

Hello Python!

INTRODUCTION TO PYTHON



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How you will learn

Learn / Courses / Introduction to Python

Exercise

Python as a calculator

Python is perfectly suited to do basic calculations. It can do addition, subtraction, multiplication and division.

The code in the script gives some examples.

Now it's your turn to practice!

Instructions

300 XP

- Print the sum of 5 + 5 .
- Print the result of subtracting 5 from 5 .
- Multiply 3 by 5 .
- Divide 10 by 2 .

Take Hint (-30 XP)

script.py

Light Mode

```
1 # Addition
2 print(5 + 5)
3
4 # Subtraction
5 print(5 - 5)
6
7 # Multiplication
8 print(3 * 5)
9
10 # Division
11
```

↺

Run Code

Submit Answer

IPython Shell

In [1]:

Python



- General purpose: build anything
- Open source! Free!
- Python packages, also for data science
 - Many applications and fields
- Version 3.x - <https://www.python.org/downloads/>

IPython Shell

Execute Python commands

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← Course Outline →

Light Mode

Exercise

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Instructions 100 XP

- Print the sum of `5 + 5`.
- Print the result of subtracting `5` from `5`.
- Multiply `3` by `5`.
- Divide `10` by `2`.

Take Hint (-30 XP)

script.py

```
1 # Addition
2
3
4 # Subtraction
5
6
7 # Multiplication
8
9
10 # Division
11
```

Run Code Submit Answer

IPython Shell

In [1]:

IPython Shell

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script.py

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In [1]:

IPython Shell

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Take Hint (-30 XP)

script.py

1

Run Code

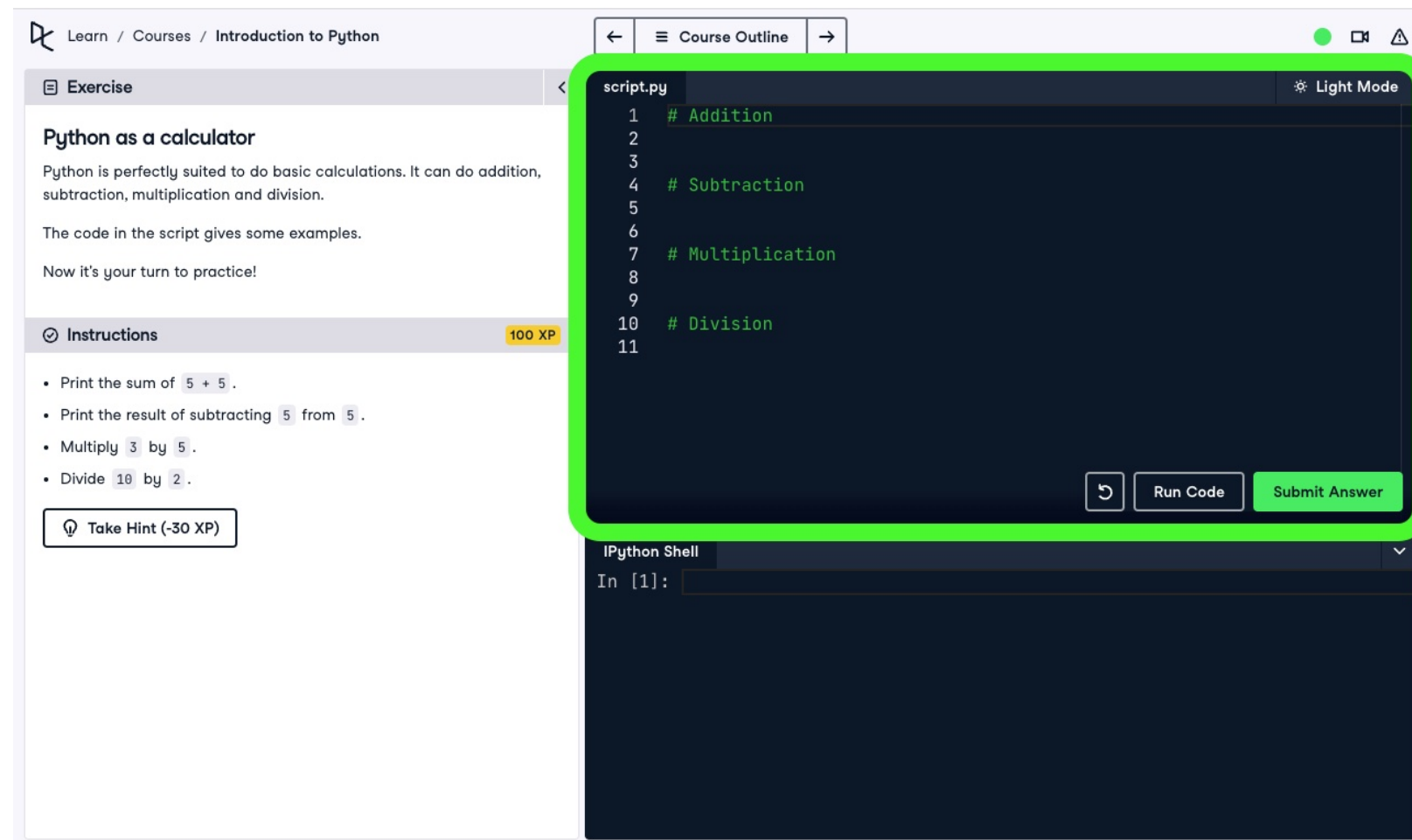
Submit Answer

IPython Shell

In [1]:

