

# READ ME

1. There are totally 8 functions, the final letter corresponds to the question letter

```
function obj = change_pos_and_orientation_h_5a(obj) %function for levitate and stay at 2.5...
function obj = change_pos_and_orientation_h_5b(obj) %function for levitate and stay at 2.5 ...
function obj = change_pos_and_orientation_h_5c(obj) %function for levitate and stay at 2.5 noise...
function obj = change_pos_and_orientation_h_5d(obj) %function for levitate and stay at 2.5 wind...
function obj = change_pos_and_orientation_circle_5a(obj) %function for circle trajectory with radius and altitude 2.5...
function obj = change_pos_and_orientation_circle_5b(obj) %function for circle trajectory with radius and altitude 2.5...
function obj = change_pos_and_orientation_circle_5c(obj) %function for circle trajectory with radius and altitude 2.5 noise...
function obj = change_pos_and_orientation_circle_5d(obj) %function for circle trajectory with radius and altitude 2.5 wind...
```

For example, to run 5a, in the orange circle should be “5a”, to run 5b, in the orange circle should be “5b”. 2 circled letters are required the same all the time.

```
function update(obj)
    %update simulation time
    obj.time = obj.time + obj.time_interval;
    %change position and orientation of drone
    if obj.time >= 0 && obj.time <= obj.time2stop
        obj = change_pos_and_orientation_h_5a(obj);
    end
    if obj.time > obj.time2stop
        obj = change_pos_and_orientation_circle_5a(obj);
    end
end
```

After the change, leave the “Drone.m” and run the code in “quadcopter\_script.m” to see the result.

2. For each time of simulation, please allow at least 250s to observe the result as our drone is relative slow.
3. Note that you may required to enter “move” twice to let the drone complete the task
4. For 5e, in the “Drone.m” function, use 5a function in both places, then exit “Drone.m” and run “quadcopter5e\_script.m”
5. To increase the computation speed, we comment all the given animation command, if needed please uncomment them.