1. Experimental objectives

In this course, we will learn how to control DOFBOT up, down, left and right. Then, it will return to middle state.

By controlling the different angles of the No. 3 and No. 4 servos at the same time to realize DOFBOT up and down movement. Then, By controlling No. 1 servo to realize swing left and right, and finally it returns to middle state.

2. About code

Path: /home/dofbot/Dofbot/3.ctrl_Arm/6.left_right.ipynb

```python
#!/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)
```

```python
# Control DOFBOT swing up and down from side to side
def main():
    # Middle servo
    Arm.Arm_serial_servo_write6(90, 90, 90, 90, 90, 90, 500)
    time.sleep(1)


    while True:
        # Control No. 3 and No.4 servo 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 No. 1 servo 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 servo to restore 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
```

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