

Stepper Motor

Task:

1. Connect the stepper motor to the controller (via driver board).
2. Write a program to:
 - Rotate the motor **one full revolution clockwise** (200 steps if 1.8° per step).
 - Rotate **half a revolution anti-clockwise**.
 - Pause for 2 seconds.
 - Repeat this sequence continuously.

Code:

```
import time
from adafruit_crickit import crickit

# Create stepper object
stepper = crickit.stepper_motor

# Steps per revolution (depends on motor type, here 200 steps for
# 1.8°)
steps_per_revolution = 200

print("Stepper Motor Angle Control Started")

while True:
    # Full revolution clockwise
    print("Rotating 360° Clockwise")
    for step in range(steps_per_revolution):
        stepper.onestep(direction=1)    # 1 = forward (clockwise)
        time.sleep(0.01)                # adjust speed

    time.sleep(1)

    # Half revolution anti-clockwise
```

```
    print("Rotating 180° Anti-Clockwise")
    for step in range(steps_per_revolution // 2):
        stepper.onestep(direction=2)    # 2 = backward (anti-
clockwise)
        time.sleep(0.01)

    time.sleep(2)    # pause before repeating
```