

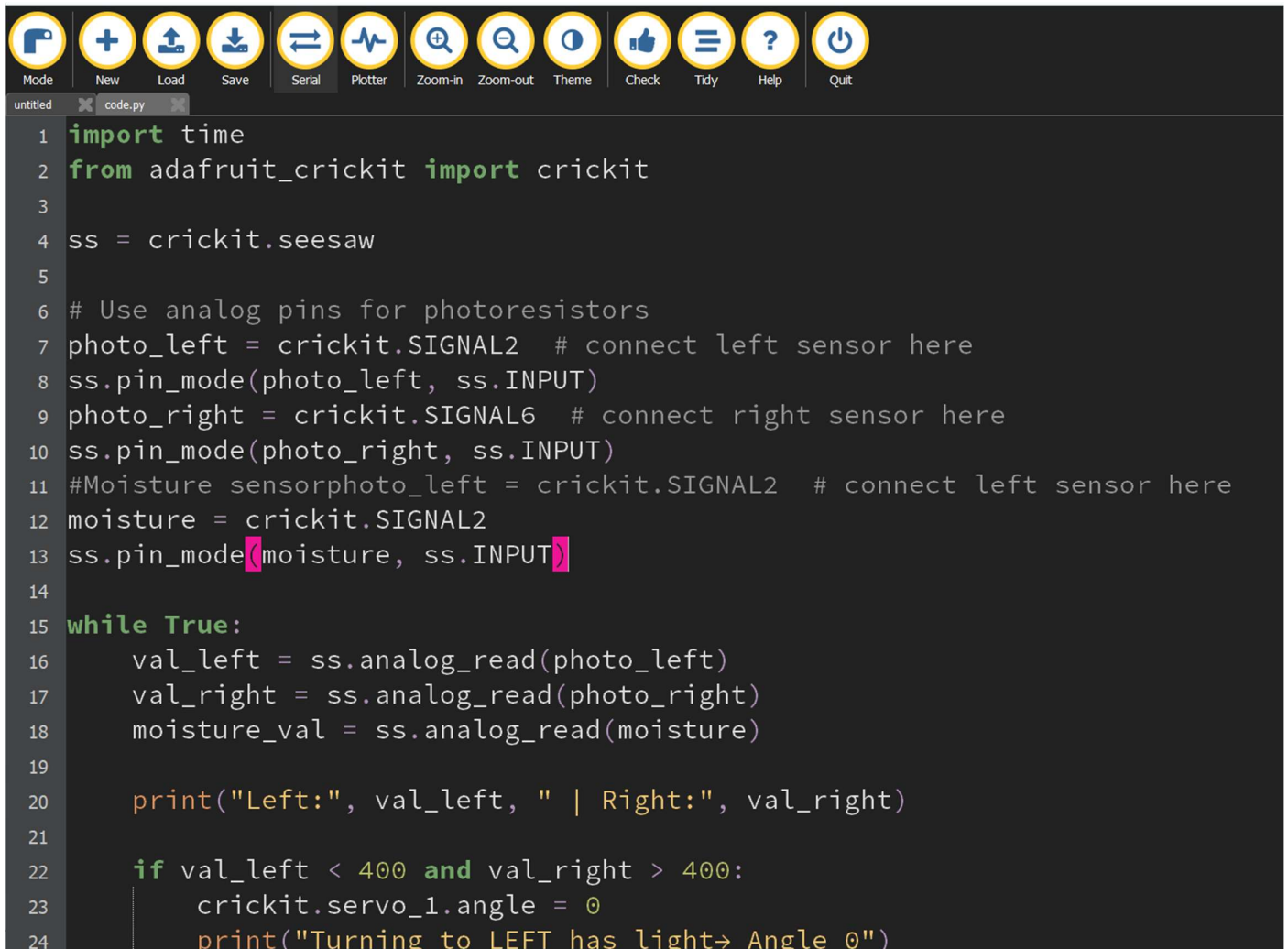
Coding part – Using servo and light sensor to optimise light conditions for a plant

