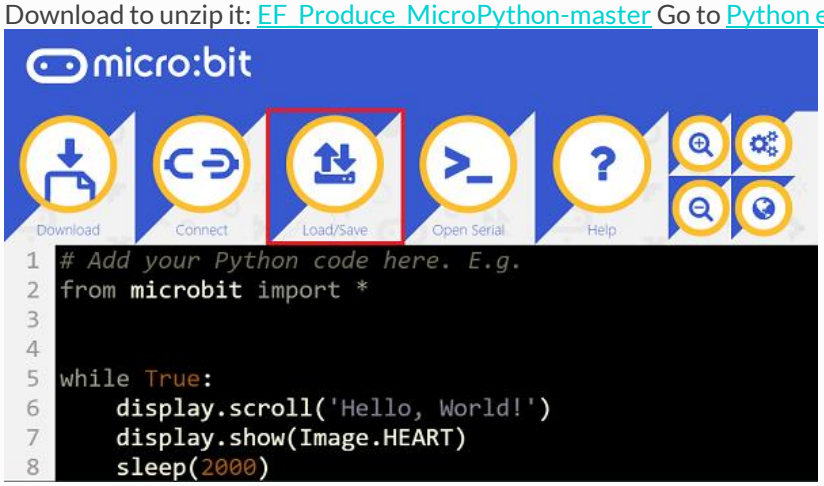
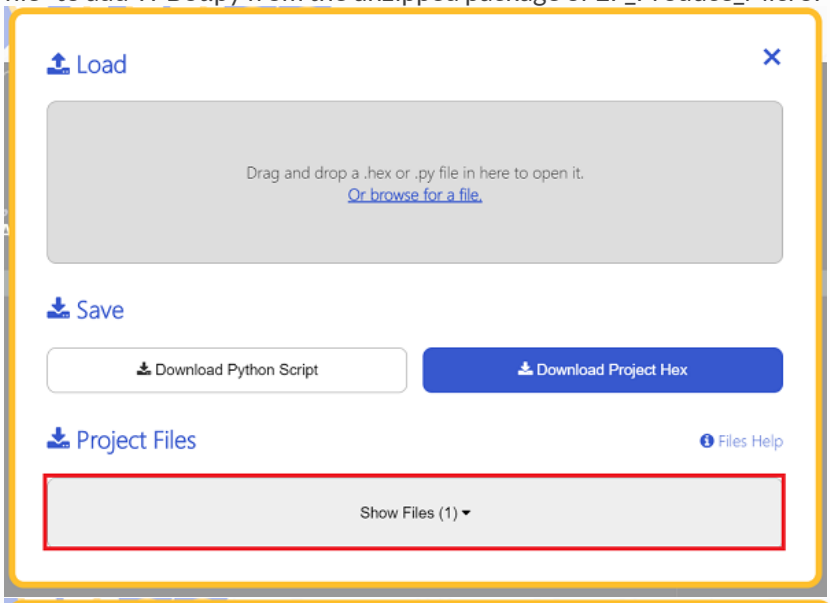
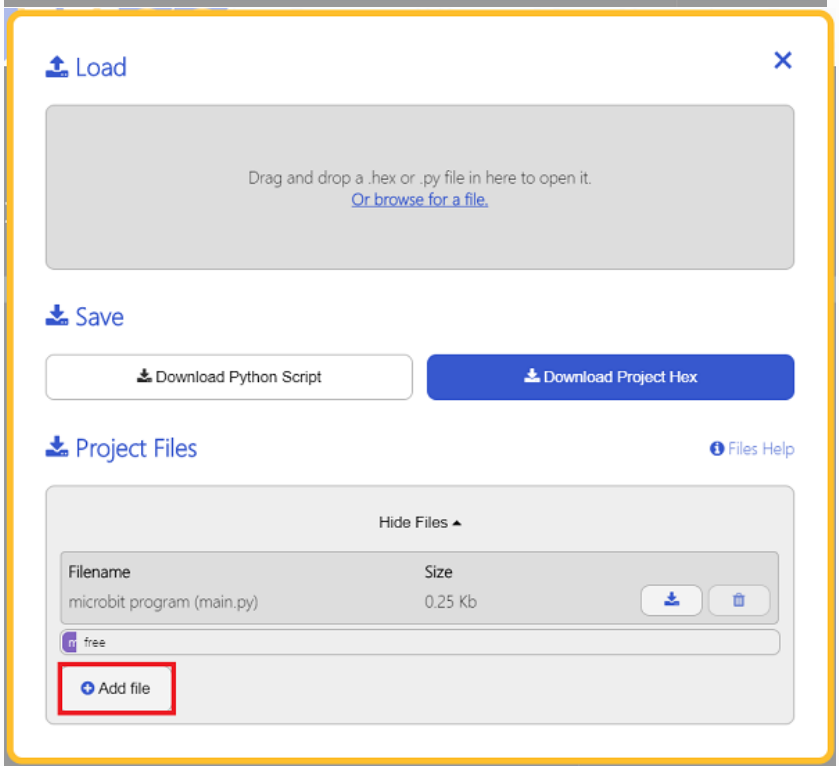
2.1. Add Python File

