**************************Default**************************

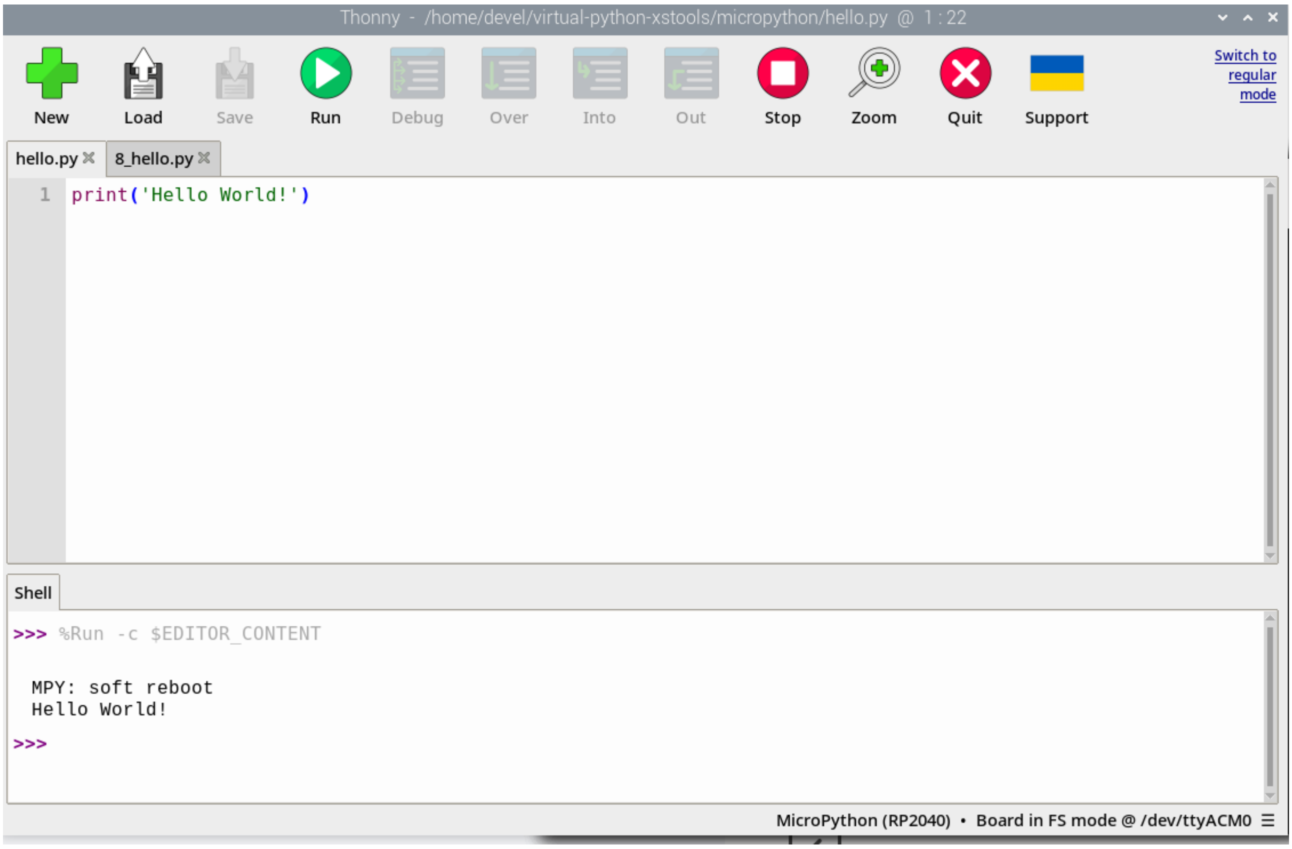
MicroPython Pico

11/09/24

**************************Default**************************

Copied **“RPI_PICO-20241025-v1.24.0.uf2”** to Raspberry Pico.

