

# Python Basics

Using a web-based code editor, learn the basics of Python and put your knowledge into practice by eventually coding a short Bitcoin investment project.

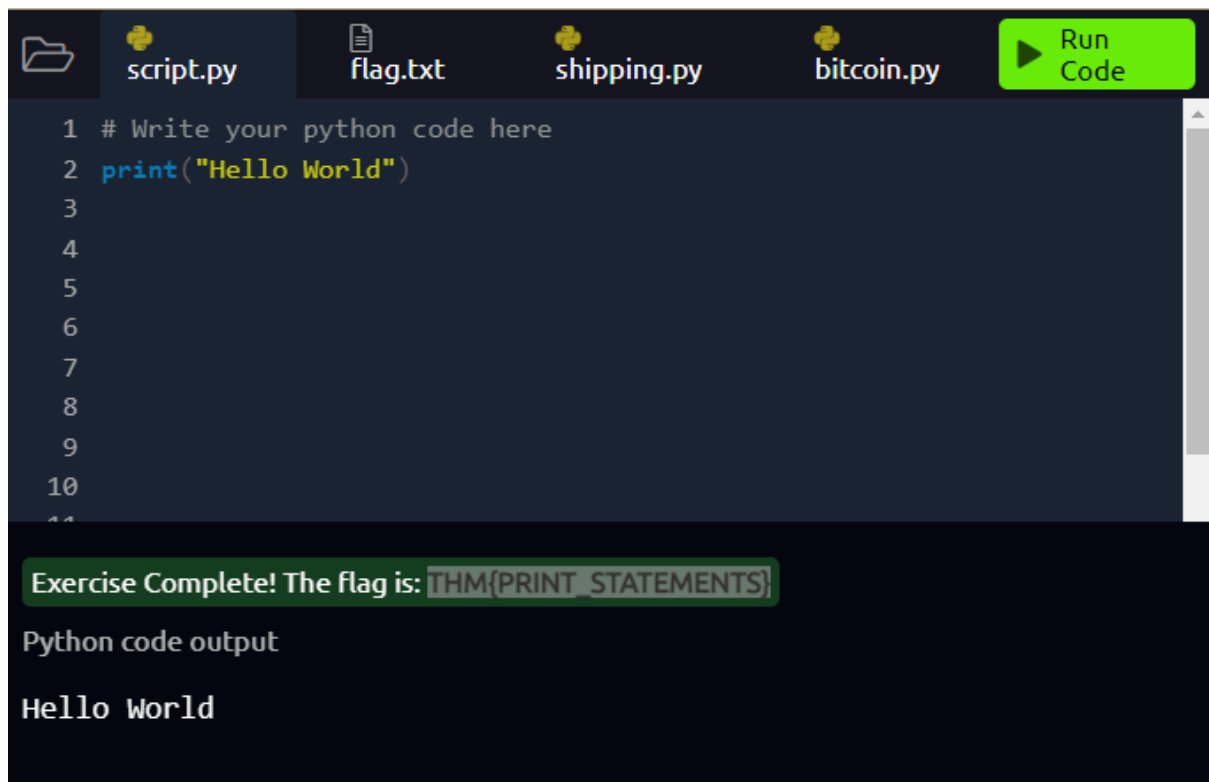
## Task 2 Hello World

On the code editor, print "Hello World". What is the flag?

**Answer:** THM{PRINT\_STATEMENTS}

→ I clicked the "view site" button

**CODE:** `print("Hello World")`



The screenshot shows a web-based code editor interface. At the top, there is a dark blue header bar with a folder icon on the left and four file tabs: 'script.py' (active), 'flag.txt', 'shipping.py', and 'bitcoin.py'. To the right of the tabs is a green 'Run Code' button with a play icon. The main editor area has a dark blue background with white text. It shows line numbers 1 through 10 on the left. The code entered is: `1 # Write your python code here`, `2 print("Hello World")`, and lines 3 through 10 are empty. Below the code editor, there is a dark blue box with a green border containing the text: 'Exercise Complete! The flag is: THM{PRINT\_STATEMENTS}'. Below this box, the text 'Python code output' is displayed, followed by the output 'Hello World'.

