3.Control single servo

1. API Introduction

The API corresponding to controlling a single bus servo is:

Arm_serial_servo_write(id, angle, time)

Function: Control the angle to which the bus servo will run.

Parameter explanation:

id: The ID number of the servo to be controlled, ranging from 1 to 6. Each ID number represents a servo. The ID of the bottom servo is 1 and increases upwards. The ID of the top servo is 6.

Angle: The angle to which the servo is to be controlled. Except for the No. 5 servo (ID=5), the control range of the other servos is 0~180, and the control range of the No. 5 servo is 0~270.

Time: Controls the time the servo runs. Within the valid range, the servo rotates at the same angle. The smaller the input running time, the faster the servo moves. Entering 0 will cause the servo to run at the fastest speed.

Return value: None.

2. Code content

Code path:

```
~/dofbot_ws/src/dofbot_ctrl/scripts/03.ctrl_servo.ipynb
```

```
#!/usr/bin/env python3
#coding=utf-8
import time
from Arm_Lib import Arm_Device
# Create a robotic arm object
Arm = Arm_Device()
time.sleep(.1)
```

```
# Individually control a servo to move to a certain angle
id = 6
Arm.Arm_serial_servo_write(id, 90, 500)
time.sleep(1)
```

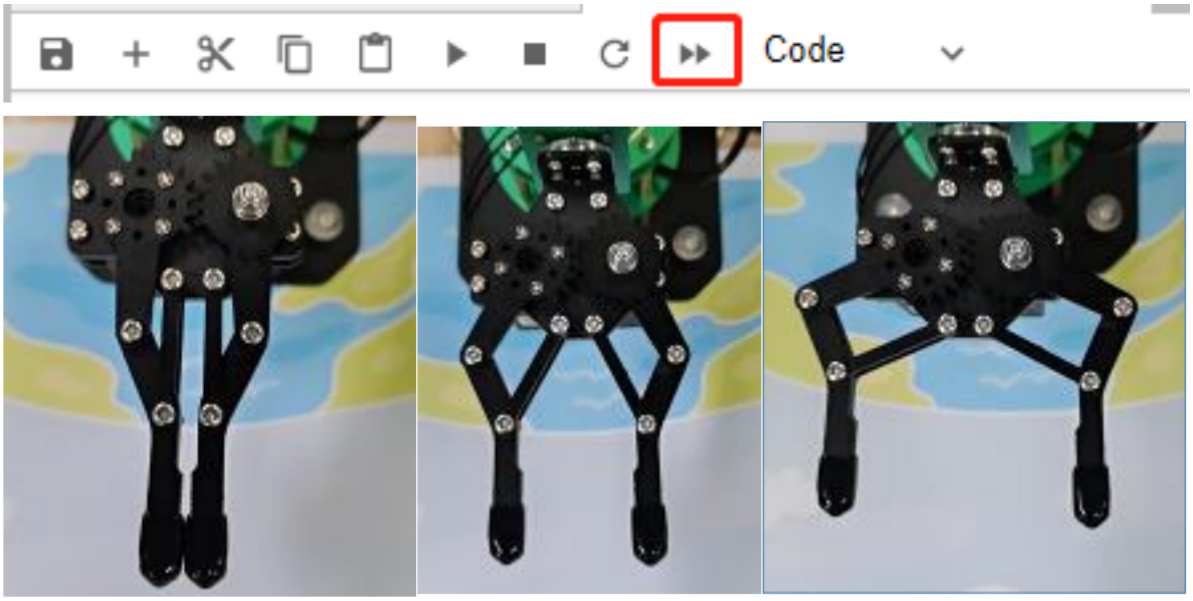
```
# Control a servo to switch angles cyclically
id = 6
def main():
 while True:
 Arm.Arm_serial_servo_write(id, 120, 500)
 time.sleep(1)
 Arm.Arm_serial_servo_write(id, 50, 500)
 time.sleep(1)
 Arm.Arm_serial_servo_write(id, 120, 500)
 time.sleep(1)
```

```
 Arm.Arm_serial_servo_write(id, 180, 500)
 time.sleep(1)

try :
 main()
except KeyboardInterrupt:
 print(" Program closed! ")
 pass
```

```
del Arm # ReleaseArm object
```

Open the program file from jupyter lab and click the run entire notebook button on the jupyter lab toolbar. You can see that the claws of the robotic arm are constantly changing angles.



If you want to quit, click the Stop button on the toolbar.