

# SEQ1-ASPIRATEUR AUTONOME

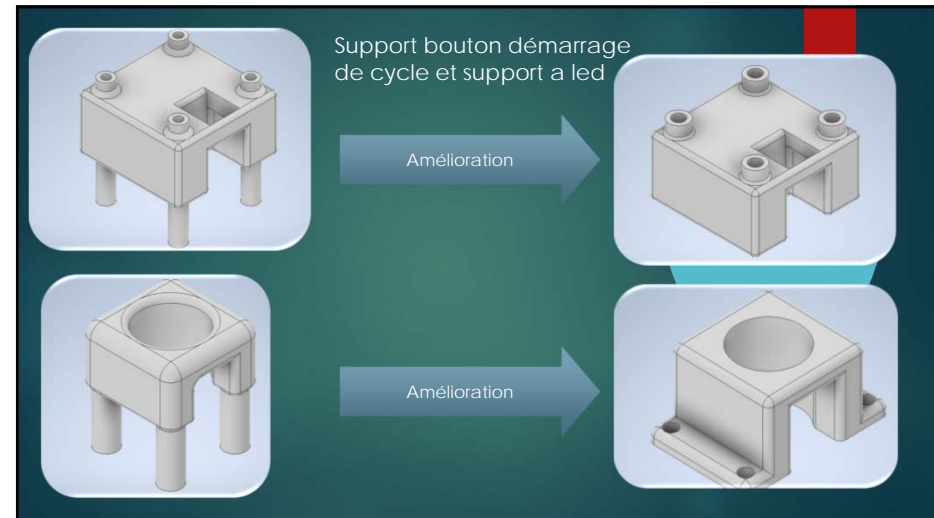
PRÉSENTE PAR

MATEO BOUVET, CIRELLI MATTEO, LAURENT-BILLOTTE AMÉLIEN

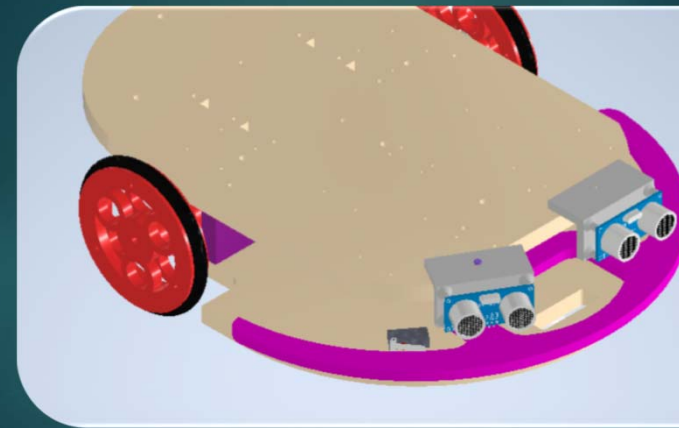
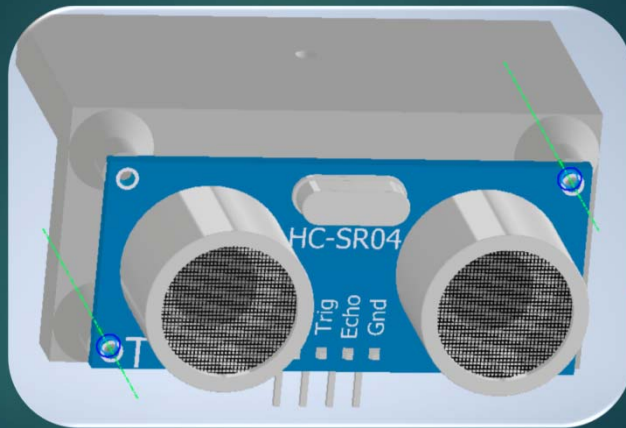
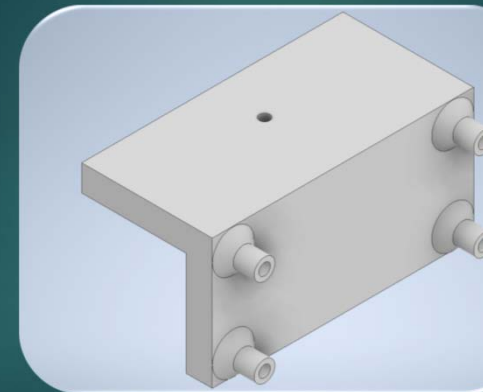
## Sommaire

