

# Hello Python!

INTRODUCTION TO PYTHON



**Hugo Bowne-Anderson**  
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

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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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Light Mode

Exercise

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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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Exercise

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Take Hint (-30 XP)

script.py

Light Mode

1

Run Code

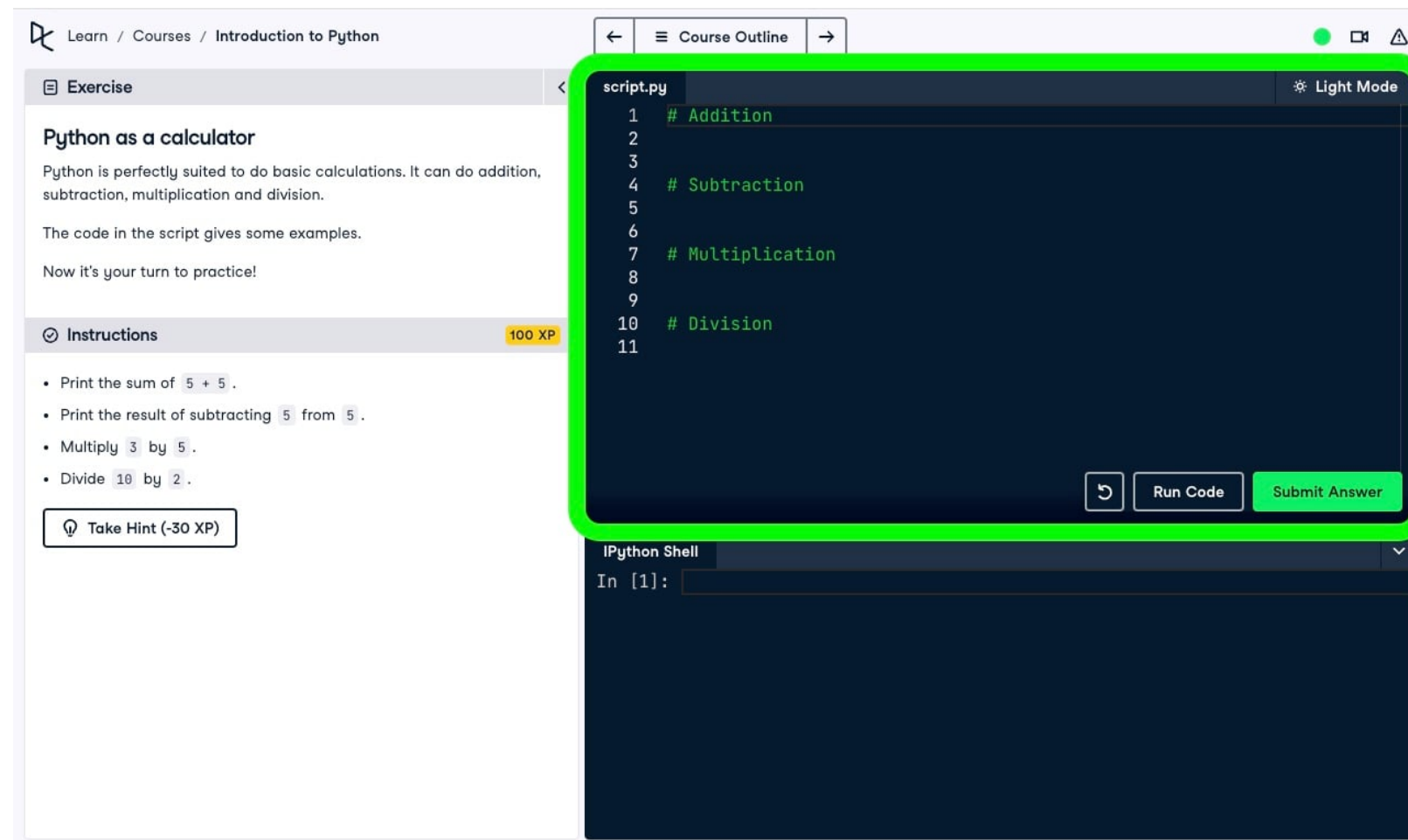
Submit Answer

IPython Shell

In [1]:

# Python Script

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



The screenshot 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]:". The script editor pane is highlighted with a red border.

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

Buttons at the bottom of the script editor: Run Code, Submit Answer

# Python Script

Learn / Courses / Introduction to Python

← 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 active, 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 panels. The top panel, titled 'script.py', shows a code editor with a single line of code: '1'. The bottom panel, titled 'IPython Shell', shows a prompt 'In [1]:' followed by 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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Exercise

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Now it's your turn to practice!

Instructions100 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.pyLight Mode

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

↺

Run Code

Submit Answer

IPython Shell

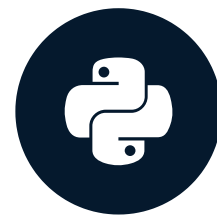
In [1]:

# 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