Created first MicroPython program hello.py

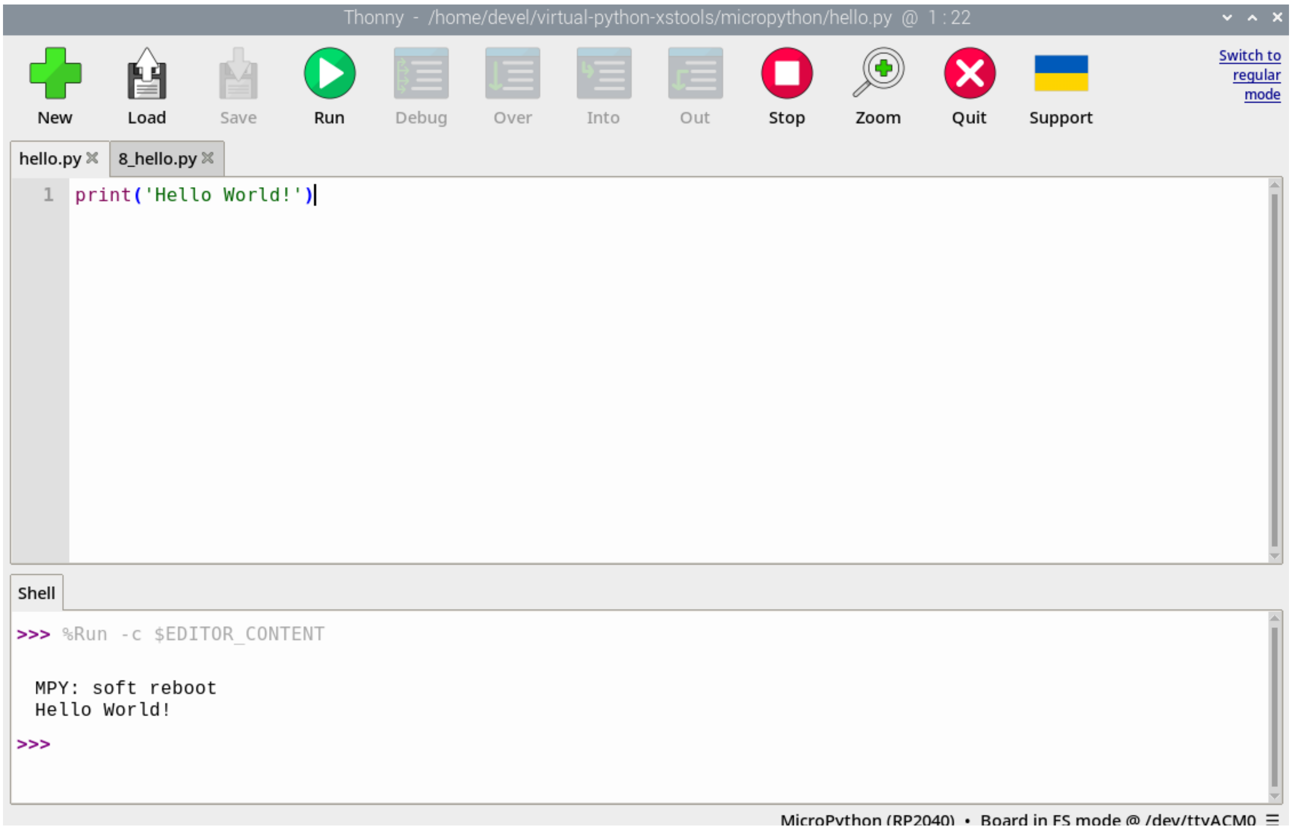

Thonny - /home/devel/virtual-python-xstools/micropython/hello.py @ 1 : 22
New
Load
Save
Run
Debug
Over
Into
Out
Stop
Zoom
Quit
Support
Switch to regular mode
hello.py
8_hello.py
Shell
MicroPython (RP2040) • Board in FS mode @ /dev/ttyACM0

```
print('Hello World!')
```

```
>>> %Run -c $EDITOR_CONTENT

  MPY: soft reboot
  Hello World!
>>>
```

Running MicroPython program hello.py


Thonny - /home/devel/virtual-python-xstools/micropython/hello.py @ 1 : 22
New
Load
Save
Run
Debug
Over
Into
Out
Stop
Zoom
Quit
Support
Switch to regular mode
hello.py
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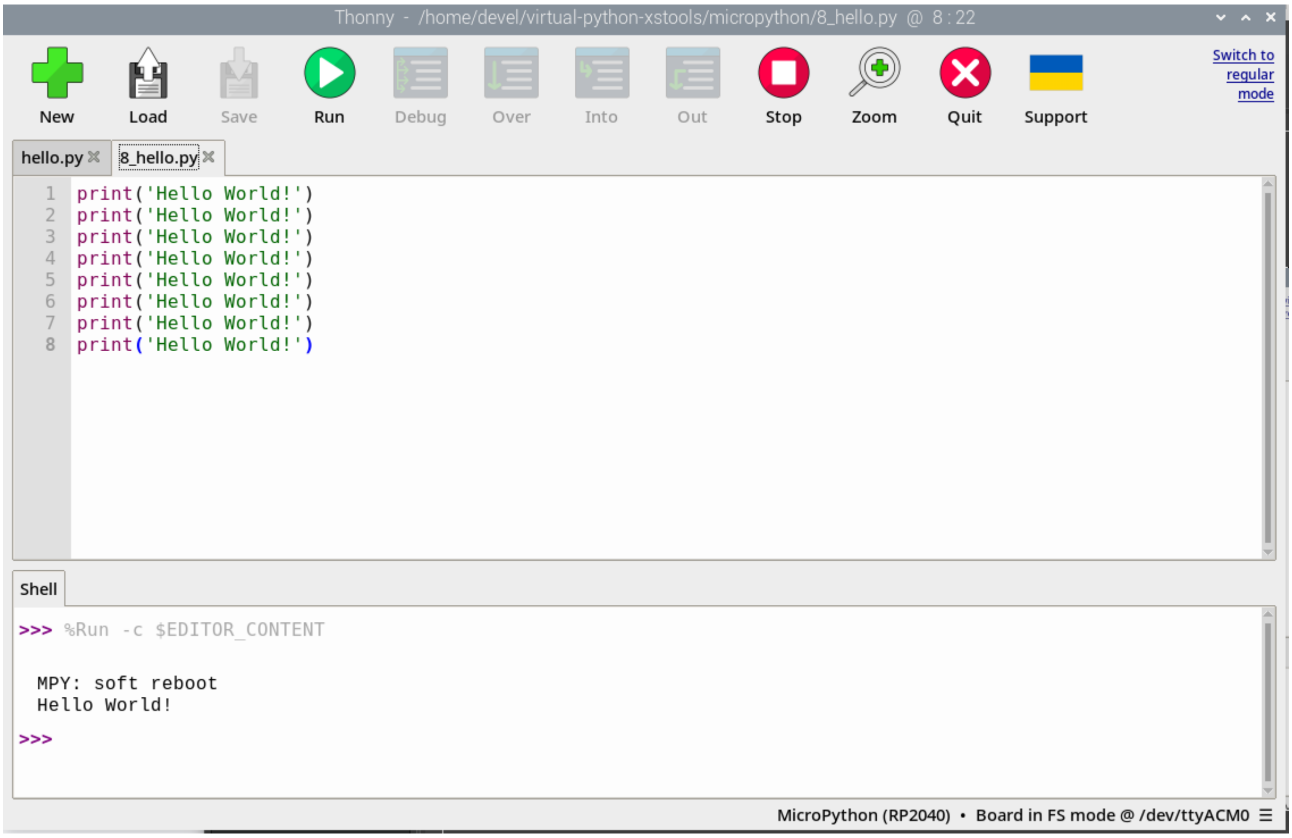
Shell
MicroPython (RP2040) • Board in FS mode @ /dev/ttyACM0

```
print('Hello World!')
```

```
>>> %Run -c $EDITOR_CONTENT

 MPY: soft reboot
 Hello World!
>>>
```