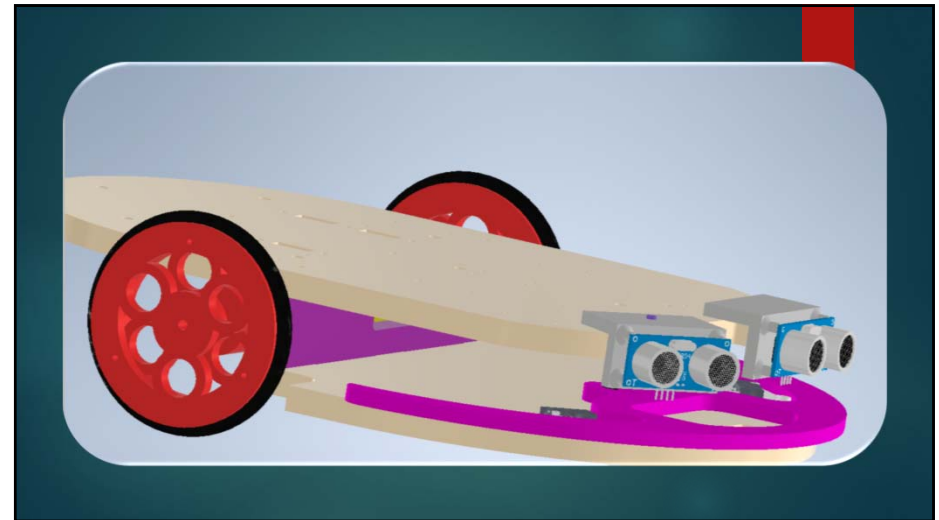
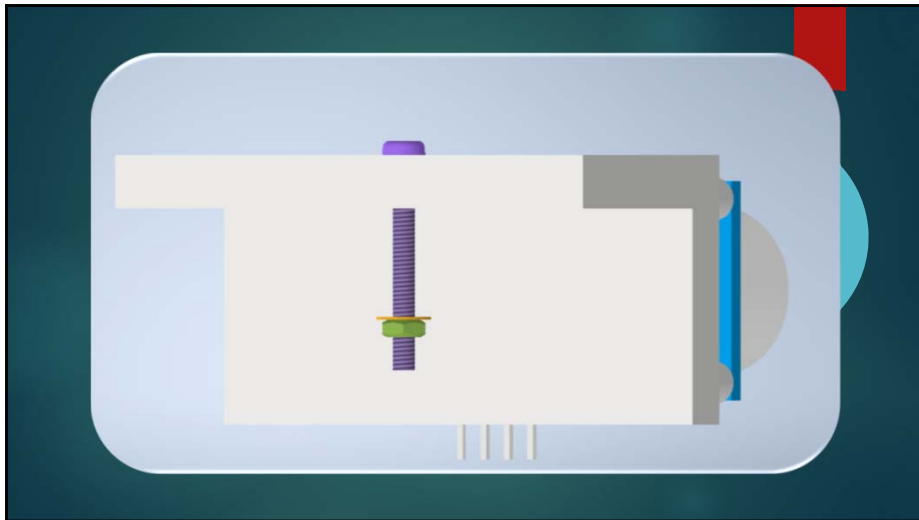
- ▶ 1) Mise en situation
- ▶ 2) conception du produit
- ▶ 3) conception du logiciel
- ▶ 4) teste et validation

