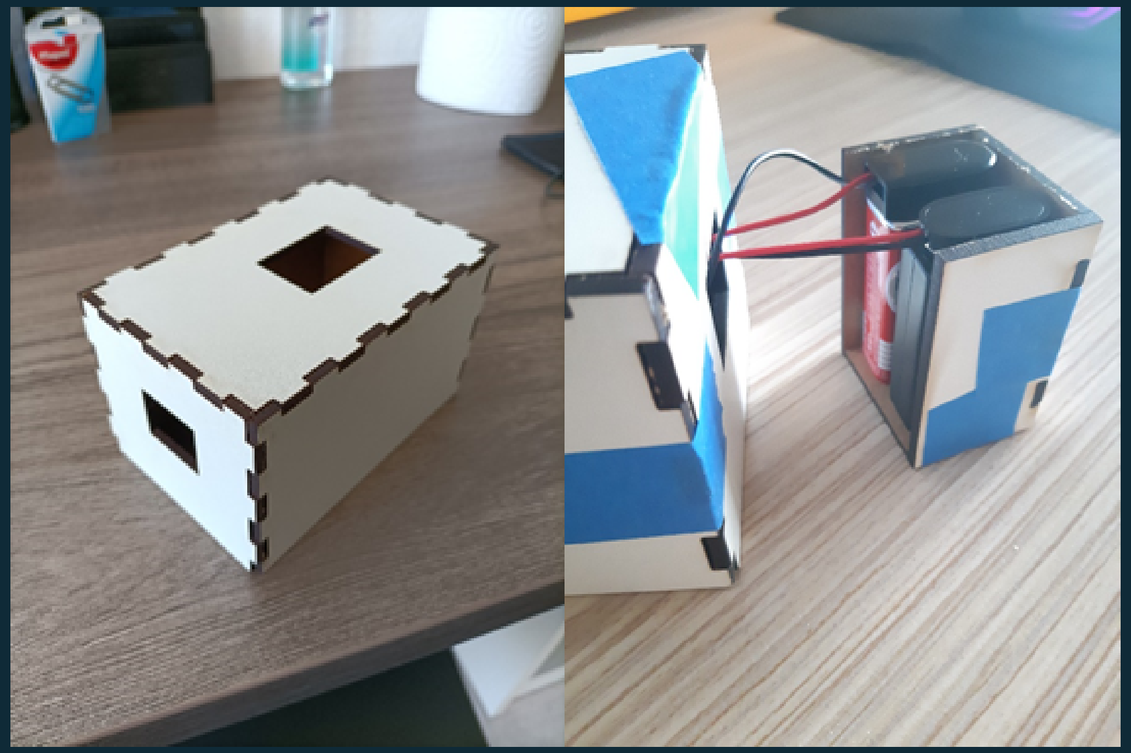



```
void Stop()
{
  Serial.println("Stop");

  //Speed
  analogWrite(ENA,0);
  analogWrite(ENB,0);
}
```