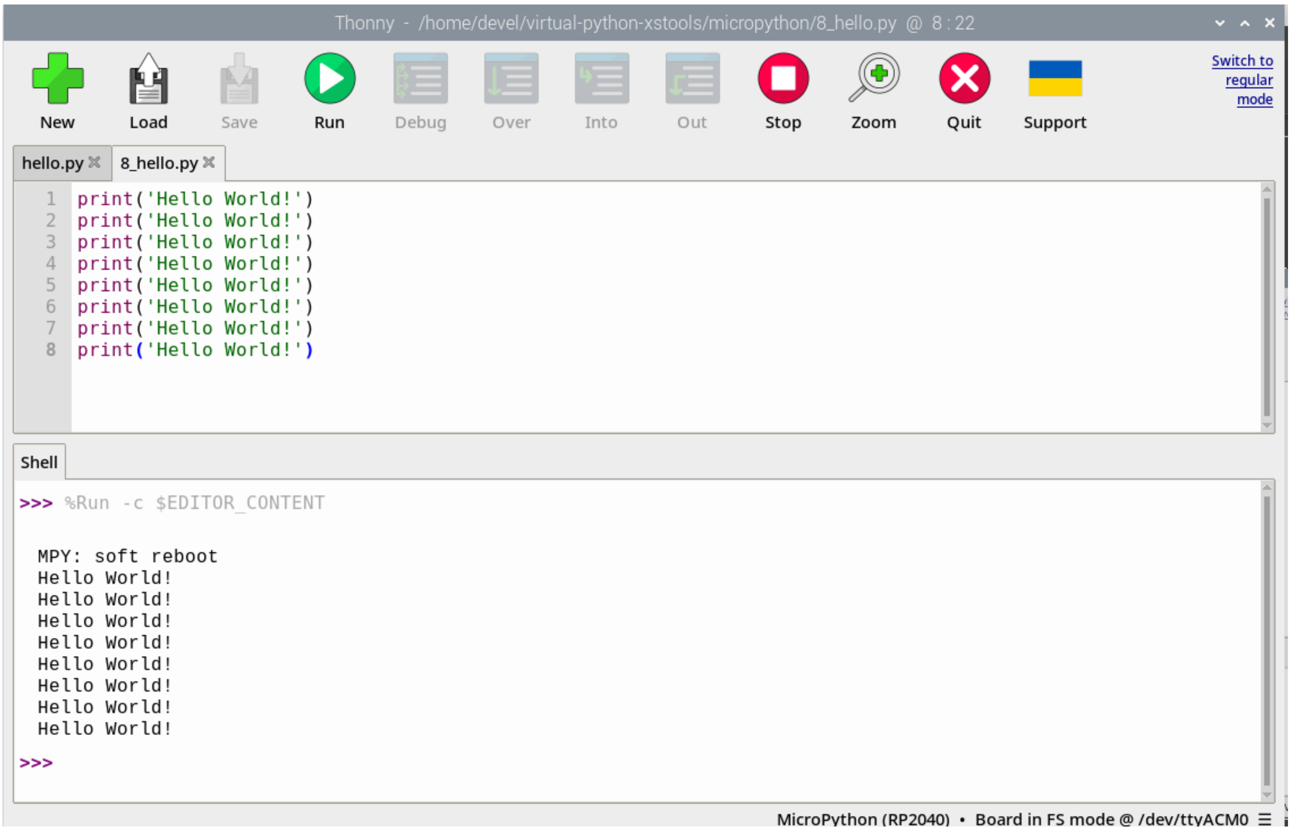
Modified MicroPython program hello.py 8_hello.py.