## 1) Mise en situation

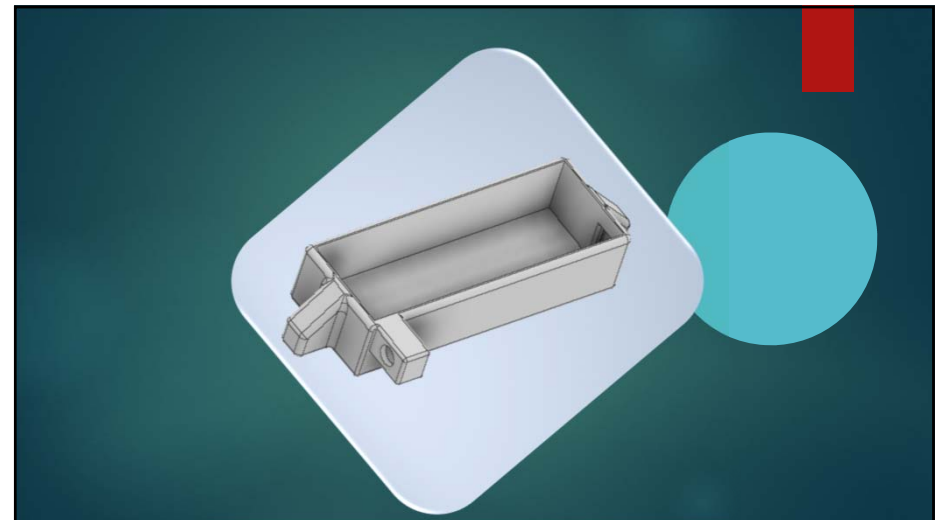


## Conception détaillée du capteur





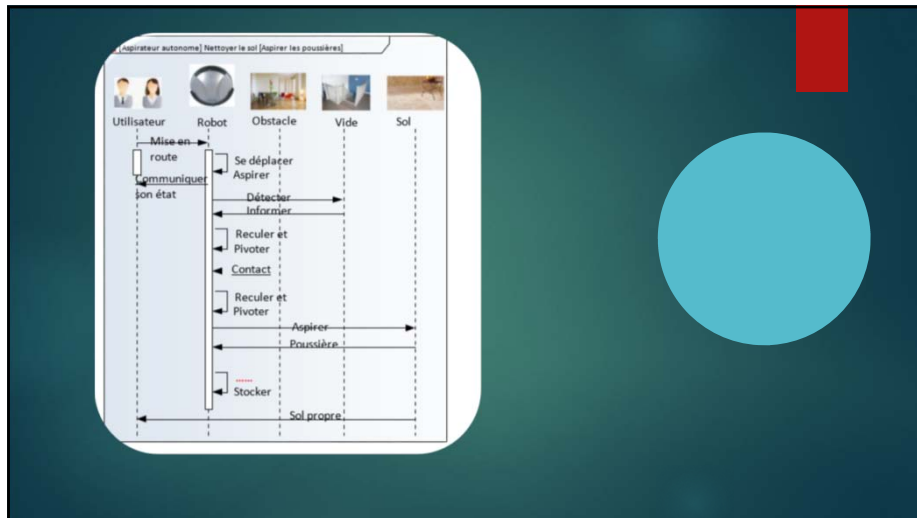
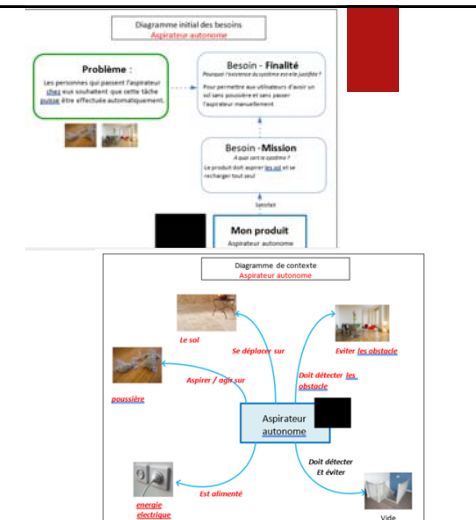
Conception du boîtier de la  
batterie



