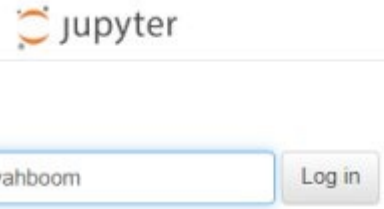
Car squats and shakes

1. Experimental purpose

Drive the car to squat and sway left and right

2. Experimental path source code

Enter the car system, end the car program, enter "ip (ip is the car's ip): 8888" in the browser, enter the password "yahboom"



Then log in
Enter **Rider-pi_class/3.Base Motion/6. Squatting and swaying the car from side to side** and run **car_sport.ipynb**.

3. Experimental phenomenon

After running the code, drag the slider to control the car's squat and sway left and right.
The car cannot be in a stopped state (that is, not in a standing balance state), otherwise it cannot move.
Squat:

[2]:
```
#机身蹲起周期
def run_periodic(value):
    g_car.rider_periodic_z(value)

#创建滑块来控制小车 Create four sliders to control the 小车
interact(run_periodic, \
         value=widgets.FloatSlider(min=0,max=4,step=0.5,value=0));
```

value 0.50

Sway left and right:

[3]:
```
#周期左右晃动
def run_roll(value):
    g_car.rider_periodic_roll(value)

#创建滑块来控制小车 Create four sliders to control the 小车
interact(run_roll, \
         value=widgets.FloatSlider(min=0,max=4,step=0.5,value=0));
```

value 0.50

4. Analysis of main source code parameters

```
#Body squat cycle
def run_periodic(value):
g_car.rider_periodic_z(value)

#Create sliders to control the car Create four sliders to control the car
interact(run_periodic, \
value=widgets.FloatSlider(min=0,max=4,step=0.5,value=0));

#Sway left and right
def run_roll(value):
g_car.rider_periodic_roll(value)

#Create sliders to control the car Create four sliders to control the Car
interact(run_roll, \
value=widgets.FloatSlider(min=0,max=4,step=0.5,value=0));
```

rider_periodic_z: This function controls the period of the car's squatting, 0: stop, other values squat at a certain frequency.
rider_periodic_roll: This function controls the period of the car's left and right shaking, 0: stop, other values squat at a certain frequency.

In addition, these two actions can move at the same time