Thonny - /home/devel/virtual-python-xstools/micropython/8_hello.py @ 8 : 22
New
Load
Save
Run
Debug
Over
Into
Out
Stop
Zoom
Quit
Support
Switch to regular mode
hello.py
8_hello.py
Shell
MicroPython (RP2040) • Board in FS mode @ /dev/ttyACM0

```
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
```

```
>>> %Run -c $EDITOR_CONTENT

 MPY: soft reboot
 Hello World!
>>>
```

Running MicroPython 8_hello.py

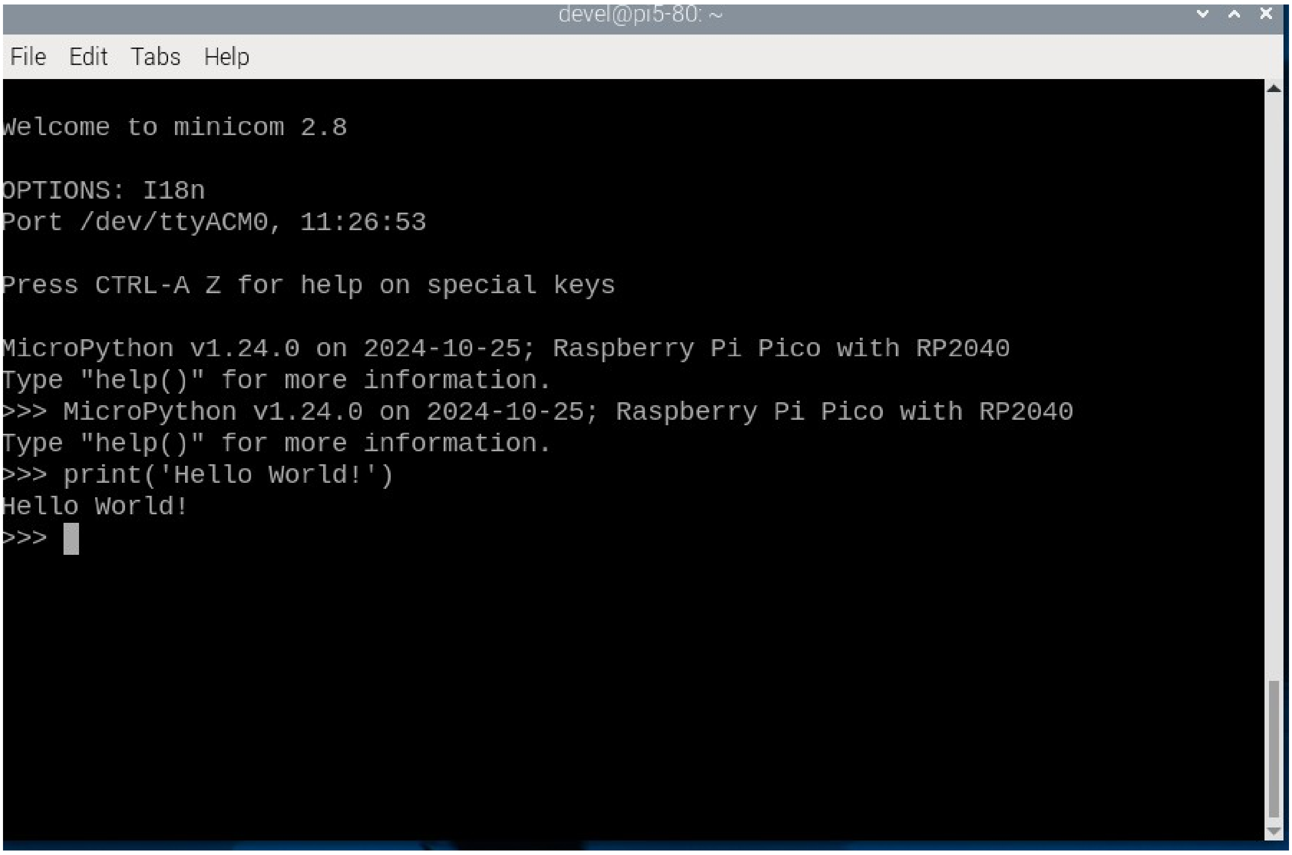


Thonny - /home/devel/virtual-python-xstools/micropython/8_hello.py @ 8 : 22
New
Load
Save
Run
Debug
Over
Into
Out
Stop
Zoom
Quit
Support
Switch to regular mode
hello.py
8_hello.py
Shell
MicroPython (RP2040) • Board in FS mode @ /dev/ttyACM0

```
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
print('Hello World!')
```

