00_crazyflie_sim_student_version_hs_

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1 Crazyflie Motion Command Reference

This notebook helps you learn and practice using the different motion commands available in the `CrazyflieSimulator` class.

Use the table below to understand what each command does and what arguments it expects.

1.1 Motion Command Reference Table

Command	Description	Parameters (units/type)
takeoff()	Drone takes off into a hover	height (m/float), speed (m/s/float)
land()	Drone lands gently	speed (m/s/float)
forward()	Move forward	distance (m/float), speed (m/s/float)
backward()	Move backward	distance (m/float), speed (m/s/float)
left()	Move left	distance (m/float), speed (m/s/float)
right()	Move right	distance (m/float), speed (m/s/float)
up()	Move upward	distance (m/float), speed (m/s/float)
down()	Move downward	distance (m/float), speed (m/s/float)
rotate()	Rotate in place (yaw)	angle (degrees/int), duration (s/float)
circle_left()	Fly a circle to the left	radius (m/float), speed (m/s/float), angle (degrees/int)
circle_right()	Fly a circle to the right	radius (m/float), speed (m/s/float), angle (degrees/int)

```python
#   Setup the simulator
from crazyflie_sim import CrazyflieSimulator
drone = CrazyflieSimulator(real=False)
```

1.2 Exercise 1: Takeoff

Prompt: Write a command to take off to 0.5 meters at 0.3 m/s

```python
# Write your takeoff command below:
```

1.3 Exercise 2: Move forward

Prompt: Move the drone forward by 0.4 meters at 0.2 m/s

```
[ ]:  # Write your forward command below:
```

1.4 Exercise 3: Move left

Prompt: Move the drone left by 0.3 meters at 0.2 m/s

```
[ ]:  # Write your left command below:
```

1.5 Exercise 4: Circle maneuver

Prompt: Fly a left circle with radius 0.3 meters at speed 0.3 m/s

```
[ ]:  # Write your circle_left command below:
```

1.6 Exercise 5: Rotation

Prompt: Rotate 90 degrees in place in 1 second

```
[ ]:  # Write your rotate command below:
```

1.7 Exercise 6: Land

Prompt: Land the drone at 0.3 m/s

```
[ ]:  # Write your land command below:
```