Python Script

- Text files - `.py`
- List of Python commands
- Similar to typing in IPython Shell



The screenshot displays a web-based Python learning environment. On the left, a sidebar contains the course title 'Learn / Courses / Introduction to Python', a 'Course Outline' button, and an 'Exercise' section titled 'Python as a calculator'. The exercise description states: 'Python is perfectly suited to do basic calculations. It can do addition, subtraction, multiplication and division. The code in the script gives some examples. Now it's your turn to practice!'. Below this, the 'Instructions' section (worth 100 XP) lists four tasks: 'Print the sum of 5 + 5', 'Print the result of subtracting 5 from 5', 'Multiply 3 by 5', and 'Divide 10 by 2'. A 'Take Hint (-30 XP)' button is also present. The main area features a code editor for 'script.py' with a 'Light Mode' toggle. The editor contains the following Python code:

```
1 # Addition
2
3
4 # Subtraction
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6
7 # Multiplication
8
9
10 # Division
11
```

At the bottom of the code editor are buttons for 'Run Code' and 'Submit Answer'. Below the code editor is an 'IPython Shell' window with the prompt 'In [1]:'.

Python Script

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← Course Outline →

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Exercise

Python as a calculator

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The code in the script gives some examples.

Now it's your turn to practice!

Instructions 100 XP

- Print the sum of 4 + 5 .
- Print the result of subtracting 5 from 5 .
- Multiply 3 by 5 .
- Divide 10 by 2 .

Take Hint (-30 XP)

script.py Light Mode

1 4

⌂ Run Code Submit Answer

IPython Shell

In [1]:

Python Script

The screenshot shows a web interface for a Python exercise. The top navigation bar includes 'Learn / Courses / Introduction to Python' and a 'Course Outline' button. The left sidebar has tabs for 'Exercise' and 'Instructions'. The 'Exercise' tab is active, showing the title 'Python as a calculator' and a description: 'Python is perfectly suited to do basic calculations. It can do addition, subtraction, multiplication and division. The code in the script gives some examples. Now it's your turn to practice!'. Below this, the 'Instructions' tab is visible, showing a list of tasks: 'Print the sum of 4 + 5', 'Print the result of subtracting 5 from 5', 'Multiply 3 by 5', and 'Divide 10 by 2'. A 'Take Hint (-30 XP)' button is also present. The main area is split into two panes. The top pane, titled 'script.py', contains a code editor with a single line of code: `1`. The bottom pane, titled 'IPython Shell', shows a prompt `In [1]:` and a text input field. At the bottom right of the code editor, there are three buttons: a circular arrow icon, 'Run Code', and 'Submit Answer'.

- Use `print()` to generate output from script

DataCamp Interface

Learn / Courses / Introduction to Python

←

Course Outline

→

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script.py

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Run Code

Submit Answer

IPython Shell

▼

In [1]:

Let's practice!

INTRODUCTION TO PYTHON

Variables and Types

INTRODUCTION TO PYTHON



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Variable

- Specific, case-sensitive name
- Call up value through variable name
- 1.79 m - 68.7 kg

```
height = 1.79  
weight = 68.7  
height
```

```
1.79
```

Calculate BMI

```
height = 1.79  
weight = 68.7  
height
```

```
1.79
```

$$\text{BMI} = \frac{\text{weight}}{\text{height}^2}$$

```
68.7 / 1.79 ** 2
```

```
21.4413
```

```
weight / height ** 2
```

```
21.4413
```

```
bmi = weight / height ** 2  
bmi
```

```
21.4413
```

Reproducibility

```
height = 1.79  
weight = 68.7  
bmi = weight / height ** 2  
print(bmi)
```

```
21.4413
```

Reproducibility

```
height = 1.79  
weight = 74.2 # <-  
bmi = weight / height ** 2  
print(bmi)
```

```
23.1578
```


Python Types

```
type(bmi)
```

```
float
```

```
day_of_week = 5  
type(day_of_week)
```

```
int
```

Python Types (2)

```
x = "body mass index"  
y = 'this works too'  
type(y)
```

str

```
z = True  
type(z)
```

bool

Python Types (3)

```
2 + 3
```

```
5
```

```
'ab' + 'cd'
```

```
'abcd'
```

- Different type = different behavior!

Let's practice!

INTRODUCTION TO PYTHON