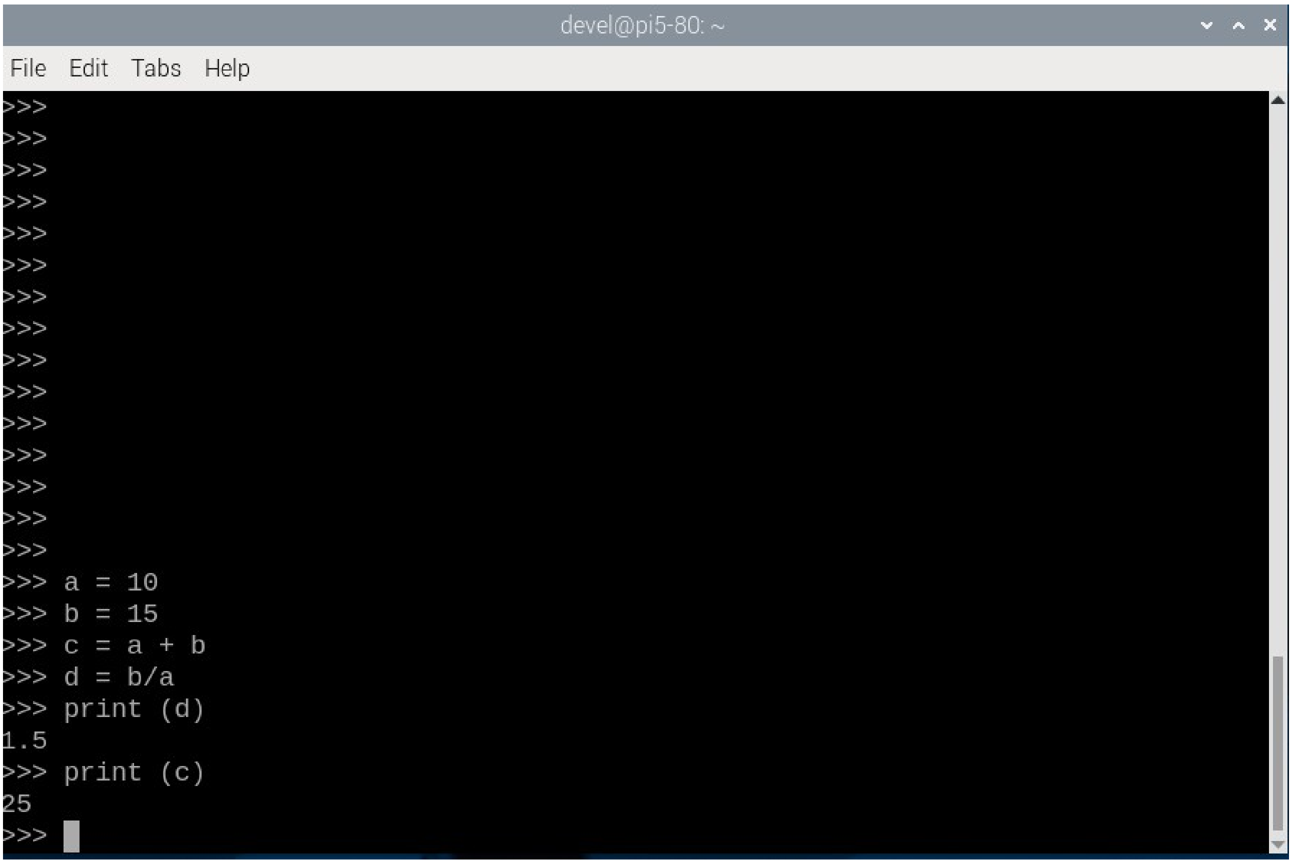
```
>>> %Run -c $EDITOR_CONTENT

  MPY: soft reboot
  Hello World!
  Hello World!
  Hello World!
  Hello World!
  Hello World!
  Hello World!
  Hello World!
  Hello World!
>>>
```

Up to now no imports required.