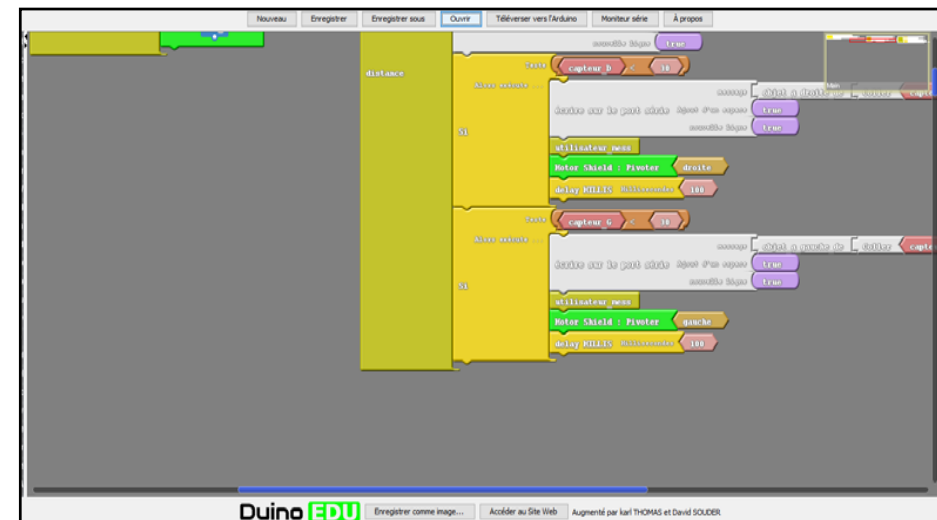
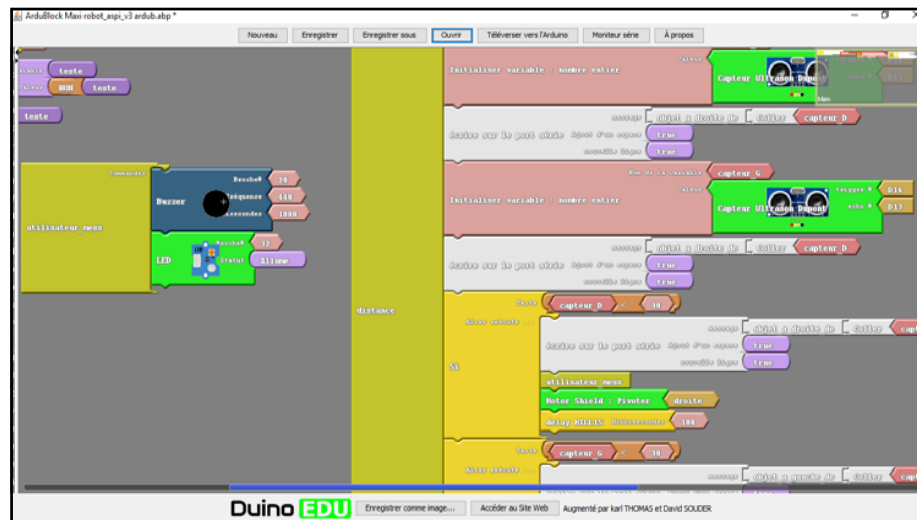