DESSUS DU TANK



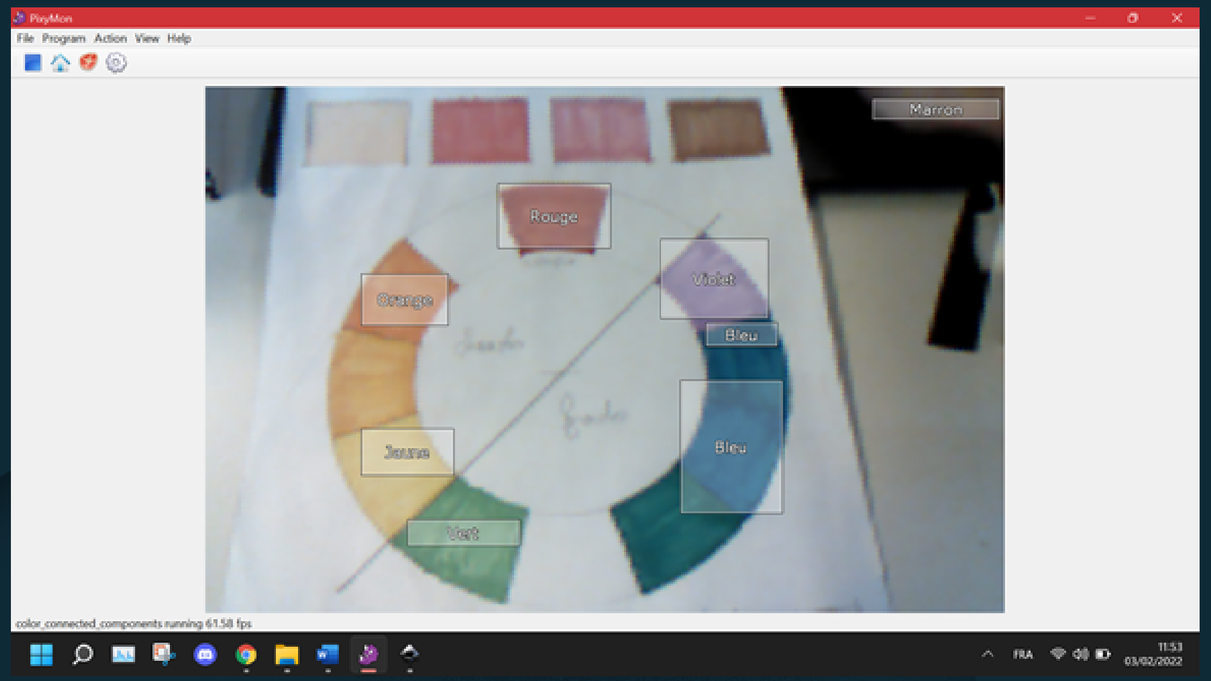
Avant (onshape)

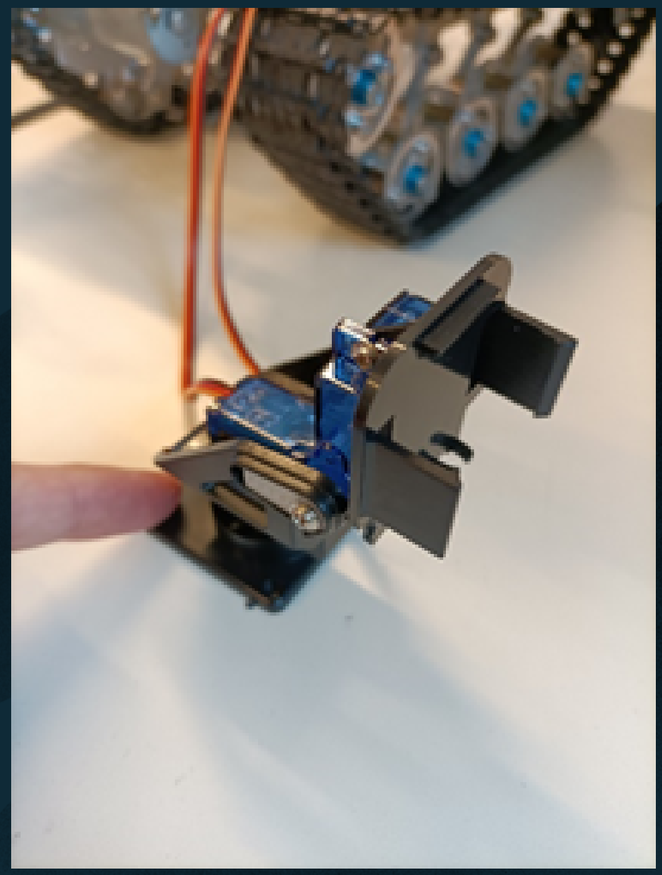


Après (découpe laser)

TIR LASER

-Servomoteurs/laser
-Détection des couleurs avec *Pixy2*





CODE DES SERVO

```
#include <Servo.h>          //Servo
#include <Pixy2.h>          //Camera

Pixy2 pixy;
Servo turret_bas;
Servo turret_haut;

const int laser = 8;
String couleur = "bleu";

const String liste_coul[] = {"rouge", "orange", "jaune", "vert", "bleu", "violet", "marron"};

int pos_bas = 0;
int pos_haut = 135;

int x = 0;
int y = 135;
```