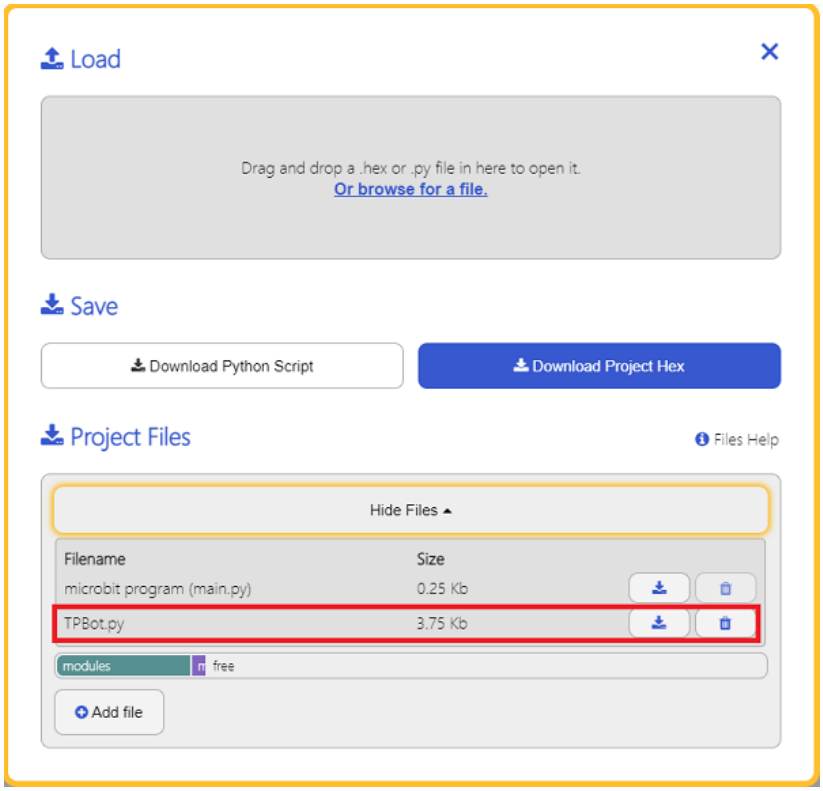
Download to unzip it: EF_Produce_MicroPython-master Go to Python editor



We need to add TPBot.py for programming. Click “Load/Save” and then click “Show Files (1)” to see more choices, click “Add file” to add TPBot.py from the unzipped package of EF_Produce_MicroPython-master.







2.2. Samples

2.3. Sample 1: Drive the car at a full speed.

```
from microbit import *
from TPBot import *

tp = TPBOT()
tp.set_motors_speed(100,100)
```

2.4. Result

The speed of the left and right wheels is at 100, the car moves forward at the full speed.

2.5. Sample 2: Turn the headlights on in random colors

```
from microbit import *
from TPBot import *
import random

tp = TPBOT()

while True:
    R = random.randint(0,255);
    G = random.randint(0,255);
    B = random.randint(0,255);
    tp.set_car_light(R,G,B)
    sleep(500)
```

2.6. Result

The headlights light up in different colours at random.

2.7. Sample 3: Obstacles avoidance

```
from microbit import *
from TPBot import *

tp = TPBOT()
while True:
    i = tp.get_distance(0)
    if i>3 and i<30:
        tp.set_motors_speed(-50, 50)
        sleep(500)
    else:
        tp.set_motors_speed(50, 50)
```

2.8. Result

The TPBot turns its direction once it detects any obstacle ahead of it.

2.9. Sample 4: Link-tracking

```
from microbit import *
from TPBot import *

tp = TPBOT()
while True:

    i = tp.get_tracking()
    if i == 10:
        tp.set_motors_speed(10, 50)
    if i == 1:
        tp.set_motors_speed(50, 10)
    if i == 11:
        tp.set_motors_speed(25, 25)
```

2.10. Result

The TPBot drives along with the black line.

2.11. Sample 5: Control the servo

```
from microbit import *
from TPBot import *

tp = TPBOT()
while True:
    tp.set_servo(1,180)
    sleep(1000)
    tp.set_servo(1,0)
    sleep(1000)
```