## Task 3 Mathematical Operators

In the code editor, print the result of  $21 + 43$ . What is the flag?

**Answer:** THM{ADDITION}

**CODE:** `print(21+43)`

The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. A green 'Run Code' button is on the right. The code in 'script.py' is as follows:

```
1 # Write your python code here
2 print(21+43)
3
4
5
6
7
8
9
10
11
```

Below the code editor, a green banner reads: "Exercise Complete! The flag is: **THM{ADDITION}**". Underneath, the text "Python code output" is followed by the number "64".

Print the result of  $142 - 52$ . What is the flag?

Answer: **THM{SUBTRCT}**

CODE: `print(142-52)`

The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. A green 'Run Code' button is on the right. The code in 'script.py' is as follows:

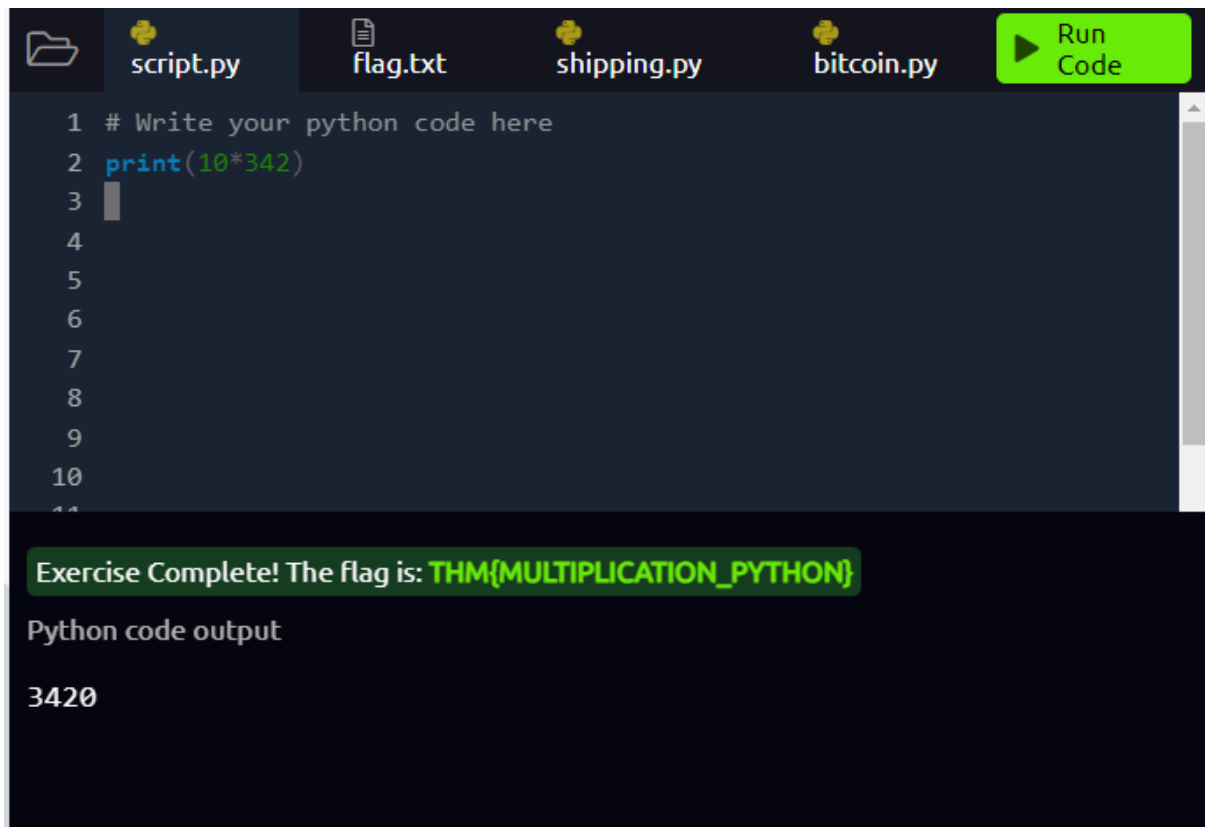
```
1 # Write your python code here
2 print(142-52)
3
4
5
6
7
8
9
10
11
```

Below the code editor, a green banner reads: "Exercise Complete! The flag is: **THM{SUBTRCT}**". Underneath, the text "Python code output" is followed by the number "90".

