Performing actions

1.1 Experimental purpose

In this course, we will learn how to control dogzilla preset action groups and perform actions.

1.2 Experimental preparation

The functions of dogzilla Python library involved in this course.

action(action_id)：Perform preset actions.

action_id：Input range [1, 255], where 255 represents stopping the operation and restoring the initial posture; 1 ~ 19 correspond to 19 actions, and the corresponding relationship is shown in the following figure.

ID	动作	ID	动作	ID	动作
1	趴下	2	站起	3	匍匐前进
4	转圈	5	原地踏步	6	蹲起
7	转动Roll	8	转动Pitch	9	转动Yaw
10	三轴转动	11	撒尿	12	坐下
13	招手	14	伸懒腰	15	波浪
16	左右摇摆	17	求食	18	找食物
19	握手				

perform(mode)：In the performance mode, the robot dog will cycle through the preset actions.

mode：Pass in 1, open the action rotation, and perform the above actions in sequence. Pass in 0 and stop action rotation.

1.3 Experimental process

Open the jupyterlab client and find the code path:

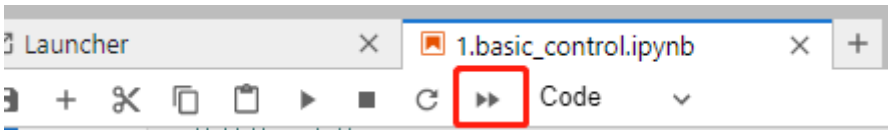
```
DOGZILLA/Samples/2_Control/4.performance.ipynb
```

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

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

Name_widgets = {
    'Lie_Down': ("Lie_Down", "趴下"),
    'Stand_Up': ("Stand_Up", "站起"),
    'Crawl': ("Crawl", "匍匐前进"),
    'Turn_Around': ("Turn_Around", "转圈"),
    'Mark_Time': ("Mark_Time", "原地踏步"),
    'Squat': ("Squat", "蹲起"),
    'Turn_Roll': ("Turn_Roll", "转动Roll"),
    'Turn_Pitch': ("Turn_Pitch", "转动Pitch"),
    'Turn_Yaw': ("Turn_Yaw", "转动Yaw"),
    '3_Axis': ("3_Axis", "三轴联动"),
    'Pee': ("Pee", "撒尿"),
    'Sit_Down': ("Sit_Down", "坐下"),
    'Wave_Hand': ("Wave_Hand", "招手"),
    'Stretch': ("Stretch", "伸懒腰"),
    'Wave_Body': ("Wave_Body", "波浪"),
    'Swing': ("Swing", "左右摇摆"),
    'Pray': ("Pray", "求食"),
    'Seek': ("Seek", "找食物"),
    'Handshake': ("Handshake", "握手"),
    'Rotation': ("Rotation", "动作轮播"),
    'Reset': ("Reset", "恢复初始姿态"),
}
```

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



布局控件并显示 Layout widgets and display them

```
# 布局控件并显示  Layout widgets and display them
output = widgets.Output()
box_btn_1 = widgets.HBox([button_action_1, button_action_2, button_action_3, button_action_4, button_Rotation])
box_btn_2 = widgets.HBox([button_action_5, button_action_6, button_action_7, button_action_8, button_Reset])
box_btn_3 = widgets.HBox([button_action_9, button_action_10, button_action_11, button_action_12])
box_btn_4 = widgets.HBox([button_action_13, button_action_14, button_action_15, button_action_16])
box_btn_5 = widgets.HBox([button_action_17, button_action_18, button_action_19])

box_v = widgets.VBox([box_btn_1, box_btn_2, box_btn_3, box_btn_4, box_btn_5])
box_display = widgets.VBox([box_v, output])
display(box_display)
```

The orange button corresponds to rotation action rotation and reset to restore the initial posture. Click action rotation to play all actions in turn. Restore the initial posture, stop all actions, and restore the posture to the initial state.

1.4 Summary

In this course, we use JupyterLab controls DOGZILLA preset action groups and perform actions.

It can complete many actions, and we can set the action loop or execute it once.