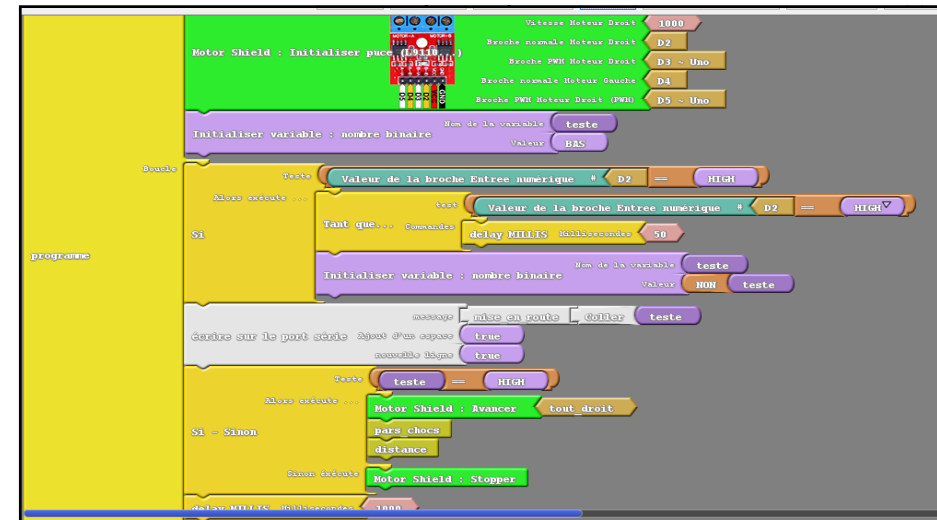
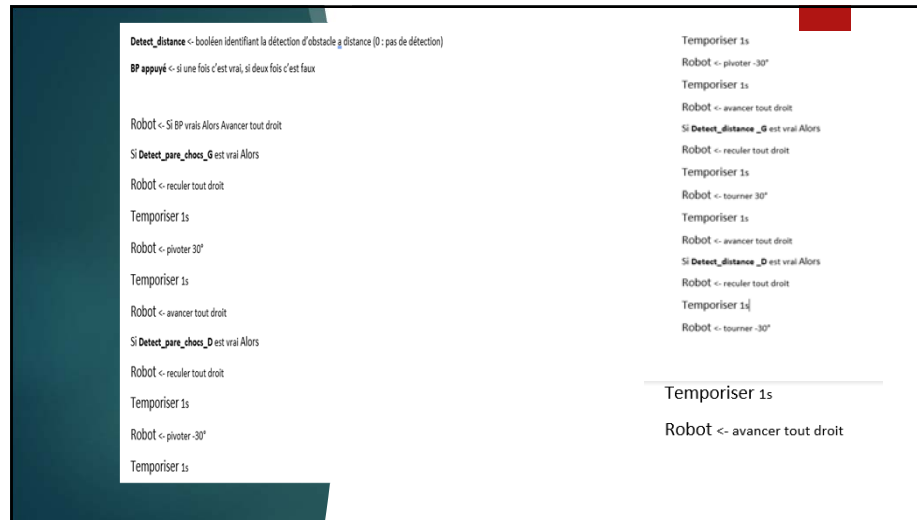


