Control 6 servos at a time

1. API Introduction

The API corresponding to controlling 6 bus servos at a time is:

Arm_serial_servo_write6(S1, S2, S3, S4, S5, S6, time)

Function: Control the angles of the six servos of the robot arm at the same time

Parameter explanation:

S1: The angle value of servo No. 1 is 0~180.

S2: The angle value of servo No. 2 is 0~180.

S3: The angle value of servo No. 3 is 0~180.

S4: The angle value of servo No. 4 is 0~180.

S5: The angle value of servo No. 5 is 0~270.

S6: The angle value of servo No. 6 is 0~180.

time: Controls the running time of the servo. Within the effective range, the servo rotates at the same angle. The smaller the input running time, the faster the servo moves. If you input 0, the servo runs at the fastest speed.

Return value: None.

2. Code content

Code path:

```
~/dofbot_pro/dofbot_ctrl/scripts/05.ctrl_all.ipynb
```

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

```
# Control the movement of six servos at the same time and gradually change the
angle.
def ctrl_all_servo(angle, s_time = 500):
 Arm.Arm_serial_servo_write6(angle, 180-angle, angle, angle, angle, angle,
s_time)
 time.sleep(s_time/1000)
def main():
 dir_state = 1
 angle=90

 # Reset the servo to center
 Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 500)
```

```
 time.sleep(1)

 while True:
 if dir_state == 1:
 angle += 1
 if angle >= 180:
 dir_state = 0
 else:
 angle -= 1
 if angle <= 0:
 dir_state = 1

 ctrl_all_servo(angle, 10) time.sleep(10/1000)
# print(angle)
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 the entire notebook button on the jupyter lab toolbar. You can see that the six servos of the robotic arm rotate at the same time and the robotic arm constantly changes its posture.

If you want to exit, click the stop button on the toolbar.