Print the result of  $10 * 342$ . What is the flag?

Answer: **THM{MULTIPLICATION\_PYTHON}**

CODE: `print(10*342)`



The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. A green 'Run Code' button is on the right. The code in 'script.py' is as follows:

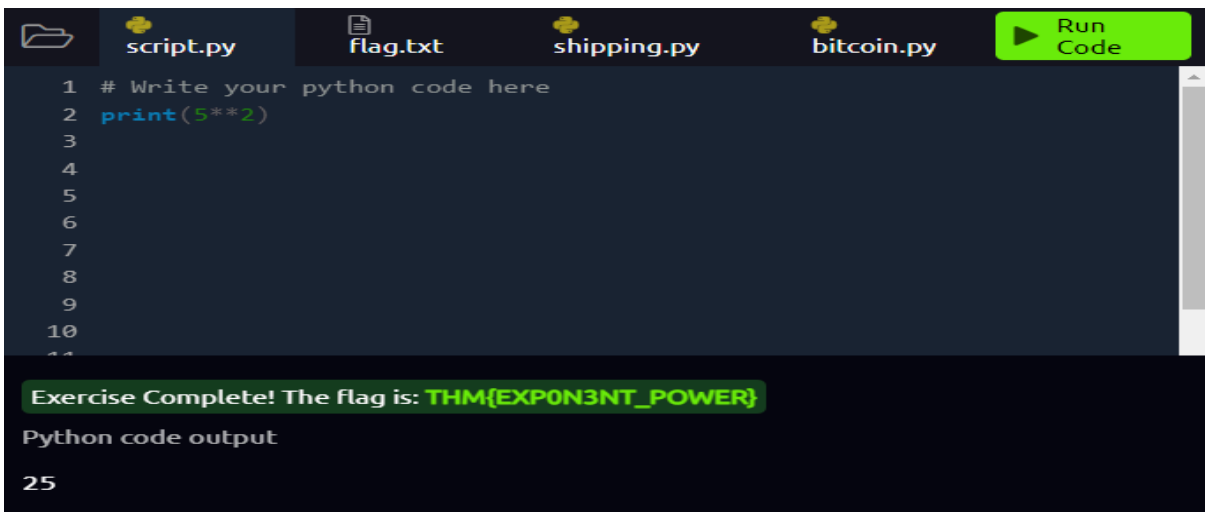
```
1 # Write your python code here
2 print(10*342)
3
4
5
6
7
8
9
10
```

Below the code editor, a green notification bar states: "Exercise Complete! The flag is: **THM{MULTIPLICATION\_PYTHON}**". Underneath, the text "Python code output" is followed by the result "3420".

Print the result of 5 squared. What is the flag?

Answer: **THM{EXPON3NT\_POWER}**

CODE: `print(10*342)`



The screenshot shows the same code editor interface. The code in 'script.py' is now:

```
1 # Write your python code here
2 print(5**2)
3
4
5
6
7
8
9
10
```

The green notification bar now says: "Exercise Complete! The flag is: **THM{EXPON3NT\_POWER}**". The "Python code output" section shows the result "25".