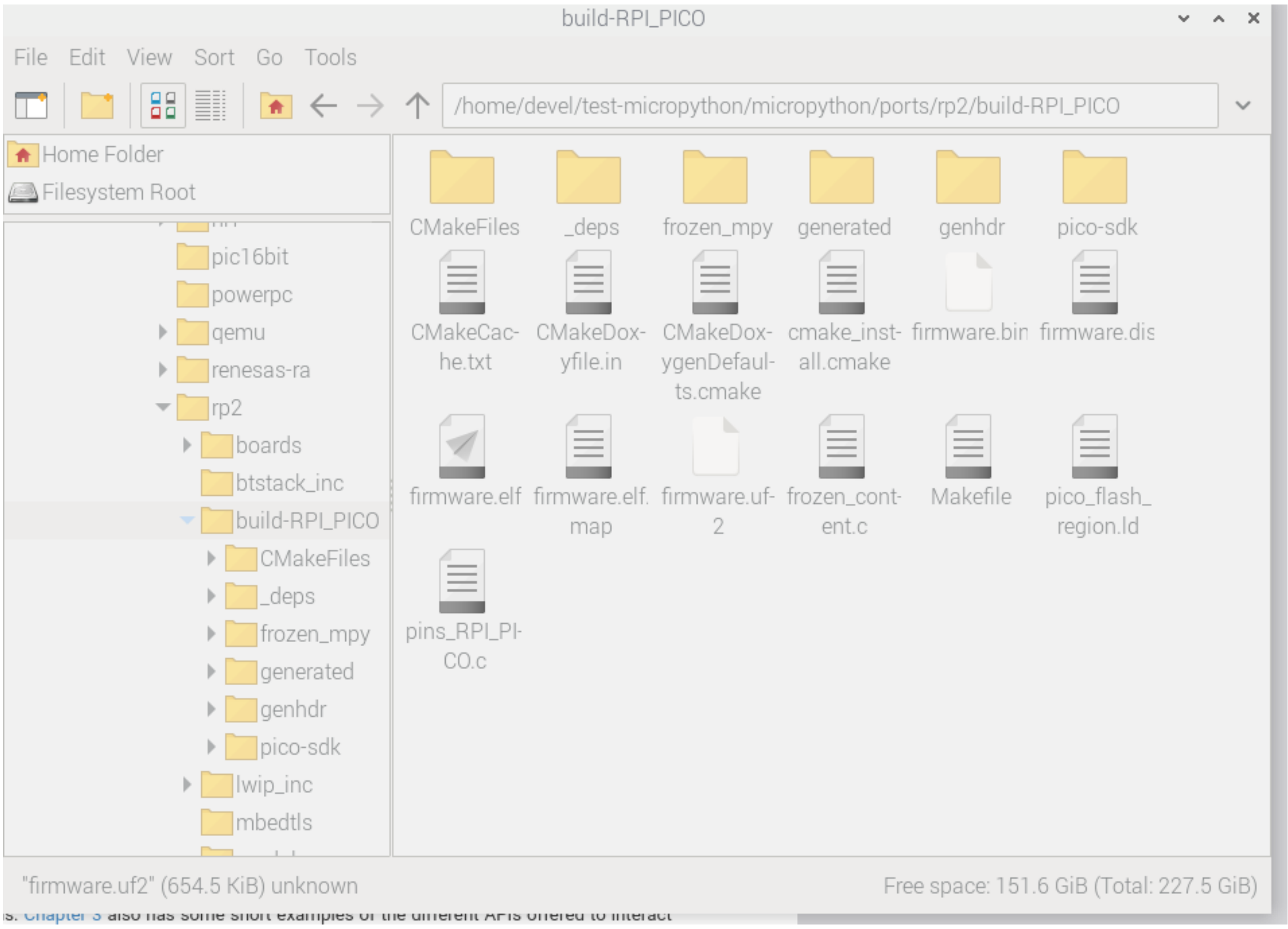
```
Welcome to minicom 2.8

OPTIONS: I18n
Port /dev/ttyACM0, 11:26:53

Press CTRL-A Z for help on special keys

MicroPython v1.24.0 on 2024-10-25; Raspberry Pi Pico with RP2040
Type "help()" for more information.
>>> MicroPython v1.24.0 on 2024-10-25; Raspberry Pi Pico with RP2040
Type "help()" for more information.
>>> print('Hello World!')
Hello World!
>>> 
```

Testing using minicom



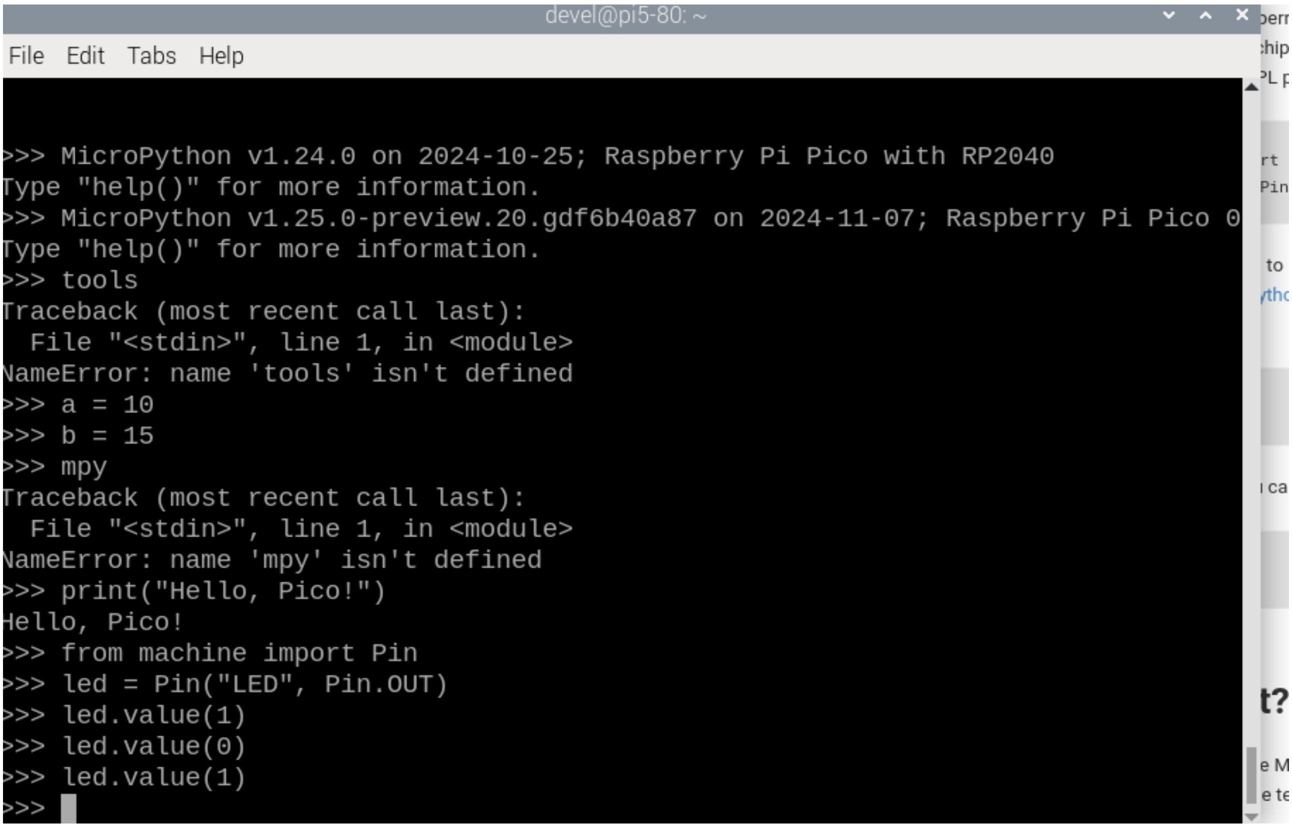
```
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>> a = 10
>>> b = 15
>>> c = a + b
>>> d = b/a
>>> print (d)
1.5
>>> print (c)
25
>>> 
```