Sensor Explanation

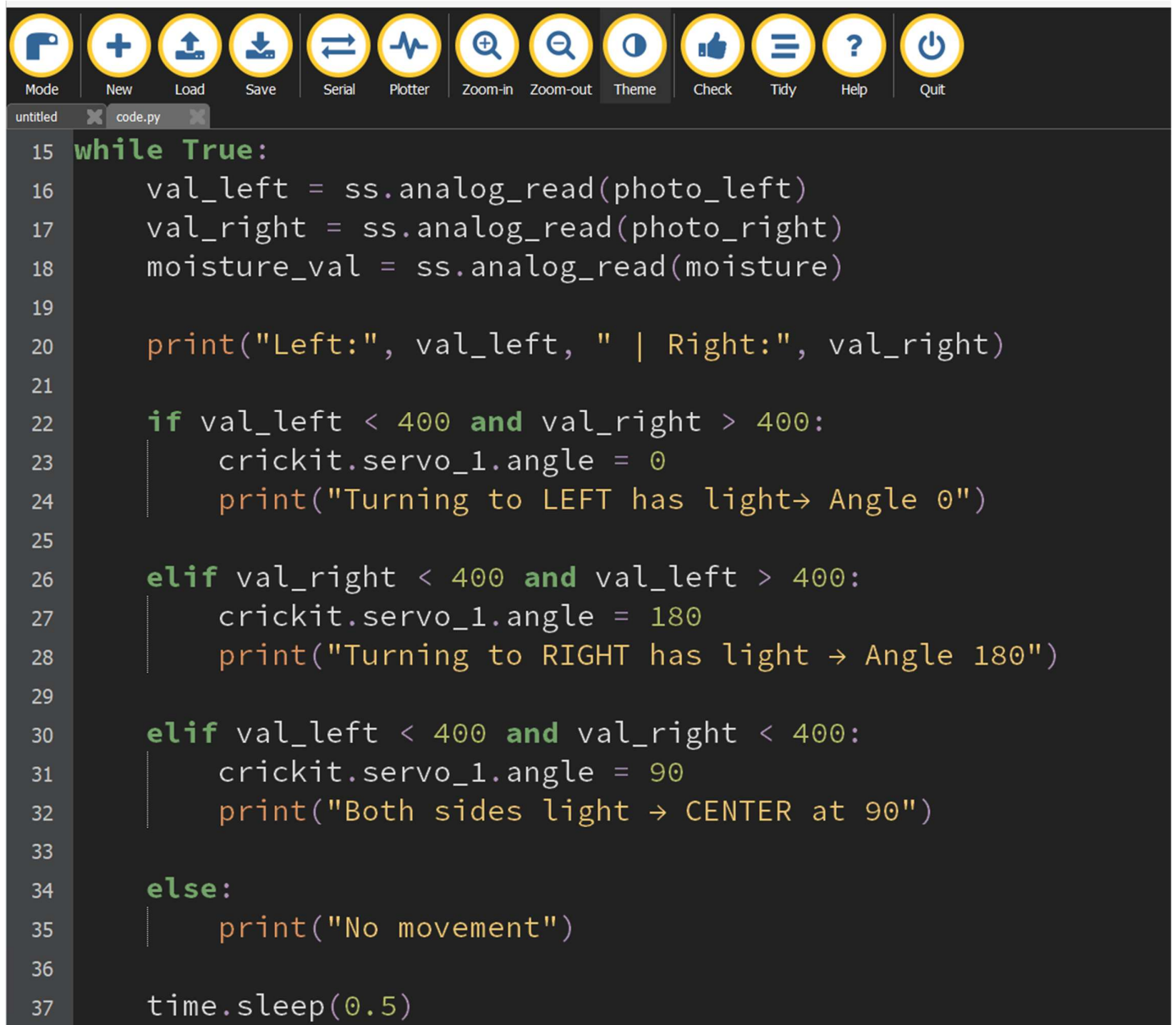
The servo sensor is an addition to the previous lesson. The servo is used for turning towards the sunlight. If both sides have light, the servo should be set to 90 degrees. If the left side has light, it should turn left, and if the right side has light, it should turn right.

Coding part

Here is the code you can see if you face any doubt while doing this task.



```
1 import time
2 from adafruit_crickit import crickit
3
4 ss = crickit.seesaw
5
6 # Use analog pins for photoresistors
7 photo_left = crickit.SIGNAL2 # connect left sensor here
8 ss.pin_mode(photo_left, ss.INPUT)
9 photo_right = crickit.SIGNAL6 # connect right sensor here
10 ss.pin_mode(photo_right, ss.INPUT)
11 #Moisture sensorphoto_left = crickit.SIGNAL2 # connect left sensor here
12 moisture = crickit.SIGNAL2
13 ss.pin_mode(moisture, ss.INPUT)
14
15 while True:
16     val_left = ss.analog_read(photo_left)
17     val_right = ss.analog_read(photo_right)
18     moisture_val = ss.analog_read(moisture)
19
20     print("Left:", val_left, " | Right:", val_right)
21
22     if val_left < 400 and val_right > 400:
23         crickit.servo_1.angle = 0
24         print("Turning to LEFT has light→ Angle 0")
```



The image shows a code editor window with a dark theme. The toolbar at the top contains icons for Mode, New, Load, Save, Serial, Plotter, Zoom-in, Zoom-out, Theme, Check, Tidy, Help, and Quit. The code is written in Python and is as follows:

```
15 while True:
16     val_left = ss.analog_read(photo_left)
17     val_right = ss.analog_read(photo_right)
18     moisture_val = ss.analog_read(moisture)
19
20     print("Left:", val_left, " | Right:", val_right)
21
22     if val_left < 400 and val_right > 400:
23         | crickit.servo_1.angle = 0
24         | print("Turning to LEFT has light→ Angle 0")
25
26     elif val_right < 400 and val_left > 400:
27         | crickit.servo_1.angle = 180
28         | print("Turning to RIGHT has light → Angle 180")
29
30     elif val_left < 400 and val_right < 400:
31         | crickit.servo_1.angle = 90
32         | print("Both sides light → CENTER at 90")
33
34     else:
35         | print("No movement")
36
37     time.sleep(0.5)
```

You can adjust the value of checking condition and modify and see the output.