## Task 4 Variables and Data Types

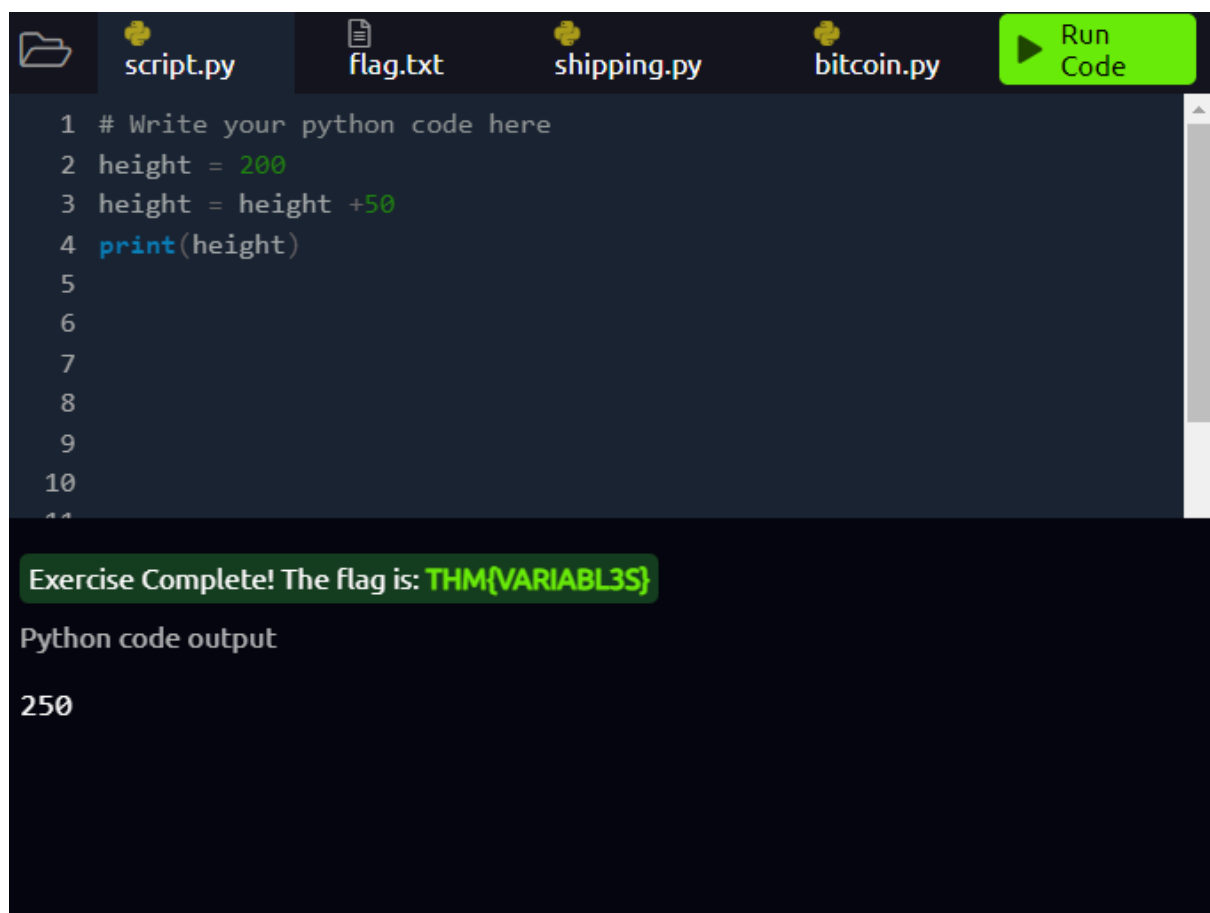
On another new line, print out the value of height. What is the flag that appears?

Answer: **THM{VARIABLES}**

- I created a variable called height and set its initial value to 200
- On a new line, I added 50 to the height variable
- Then printed out the value of height

CODE:

```
height = 200
height = height + 50
print(height)
```



The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. A green 'Run Code' button is on the right. The code in 'script.py' is as follows:

```
1 # Write your python code here
2 height = 200
3 height = height +50
4 print(height)
5
6
7
8
9
10
11
```

Below the code editor, a green banner displays the message: 'Exercise Complete! The flag is: **THM{VARIABLES}**'. Underneath this, the text 'Python code output' is shown, followed by the number '250'.

