#### Arduino

- 1. Define library of stepper motors and servo motors
- 2.Define stepper motors and Servo Motors
- 3.Define Switch
- 4. Define Cordonate and joint and Large of hands
- 5. Define stepper motor current position \* 4
- 6.Define factor to convert angles and zDistance to step
- 7. Define a string and array for data received
- 8. Define arrays for position saved and lenght counter

### void setup

- 1. Commencer le Serial communication
- 2. Switchs define as Input Pullup
- 3. Stepper motors max speed and acceleration
- 4. Gripper servo motor attache and open it
- 5.Initial z position
- 6.Homing()

## void Loop ()

- if serial available
- 1.Read content
- 2.Organize content3

#### if save button clicked

- 1.Save position
- 2.Increment counter
  - if clear button clicked
- 1.clear position
- 2.initialize counter

# if run button clicked

- Boucle i < counter
- 1.set speed and acceleration
- 2.steppers move to position i 3.gripper status excute
- 4.delay
- if current position deffirent
- 1. Move steppers to position
- if cuurent gripper value defferent
  - 1. move gripper

#### void homing()

#### Switch is non touché

- 1. stepper set speed and run one step 2. set current position
  - 3. move the stepper to initial position