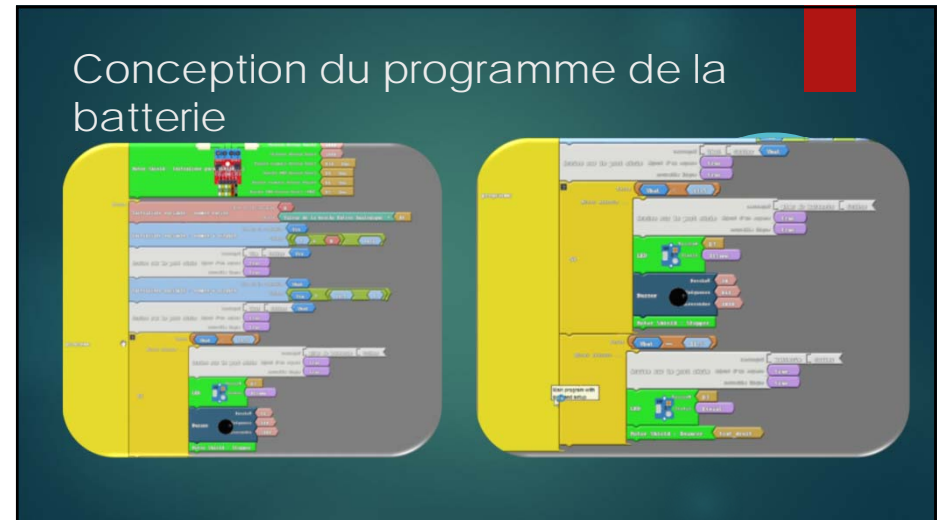
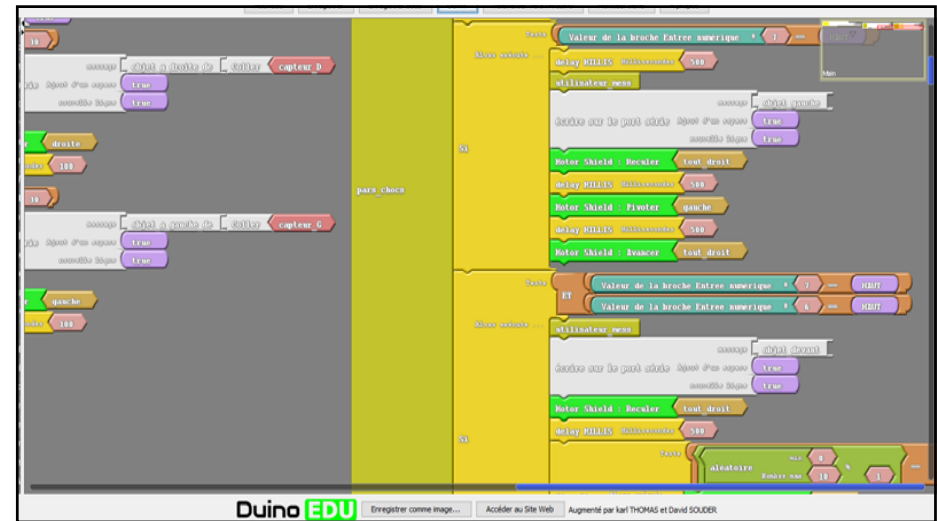
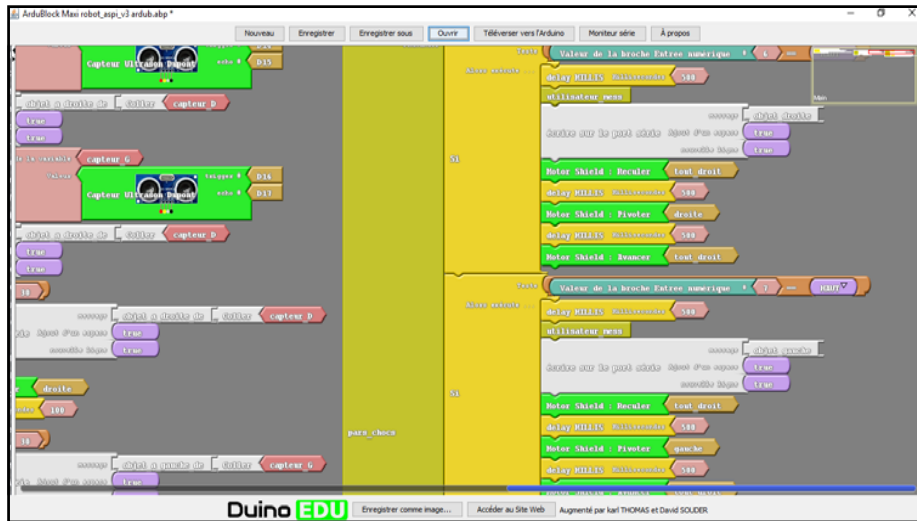
## 2) conception du produit