## Task 6 Shipping Project Introduction to If Statements

Once you've written the application in the code editor's shipping.py tab, a flag will appear, which is the answer to this question.

→ I clicked on the shipping.py tab

Answer: **THM{IF\_STATEMENT\_SHOPPING}**

CODE:

```
customer_basket_cost = 34
customer_basket_weight = 44

# Write if statement here to calculate the total cost
if customer_basket_cost > 100:
    print("free shipping")
else:
    shipping = 1.20 * customer_basket_weight
    total = customer_basket_cost + shipping
    print(total)
```

```
11
12 customer_basket_cost = 34
13 customer_basket_weight = 44
14
15 # Write if statement here to calculate the total cost
16 if customer_basket_cost > 100:
17     print("free shipping")
18 else:
19     shipping = 1.20 * customer_basket_weight
20     total = customer_basket_cost + shipping
21     print(total)
```

Exercise Complete! The flag is: **THM{IF\_STATEMENT\_SHOPPING}**

Python code output

86.8

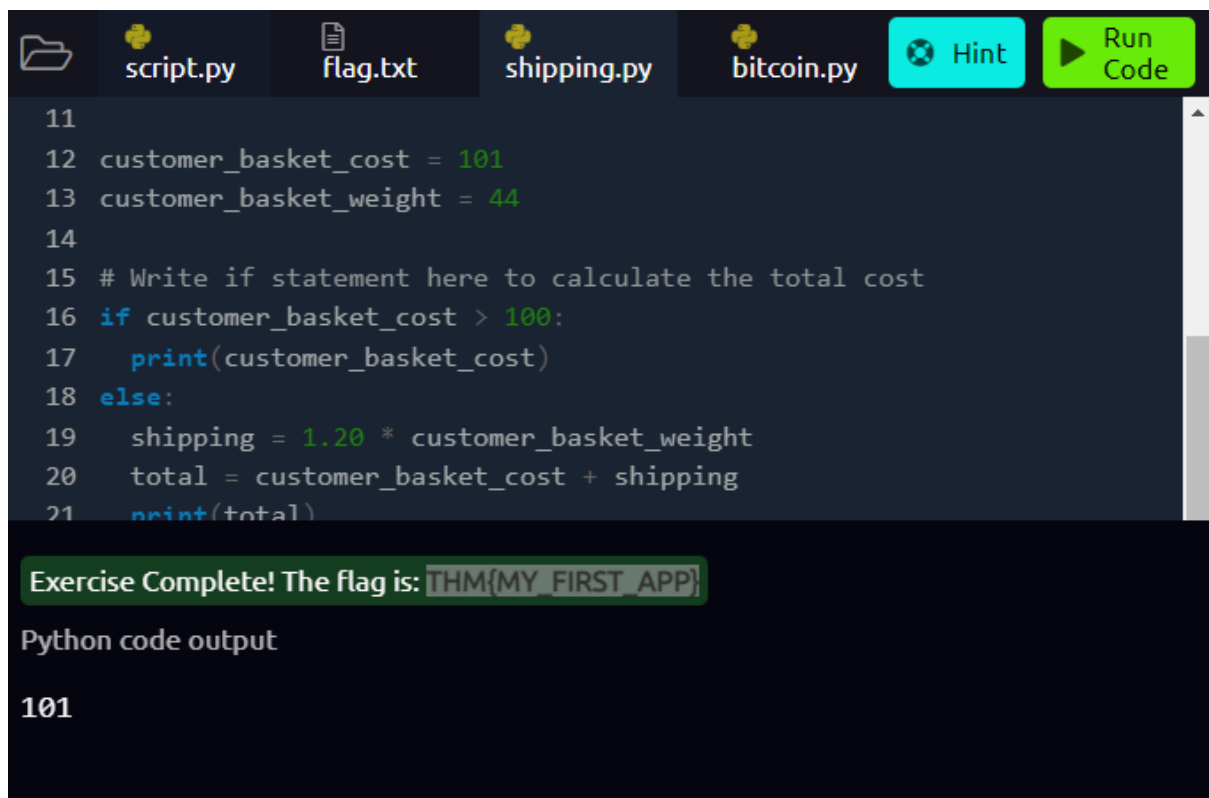
In shipping.py, on line 12 (when using the Code Editor's Hint), change the customer\_basket\_cost variable to 101 and re-run your code. You will get a flag (if the total cost is correct based on your code); the flag is the answer to this question.