MicroPython variables and simple math.



"firmware.uf2" (654.5 KiB) unknown

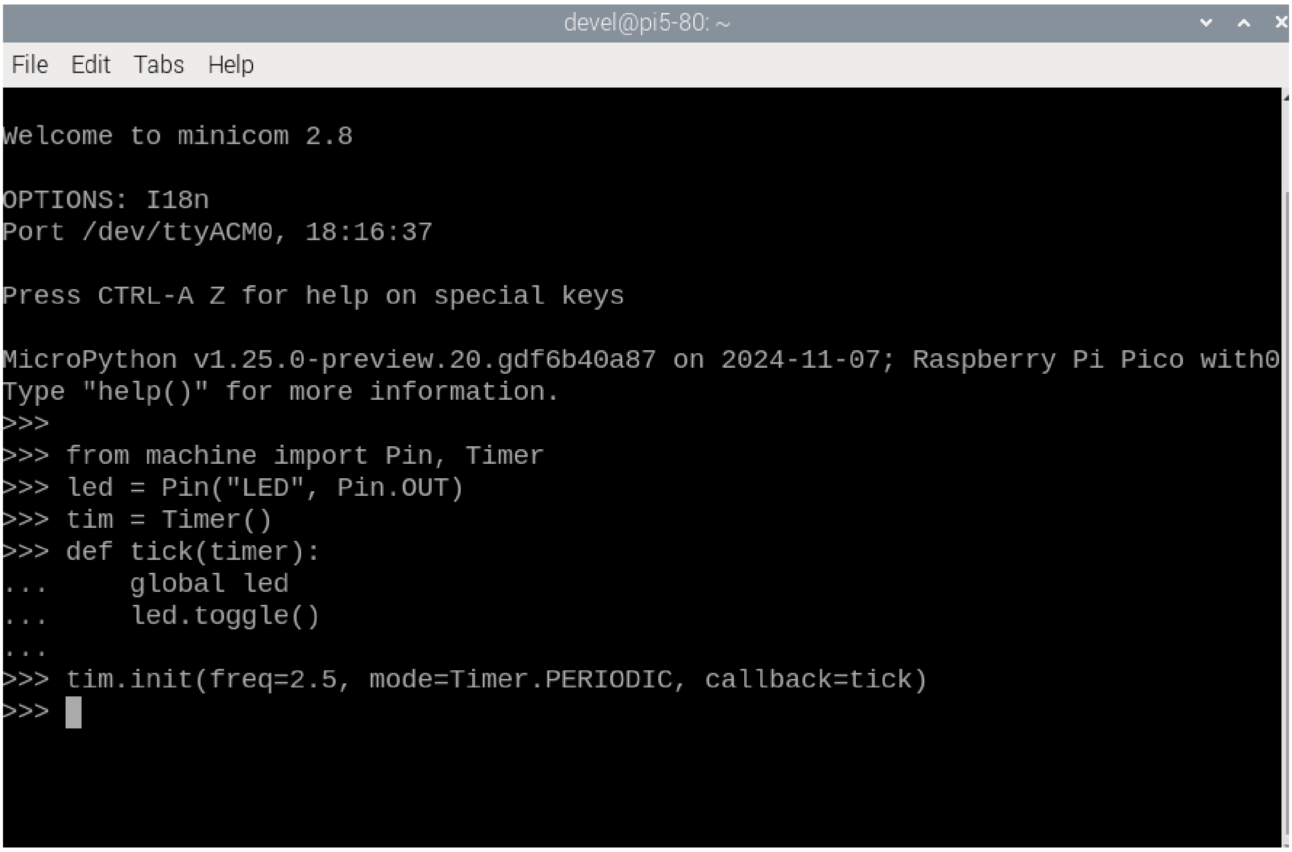
Built firmware



```
>>> MicroPython v1.24.0 on 2024-10-25; Raspberry Pi Pico with RP2040
Type "help()" for more information.
>>> MicroPython v1.25.0-preview.20.gdf6b40a87 on 2024-11-07; Raspberry Pi Pico 0
Type "help()" for more information.
>>> tools
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'tools' isn't defined
>>> a = 10
>>> b = 15
>>> mpy
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'mpy' isn't defined
>>> print("Hello, Pico!")
Hello, Pico!
>>> from machine import Pin
>>> led = Pin("LED", Pin.OUT)
>>> led.value(1)
>>> led.value(0)
>>> led.value(1)
>>> 
```

