Robotic arm dancing

1. Experimental ideas

 This experiment is to control the dancing of the robotic arm. By modifying the angles of different servos of the robotic arm and increasing the delay time, an effect similar to the dancing of the robotic arm can be achieved.

2. Code content

Code path:/root/Dofbot/3.ctrl_Arm/7.dance.ipynb

```python
#!/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)
time_1 = 500
time_2 = 1000
time_sleep = 0.5
```

```python
# Robotic arm dances in a loop
def main():
     # Reset the servo to center
    Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 500)
    time.sleep(1)
    times = 0.003
    while True:
        Arm.Arm_serial_servo_write(2, 180-120, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 120, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 60, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 180-135, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 135, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 45, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 180-120, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 120, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 60, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 90, time_1)
        time.sleep(times)
```

```python
        Arm.Arm_serial_servo_write(3, 90, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 90, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 180-80, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 80, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 80, time_1)
        time.sleep(time_sleep)


        Arm.Arm_serial_servo_write(2, 180-60, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 60, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 60, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 180-45, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 45, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 45, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(2, 90, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(3, 90, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(4, 90, time_1)
        time.sleep(times)
        time.sleep(time_sleep)


        Arm.Arm_serial_servo_write(4, 20, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(6, 150, time_1)
        time.sleep(times)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(4, 90, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(6, 90, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(4, 20, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(6, 150, time_1)
        time.sleep(time_sleep)

        Arm.Arm_serial_servo_write(4, 90, time_1)
        time.sleep(times)
        Arm.Arm_serial_servo_write(6, 90, time_1)
        time.sleep(times)
```

```python
            Arm.Arm_serial_servo_write(1, 0, time_1)
            time.sleep(times)
            Arm.Arm_serial_servo_write(5, 0, time_1)
            time.sleep(time_sleep)



            Arm.Arm_serial_servo_write(3, 180, time_1)
            time.sleep(times)
            Arm.Arm_serial_servo_write(4, 0, time_1)
            time.sleep(time_sleep)

            Arm.Arm_serial_servo_write(6, 180, time_1)
            time.sleep(time_sleep)

            Arm.Arm_serial_servo_write(6, 0, time_2)
            time.sleep(time_sleep)



            Arm.Arm_serial_servo_write(6, 90, time_2)
            time.sleep(times)
            Arm.Arm_serial_servo_write(1, 90, time_1)
            time.sleep(times)
            Arm.Arm_serial_servo_write(1, 90, time_1)
            time.sleep(times)
            Arm.Arm_serial_servo_write(5, 90, time_1)
            time.sleep(time_sleep)

            Arm.Arm_serial_servo_write(3, 90, time_1)
            time.sleep(times)
            Arm.Arm_serial_servo_write(4, 90, time_1)
            time.sleep(time_sleep)

            print("END OF LINE! ")

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

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