- Cahier des charges fonctionnel  
(finalité, mission,...)



## 3) conception du logiciel





## Explication du programme

N<- Valeur de la broche A0

Vin<- (5\*N)/1023

Vbat<- Vin\*(11,5/5)

Robot<- Si Vbat<11,5 Alors

Allumé LED et buzzer

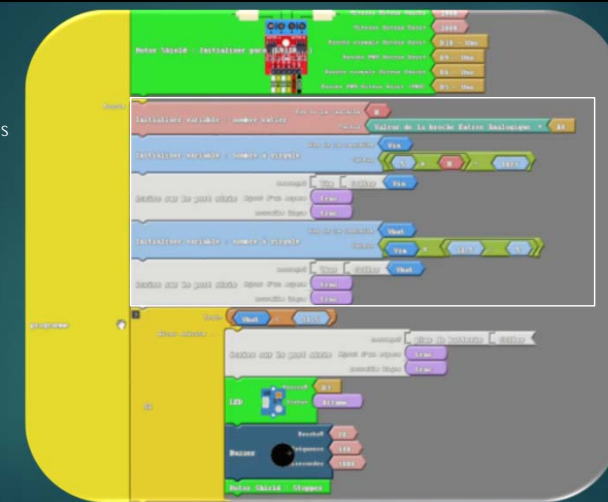
Stopper robot

Robot<- Si Vbat>=11,5 Alors

Eteint LED et buzzer

Avancer robot

### ► 1<sup>er</sup> étapes



## Explication du programme

N<- Valeur de la broche A0

Vin<- (5\*N)/1023

Vbat<- Vin\*(11,5/5)

Robot<- Si Vbat<11,5 Alors

Allumé LED et buzzer

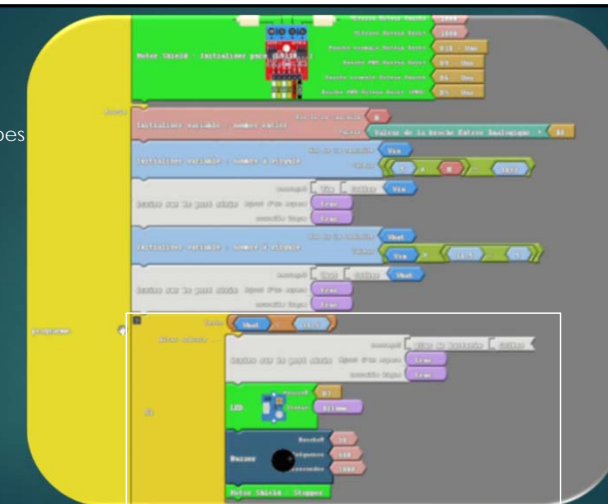
Stopper robot

Robot<- Si Vbat>=11,5 Alors

Eteint LED et buzzer

Avancer robot

### ► 2<sup>eme</sup> étapes

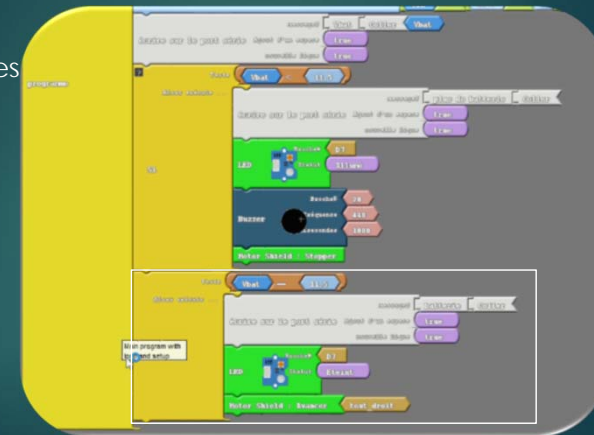




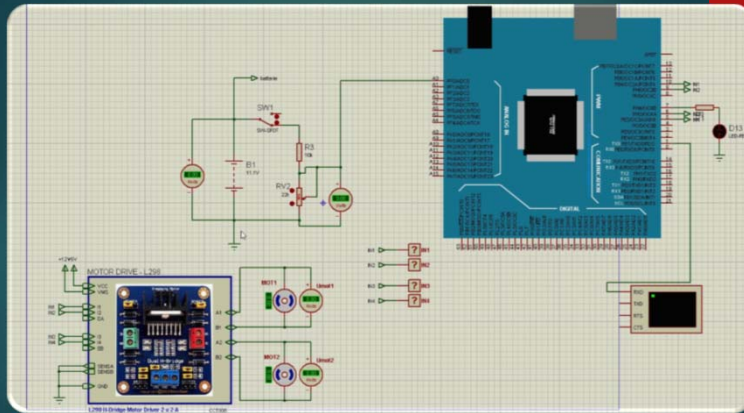
## Explication du programme

$N \leftarrow$  Valeur de la broche A0  
 $Vin \leftarrow (5 * N) / 1023$   
 $Vbat \leftarrow Vin * (11,5/5)$   
 Robot- Si  $Vbat < 11,5$  Alors  
   Allumé LED et buzzer  
   Stopper robot  
 Robot- Si  $Vbat \geq 11,5$  Alors  
   Eteint LED et buzzer  
   Avancer robot