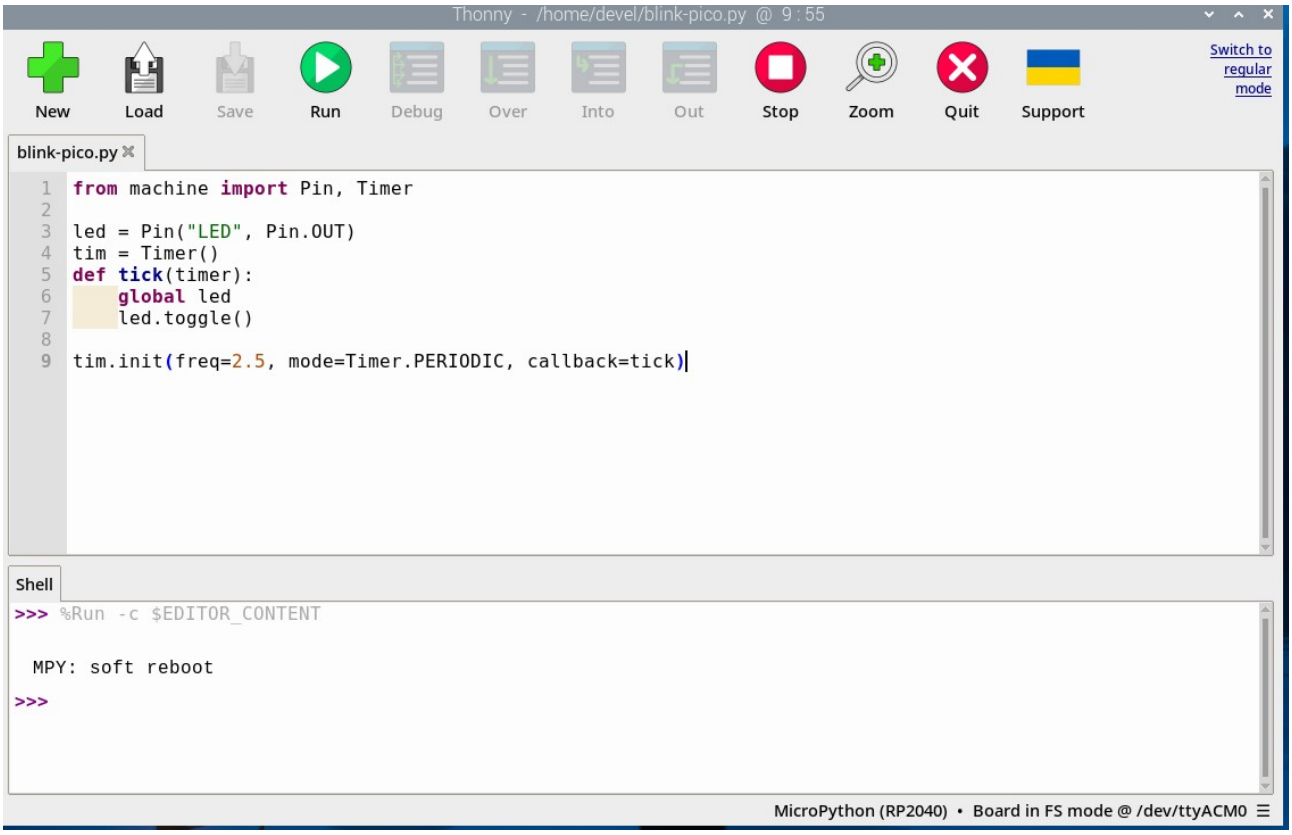
Led on pico on/off

Need to learn about RPEL
A REPL, or Read-Eval-Print Loop, is :



```
Welcome to minicom 2.8

OPTIONS: I18n
Port /dev/ttyACM0, 18:16:37

Press CTRL-A Z for help on special keys

MicroPython v1.25.0-preview.20.gdf6b40a87 on 2024-11-07; Raspberry Pi Pico with0
Type "help()" for more information.
>>>
>>> from machine import Pin, Timer
>>> led = Pin("LED", Pin.OUT)
>>> tim = Timer()
>>> def tick(timer):
...     global led
...     led.toggle()
...
>>> tim.init(freq=2.5, mode=Timer.PERIODIC, callback=tick)
>>> 
```

Now the led blinks



```
from machine import Pin, Timer

led = Pin("LED", Pin.OUT)
tim = Timer()
def tick(timer):
    global led
    led.toggle()

tim.init(freq=2.5, mode=Timer.PERIODIC, callback=tick)
```

```
>>> %Run -c $EDITOR_CONTENT

  MPY: soft reboot
>>>
```

MicroPython (RP2040) • Board in FS mode @ /dev/ttyACM0

Thonny now controls pico.