1. Experimental objectives

In this course, we will control the angle of the DOFBOT to rotate different servos, and increase the delay time, to achieve the effect similar to the mechanical arm dancing.

2. About code

Path: /home/jetson/Dofbot/3.ctrl_Arm/7.dance.ipynb

```
#!/usr/bin/env python3
#coding=utf-8
import time
from Arm_Lib import Arm_Device

# Get a robotic arm object
Arm = Arm_Device()
time.sleep(.1)

time_1 = 500
time_2 = 1000
time_sleep = 0.5
```

```
# DOFBOT dancing
def main():
    # Middle servo
    Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 500)
    time.sleep(1)

    while True:
        Arm.Arm_serial_servo_write(2, 180-120, time_1)
        time.sleep(.001)
        Arm.Arm_serial_servo_write(3, 120, time_1)
        time.sleep(.001)
        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(.001)
        Arm.Arm_serial_servo_write(3, 135, time_1)
        time.sleep(.001)
        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(.001)
        Arm.Arm_serial_servo_write(3, 120, time_1)
```

```
time.sleep(.001)
Arm.Arm_serial_servo_write(4, 60, time_1)
time.sleep(time_sleep)

Arm.Arm_serial_servo_write(2, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(3, 90, time_1)
time.sleep(.001)
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(.001)
Arm.Arm_serial_servo_write(3, 80, time_1)
time.sleep(.001)
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(.001)
Arm.Arm_serial_servo_write(3, 60, time_1)
time.sleep(.001)
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(.001)
Arm.Arm_serial_servo_write(3, 45, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(4, 45, time_1)
time.sleep(time_sleep)

Arm.Arm_serial_servo_write(2, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(3, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(4, 90, time_1)
time.sleep(.001)
time.sleep(time_sleep)
```

```
Arm.Arm_serial_servo_write(4, 20, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(6, 150, time_1)
time.sleep(.001)
time.sleep(time_sleep)

Arm.Arm_serial_servo_write(4, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(6, 90, time_1)
time.sleep(time_sleep)

Arm.Arm_serial_servo_write(4, 20, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(6, 150, time_1)
time.sleep(time_sleep)

Arm.Arm_serial_servo_write(4, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(6, 90, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(1, 0, time_1)
time.sleep(.001)
Arm.Arm_serial_servo_write(5, 0, time_1)
time.sleep(time_sleep)



Arm.Arm_serial_servo_write(3, 180, time_1)
time.sleep(.001)
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(.001)
```

```
            Arm.Arm_serial_servo_write(1, 90, time_1)
            time.sleep(.001)
            Arm.Arm_serial_servo_write(5, 90, time_1)
            time.sleep(time_sleep)

            Arm.Arm_serial_servo_write(3, 90, time_1)
            time.sleep(.001)
            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
```

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