### • 3ème étapes



## Simulation du programme



**Detect\_distance** ← variable inférieure à 30cm

Robot ← Si **Detect\_distance\_D** Alors  
   Allumé LED et buzzer  
 Robot ← Si **Detect\_distance\_G** Alors  
   Allumé LED et buzzer

Si **Detect\_pare\_chocs\_G** est vrai Alors

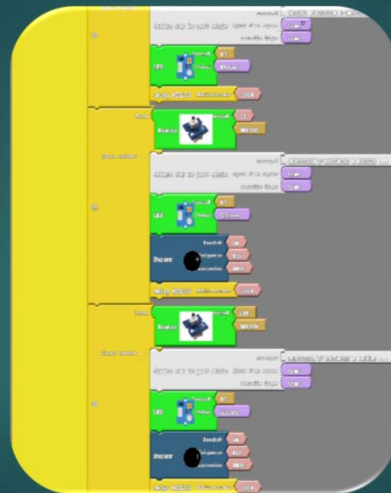
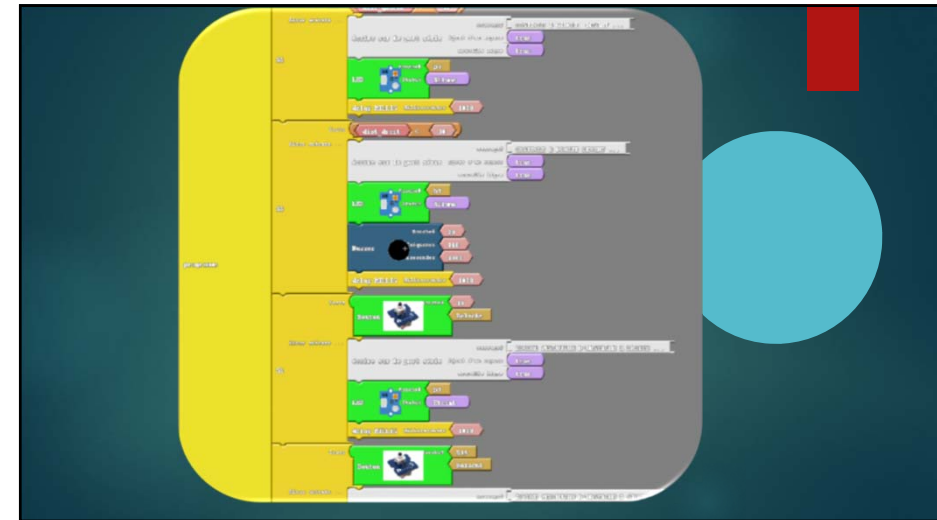
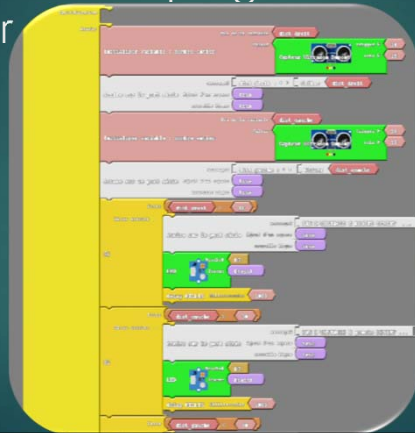
Robot «Allumé LED et buzzer

Si **Detect\_pare\_chocs\_G** est vrai Alors

Robot «Allumé LED et buzzer



# Conception du programme du capteur



## Simulation du programme

- Nous avons simulé notre programme sur Isis

