

Hello Python!

INTRODUCTION TO PYTHON



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Data Scientist at DataCamp

How you will learn

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

100 XP

- Print the result of subtracting 5 from 5 under `# Subtraction` using `print()`.
- Print the result of multiplying 3 by 5 under `# Multiplication`.

Take Hint (-30 XP)

script.py

Light Mode

```
1 # Addition and division
2 print(4 + 5)
3 print(10 / 2)
4
5 # Subtraction
6 print(5 - 5)
7
8 # Multiplication
9
```



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

IPython Shell

Execute Python commands

Learn / Courses / Introduction to Python

← Course Outline →

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- 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
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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In [1]:

IPython Shell

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script.py

Light Mode

1

Run Code

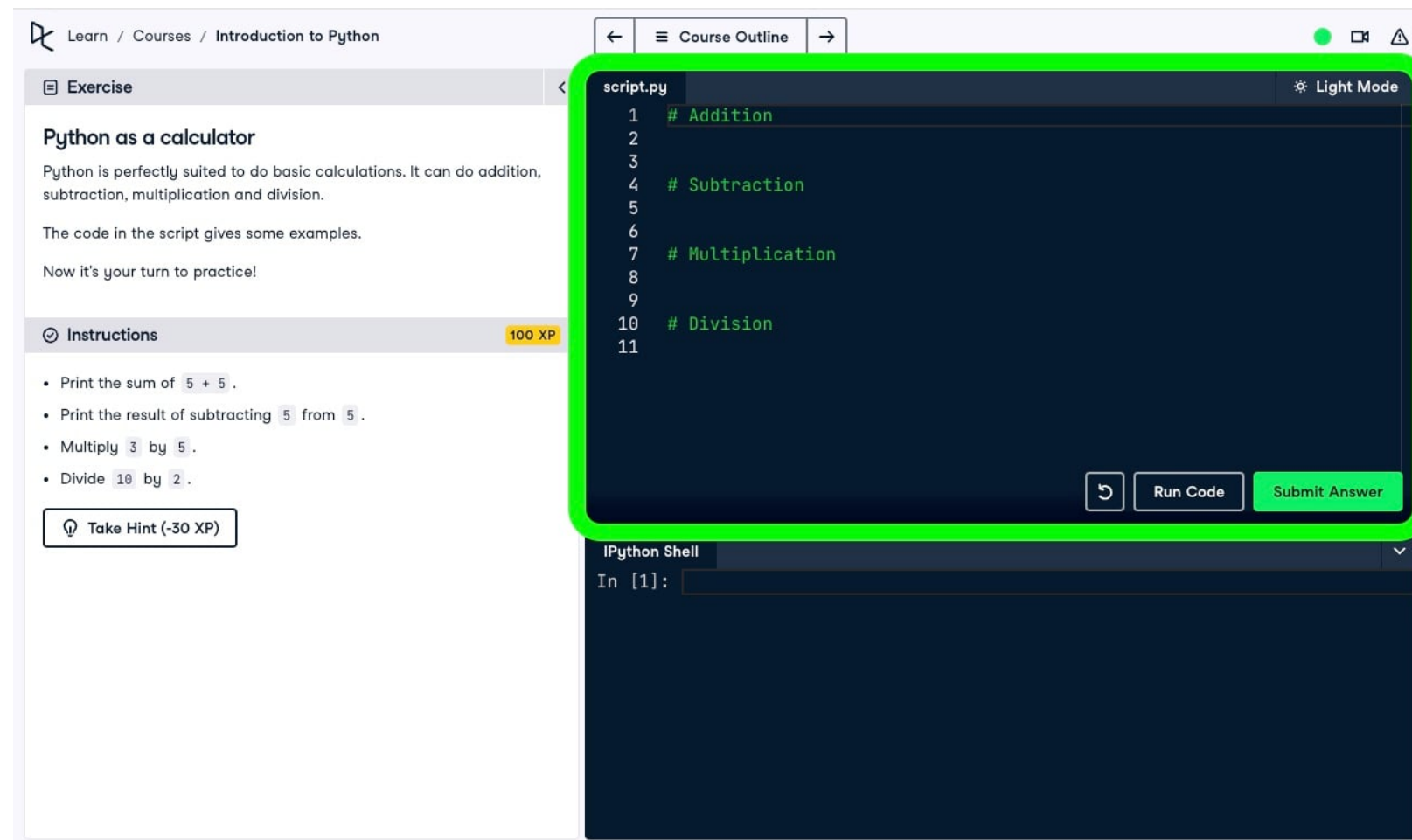
Submit Answer

IPython Shell

In [1]:

Python Script

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



The screenshot shows a web-based Python editor interface. On the left, a sidebar contains course navigation and exercise instructions. The main area is split into two panes. The top pane, titled 'script.py', contains a Python script with comments for addition, subtraction, multiplication, and division. The bottom pane is an IPython Shell with a prompt 'In [1]:'. The script editor pane is highlighted with a red border.

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Exercise

Python as a calculator

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Now it's your turn to practice!

Instructions 100 XP

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script.py Light Mode

```
1 # Addition
2
3
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8
9
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11
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Run Code Submit Answer

IPython Shell

In [1]:

Python Script

Learn / Courses / Introduction to Python

← Course Outline →

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Now it's your turn to practice!

Instructions 100 XP

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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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IPython Shell

▼

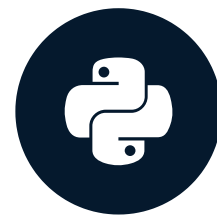
In [1]:

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