

Hello Python!

INTRODUCTION TO PYTHON



Hugo Bowne-Anderson
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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!

Instructions100 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.pyLight 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 →

Light Mode

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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

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IPython Shell

In [1]:

IPython Shell

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↺

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IPython Shell

In [1]:

IPython Shell

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Take Hint (-30 XP)

script.py

Light Mode

1

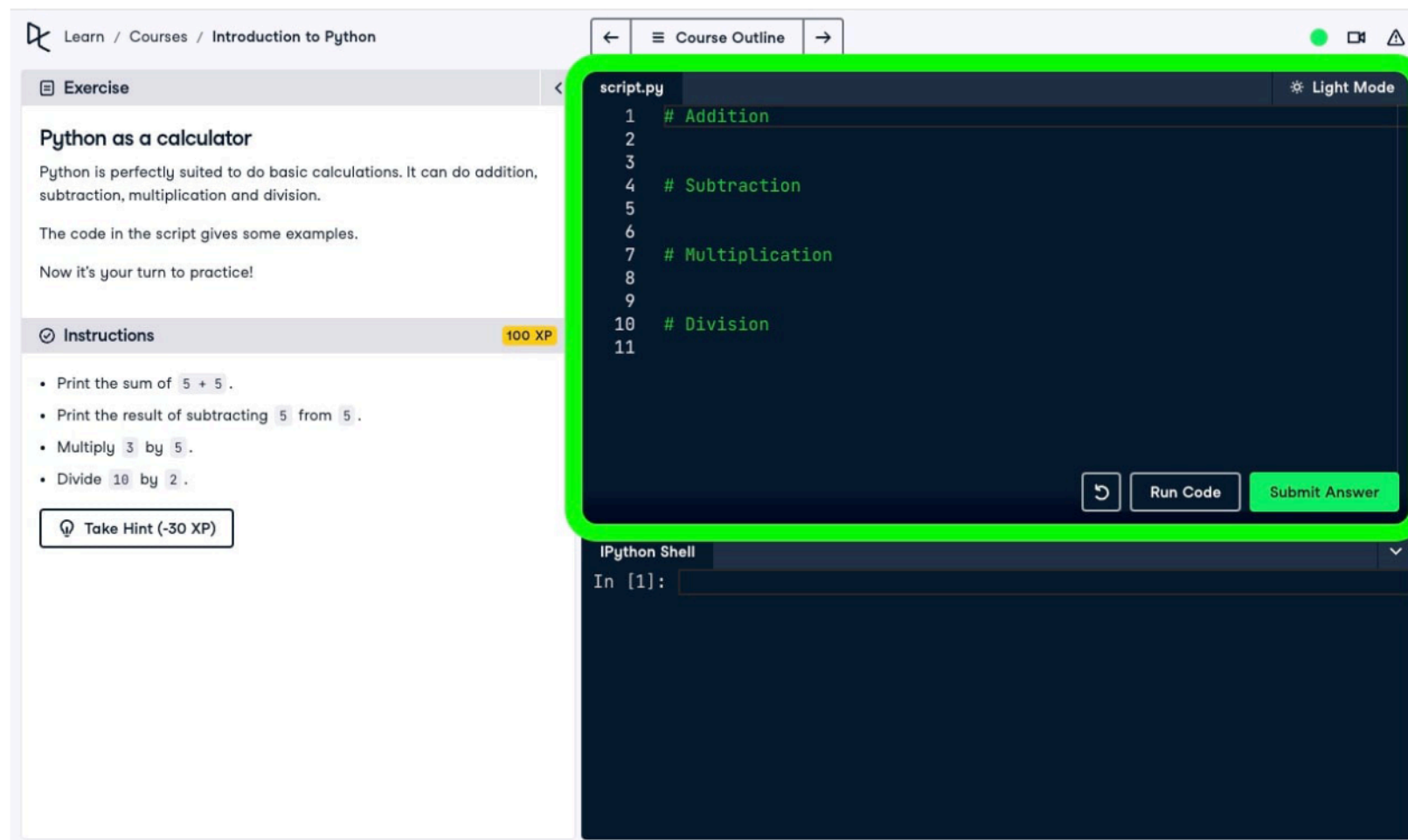
↺ Run Code Submit Answer

IPython Shell

In [1]:

Python Script

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



The screenshot displays a web-based Python learning environment. On the left, a sidebar contains the course title 'Learn / Courses / Introduction to Python', an 'Exercise' tab, and instructions for a 'Python as a calculator' task. The instructions list four problems: adding 5 and 5, subtracting 5 from 5, multiplying 3 by 5, and dividing 10 by 2. A 'Take Hint (-30 XP)' button is also present. The main area features a code editor for 'script.py' with a dark theme and a 'Light Mode' toggle. The script contains comments for addition, subtraction, multiplication, and division. Below the editor is an 'IPython Shell' with a prompt 'In [1]:'. At the bottom right of the editor, there are buttons for 'Run Code' and 'Submit Answer'.

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

Python Script

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Exercise

Python as a calculator

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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 course. On the left, there's a sidebar with 'Exercise' and 'Instructions' sections. The 'Instructions' section lists four tasks: printing the sum of 4 and 5, subtracting 5 from 5, multiplying 3 by 5, and dividing 10 by 2. A 'Take Hint (-30 XP)' button is below. The main area is split into two panes. The top pane, titled 'script.py', is a code editor with a dark theme, showing a single line '1' at the top. The bottom pane, titled 'IPython Shell', shows 'In [1]:' followed by a cursor. Between the panes are buttons for 'Run Code' and 'Submit Answer'. The top of the interface has a breadcrumb 'Learn / Courses / Introduction to Python' and a 'Course Outline' button.

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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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
```

Run Code Submit Answer

IPython Shell

```
In [1]:
```

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

DataCamp Interface

Learn / Courses / Introduction to Python

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Course Outline

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Exercise

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Instructions

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- Print the result of subtracting 5 from 5 .
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script.py

Light Mode

```
1 # Addition
2
3
4 # Subtraction
5
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7 # Multiplication
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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!

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