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 should run.

Parameter explanation:

```
id: The ID number of the servo to control, range is 1~6. Each ID number
represents a servo, with the servo at the bottom having ID 1, increasing upwards,
and the top servo having ID 6.

angle: Control the angle to which the servo should run. Except for servo 5
(ID=5), the control range for other servos is 0~180. The control range for servo
5 is 0~270.

time: Control the running time of the servo. Within the effective range, for the
same angle of rotation, the smaller the input running time, the faster the servo
moves. Input 0 for the servo to run at maximum speed.

Return value: None.
```

2. Code Content

Code path:

```
~/dofbot_pro/dofbot_ctrl/scripts/03.ctrl_servo.ipynb
```

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

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

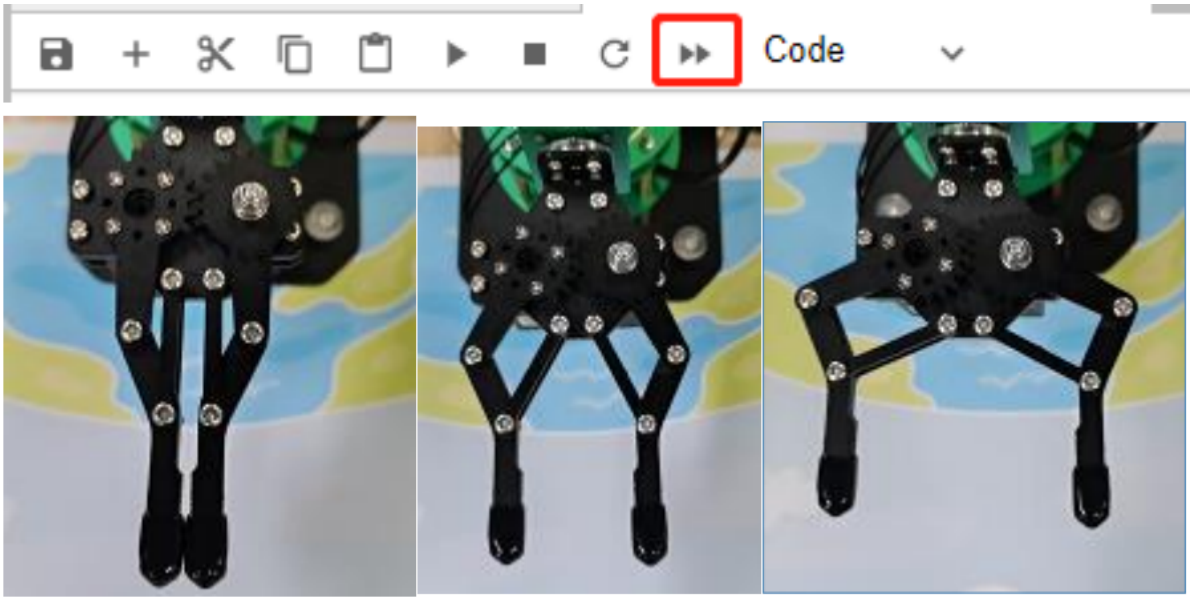
```
# Control a servo to cycle through angles
id = 6
def main():
 while True:
 Arm.Arm_serial_servo_write(id, 120, 500)
 time.sleep(1)
```

```
 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 # Release the Arm object
```

Open the program file from jupyter lab, and click the "Run entire notebook" button on the jupyter lab toolbar, you can see the robotic arm's gripper continuously changing angles.



To exit, click the stop button on the toolbar.