Robotic arm swings up and down, left and right

1. Experimental idea

 This experiment is to control the robot arm to swing up and down, left and right, and then return to the upright state. By controlling the different angles of the No. 3 and No. 4 servos at the same time, the function of controlling the servos to swing up and down is achieved, and then the No. 1 servo is controlled to swing left and right, and finally returns to the upright state.

2. Code content

Code path:

```
~/dofbot_pro/dofbot_ctrl/scripts/06.left_right.ipynb
```

```python
#!/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)
```

```python
def main():
# Reset the servo to the center
Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 500)
time.sleep(1)
while True:
# Control the servos 3 and 4 to move up and down
Arm.Arm_serial_servo_write(3, 0, 1000)
time.sleep(.001)
Arm.Arm_serial_servo_write(4, 180, 1000)
time.sleep(1)

# Control the servo No. 1 to move left and right
Arm.Arm_serial_servo_write(1, 180, 500)
time.sleep(.5)
Arm.Arm_serial_servo_write(1, 0, 1000)
time.sleep(1)
# Control the servo to restore the initial position
Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 1000)
time.sleep(1.5)
try :
main()
except KeyboardInterrupt:
print(" Program closed! ")
pass
```

```python
del Arm # Release the Arm object
```

From Open the program file in jupyter lab and click the Run the entire notebook button on the jupyter lab toolbar to see the robot arm move up, down, left, and right.

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