

Hello Python!

INTRODUCTION TO PYTHON



Hugo Bowne-Anderson
Data Scientist at DataCamp

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

IPython Shell

Execute Python commands

Learn / Courses / Introduction to Python

← 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

Execute Python commands

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In [1]:

IPython Shell

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Take Hint (-30 XP)

script.py

1

Run Code

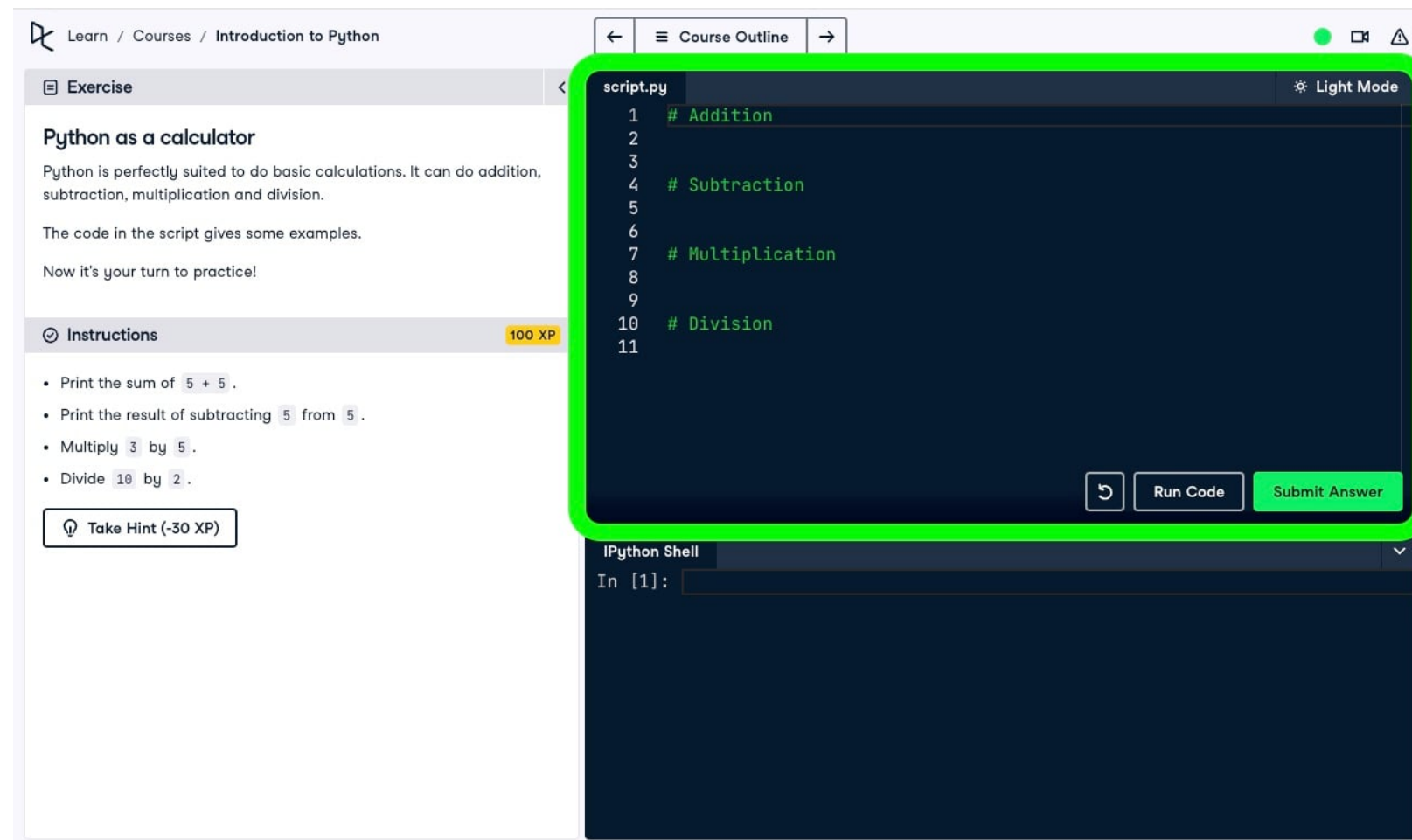
Submit Answer

IPython Shell

In [1]:

Python Script

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



The screenshot displays the DataCamp interface for an exercise titled "Python as a calculator". The left sidebar contains the exercise instructions, which include a list of 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 visible. The main area is divided into two panes. The top pane, titled "script.py", contains a Python script with comments for addition, subtraction, multiplication, and division. The bottom pane, titled "IPython Shell", shows the prompt "In [1]:".

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script.py Light Mode

```
1 # Addition
2
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5
6
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8
9
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11
```

Run Code Submit Answer

IPython Shell

In [1]:

Python Script

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.

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Instructions100 XP

- Print the sum of 4 + 5 .
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Take Hint (-30 XP)

script.pyLight Mode

1 4

Run Code

Submit Answer

IPython Shell

In [1]:

Python Script

The screenshot shows a web interface for a Python course. The top navigation bar includes a logo, the text 'Learn / Courses / Introduction to Python', and a 'Course Outline' button. The left sidebar has a tab for 'Exercise' and a section titled 'Python as a calculator' with instructions: '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 is an 'Instructions' section with a '100 XP' badge and 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, labeled 'script.py', shows a code editor with a single line '1' and buttons for 'Run Code' and 'Submit Answer'. The bottom pane, labeled 'IPython Shell', shows a prompt 'In [1]:'.

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Exercise

Python as a calculator

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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

```
1
```

Run Code Submit Answer

IPython Shell

```
In [1]:
```

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

DataCamp Interface

Learn / Courses / Introduction to Python

←

≡ Course Outline

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Exercise

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Run Code

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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