Reading Data

1.1 Experimental purpose

In this course, we will learn how to read dogzilla data, including steering angle, battery power and attitude angle.

1.2 Experimental preparation

The functions of dogzilla Python library involved in this course include.

read_ Motor(): read the angles of 12 servos. If the reading is successful, the list with length of 12 will be returned. If the reading is successful, the angle of the servos with corresponding numbers [11, 12, 13, 21, 22, 23, 31, 32, 33, 41, 42, 43] will be returned. If the reading fails, the empty list will be returned.

read_ Battery(): read the current battery power. If the reading is successful, an integer of 1-100 will be returned, representing the percentage of remaining battery power. If the reading fails, 0 will be returned.

read_ roll() ***read_ pitch()*** ***read_ yaw()***: Read the current attitude angle. If the reading succeeds, the floating point number will be returned. If the reading fails, 0 will be returned 8.

1.3 Experimental process

Open the jupyterlab client and find the code path:

```
DOGZILLA/Samples/2_Control/8.read_data.ipynb
```

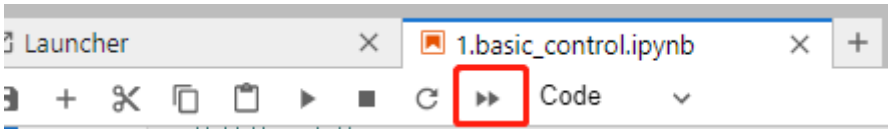
By default g_ENABLE_CHINESE=False, if you need to display Chinese, please set g_ENABLE_CHINESE=True.

Click the following icon to run all cells, and then pull to the bottom to see the generated controls.

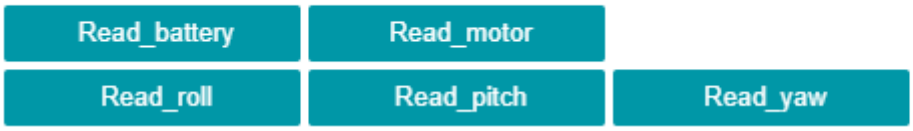
```
# 中文开关，默认为英文 Chinese switch. The default value is English
g_ENABLE_CHINESE = False

Name_widgets = {
    'Read_battery': ("Read_battery", "读取电压"),
    'Read_motor': ("Read_motor", "读取舵机角度"),
    'Read_roll': ("Read_roll", "读取ROLL"),
    'Read_pitch': ("Read_pitch", "读取PITCH"),
    'Read_yaw': ("Read_yaw", "读取YAW")
}
```

Each time you click the corresponding button, the read data will be displayed below.




```
# 布局控件并显示  Layout widgets and display them
output = widgets.Output()
box_btn1 = widgets.HBox([button_Read_battery, button_Read_motor])
box_btn2 = widgets.HBox([button_Read_roll, button_Read_pitch, button_Read_yaw])
box_display = widgets.VBox([box_btn1, box_btn2, output])
display(box_display)
```



1.4 Summary

In this course, we use JupyterLab read dogzilla's battery voltage, 12PCS steering angle and current attitude angle.