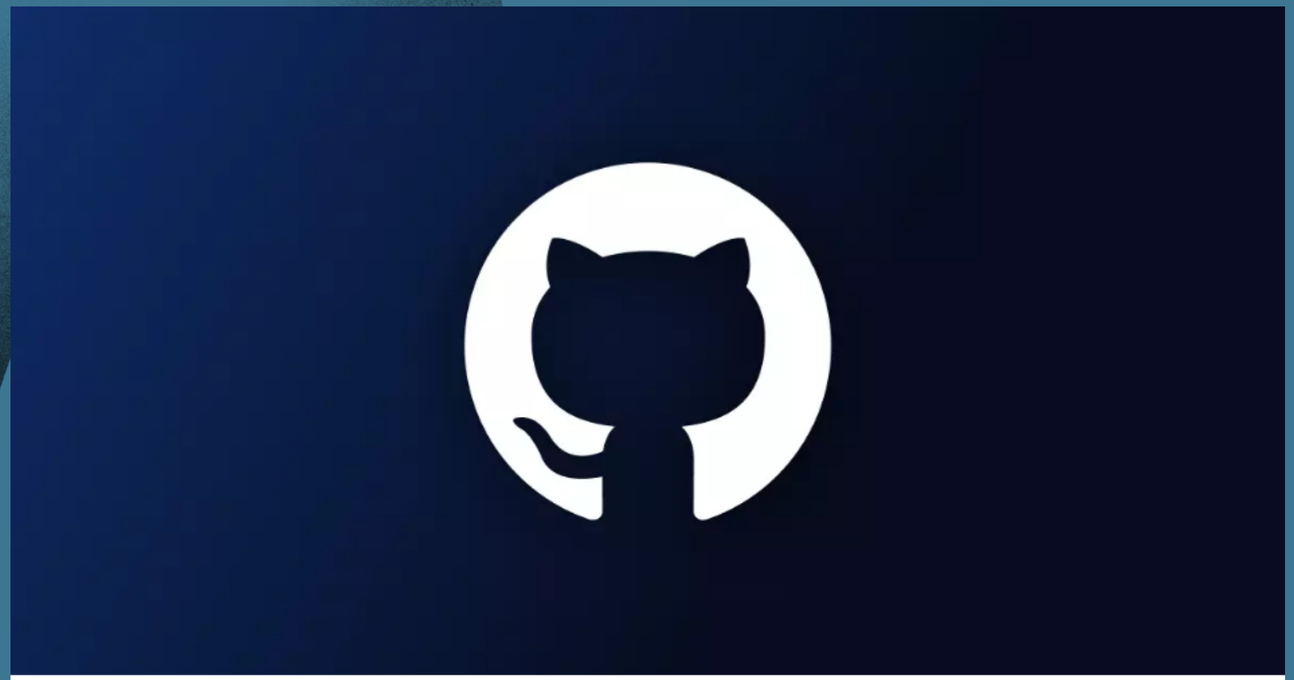
```
void setup() {
  Serial.begin(9600);
  turret_bas.attach(A0);
  turret_haut.attach(A1);
  pinMode(laser, OUTPUT);
  pixy.init();
}
```

```
void loop()
{
  turret_haut.write(pos_haut);

  for (int j = 0; j < 150; j ++)
  {
    turret_bas.write(j);
    turret_haut.write(135);
    pos_haut = 135;
    pos_bas ++;
    delay(25);

    pixy.ccc.getBlocks();
```

```
for (int i = 0; i < pixy.ccc.numBlocks; i++)
{
  Serial.println(liste_coul[pixy.ccc.blocks[i].m_signature - 1]);
  if (liste_coul[pixy.ccc.blocks[i].m_signature - 1] == couleur)
  {
    int x = pixy.ccc.blocks[i].m_x;
    Serial.println(x);
```

```
int y = pixy.ccc.blocks[i].m_y;
while (y > 165 or y < 135)
{
  Serial.println(y);
  if (y < 135)
  {
    pos_haut ++;
    y += 3;
    turret_haut.write(pos_haut);
    delay(15);
  }
  else
  {
    pos_haut --;
    y -= 3;
    turret_haut.write(pos_haut);
    delay(15);
  }
}
```

```
        Serial.println("Tir");
        digitalWrite(laser, HIGH);
        delay(1000);
        digitalWrite(laser, LOW);
      }
    }
  }

  for (int i=pos_bas; i>0; i--)
  {
    turret_bas.write(i);
    pos_bas --;
    delay(15);
  }
}
```



Jokrem/MechaSkarner-Remi-Maxime

Contribute to Jokrem/MechaSkarner-Remi-Maxime development by creating an account on GitHub.

GitHub

MERCI !