**Answer:** THM{MY\_FIRST\_APP}

**CODE:**

```
customer_basket_cost = 101
customer_basket_weight = 44
```

```
# Write if statement here to calculate the total cost
if customer_basket_cost > 100:
    print(customer_basket_cost)
else:
    shipping = 1.20 * customer_basket_weight
    total = customer_basket_cost + shipping
    print(total)
```



The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. To the right of the tabs are two buttons: 'Hint' (with a globe icon) and 'Run Code' (with a play icon). The 'shipping.py' tab is active, showing the following code:

```
11
12 customer_basket_cost = 101
13 customer_basket_weight = 44
14
15 # Write if statement here to calculate the total cost
16 if customer_basket_cost > 100:
17     print(customer_basket_cost)
18 else:
19     shipping = 1.20 * customer_basket_weight
20     total = customer_basket_cost + shipping
21     print(total)
```

Below the code editor, a green banner displays the message: 'Exercise Complete! The flag is: THM{MY\_FIRST\_APP}'. Underneath this, the text 'Python code output' is shown, followed by the output '101'.

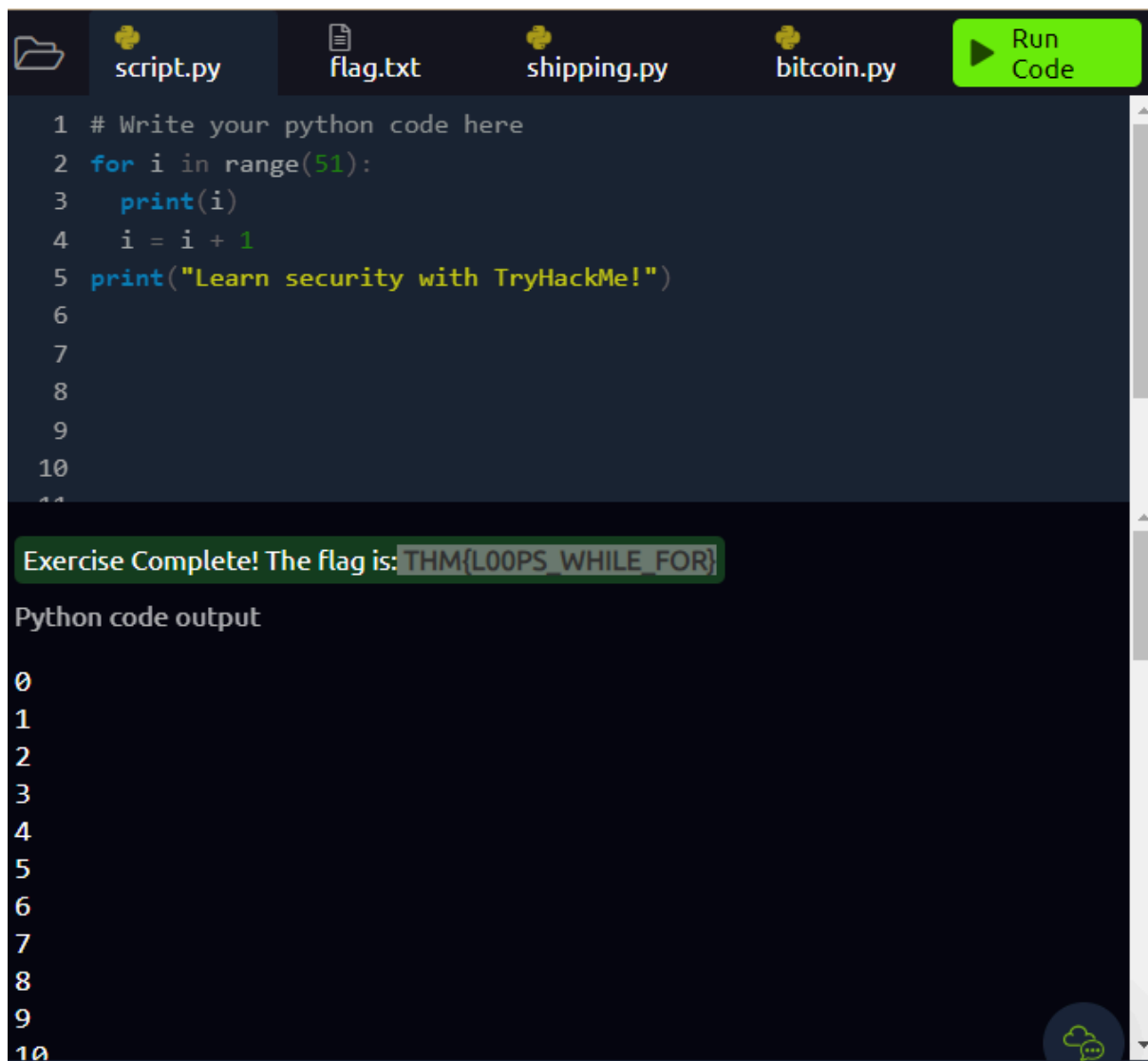
## Task 7 Loops

On the code editor, click back on the "script.py" tab and code a loop that outputs every number from 0 to 50.

Answer: **THM{LOOPS\_WHILE\_FOR}**

CODE:

```
for i in range(51):  
    print(i)  
    i = i + 1
```



The screenshot shows a code editor with a dark theme. At the top, there are four tabs: "script.py", "flag.txt", "shipping.py", and "bitcoin.py". The "script.py" tab is active. To the right of the tabs is a green "Run Code" button. The code in the editor is as follows:

```
1 # Write your python code here  
2 for i in range(51):  
3     print(i)  
4     i = i + 1  
5 print("Learn security with TryHackMe!")  
6  
7  
8  
9  
10  
11
```

Below the code editor, there is a green notification bar that says "Exercise Complete! The flag is: THM{LOOPS\_WHILE\_FOR}". Below that, the text "Python code output" is displayed, followed by a list of numbers from 0 to 10, representing the first part of the loop's output.

## Task 8 Bitcoin Project Introduction to Functions

Once you've written the bitcoinToUSD function, use it to calculate the value of your Bitcoin in USD, and then create an if statement to determine if the value falls below \$30,000; if it does, output a message to alert you (via a print statement).

**Answer:** THM{BITCOIN\_INVESTOR}

**CODE:**

```
investment_in_bitcoin = 1.2  
bitcoin_to_usd = 40000
```

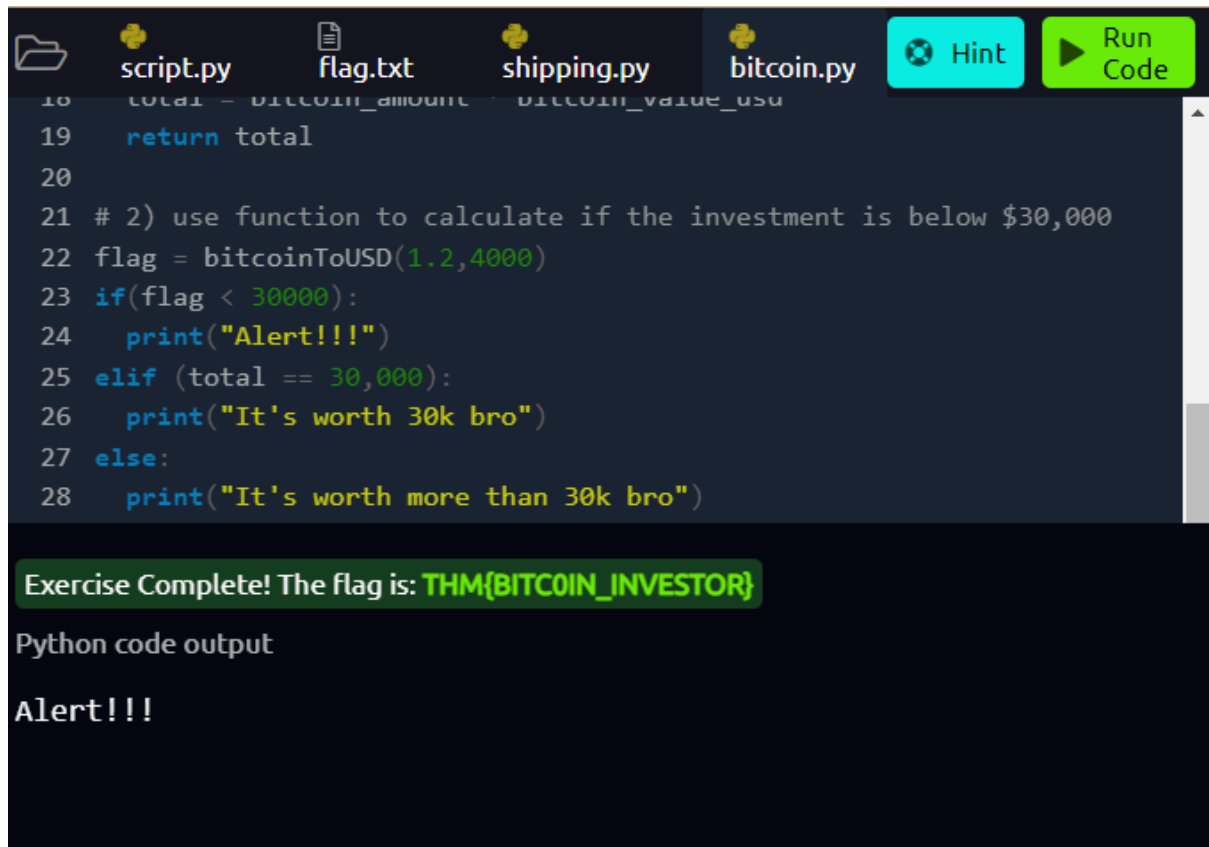
# 1) write a function to calculate bitcoin to usd

```
def bitcoinToUSD(bitcoin_amount, bitcoin_value_usd):  
    total = bitcoin_amount * bitcoin_value_usd  
    return total
```

# 2) use function to calculate if the investment is below \$30,000

```
flag = bitcoinToUSD(1.2,4000)  
if(flag < 30000):  
    print("Alert!!!")  
elif (total == 30,000):  
    print("It's worth 30k bro")  
else:  
    print("It's worth more than 30k bro")
```





The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'script.py', 'flag.txt', 'shipping.py', and 'bitcoin.py'. The 'bitcoin.py' tab is active, showing a Python script. The script defines a function 'bitcoinToUSD' and then calls it with '1.2, 4000'. It uses an if-elif-else structure to print different messages based on the result. Below the code editor, there is a green box indicating the exercise is complete and the flag is 'THM{BITCOIN\_INVESTOR}'. Below that, the Python code output is shown as 'Alert!!!'.

```
18 total = bitcoinToUSD(1.2, 4000)
19 return total
20
21 # 2) use function to calculate if the investment is below $30,000
22 flag = bitcoinToUSD(1.2, 4000)
23 if(flag < 30000):
24     print("Alert!!!")
25 elif (total == 30,000):
26     print("It's worth 30k bro")
27 else:
28     print("It's worth more than 30k bro")
```

Exercise Complete! The flag is: **THM{BITCOIN\_INVESTOR}**

Python code output

Alert!!!

## Task 9 Files

In the code editor, write Python code to read the flag.txt file. What is the flag in this file?

Answer: **THM{FILE\_R3AD}**

CODE:

```
# Write your python code here
file = open("flag.txt", "r")
print(file.read())
```

**END!!!**