


Hello Python!

INTRODUCTION TO PYTHON



Hugo Bowne-Anderson
Data Scientist at DataCamp

How you will learn

datacamp

← Course Outline →

Daily XP 0

Exercise

Calculations with variables

Remember how you calculated the money you ended up with after 7 years of investing \$100? You did something like this:

```
100 * 1.1 ** 7
```

Instead of calculating with the actual values, you can use variables instead. The `savings` variable you've created in the previous exercise represents the \$100 you started with. It's up to you to create a new variable to represent `1.1` and then redo the calculations!

Instructions100 XP

- Create a variable `growth_multiplier` equal to `1.1`.
- Create a variable, `result`, equal to the amount of money you saved after `7` years.
- Print out the value of `result`.

Take Hint (-30 XP)

script.py

```
1 # Create a variable savings
2 savings = 100
3
4 # Create a variable growth_multiplier
5 growth_multiplier = 1.1
6
7 # Calculate result
8 result = savings *
9
10 # Print out result
11
12
13
```

↺

Run Code

Submit Answer

IPython Shell

Slides

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

 datacamp

← Course Outline →

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 datacamp

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IPython Shell

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IPython Shell

Slides

In [1]:

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INTRODUCTION TO PYTHON

Python Script

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

The screenshot shows the DataCamp interface for an exercise titled "Calculations with variables". The exercise instructions are on the left, and the code editor and IPython Shell are on the right.

Exercise: Calculations with variables

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[Take Hint \(-30 XP\)](#)

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IPython Shell

In [1]:

Python Script

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Take Hint (-30 XP)

script.py

1

Run Code

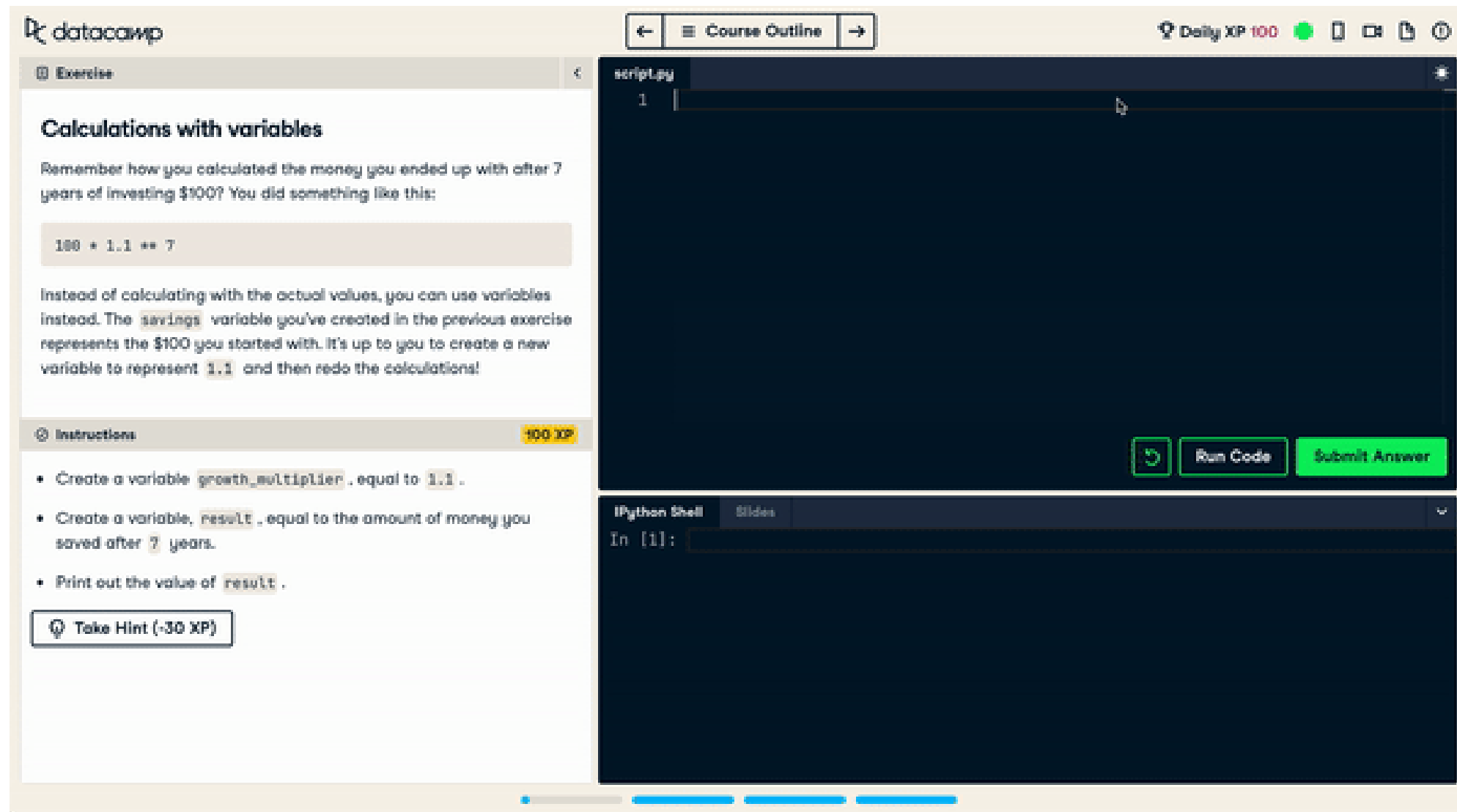
Submit Answer

IPython Shell

Slides

In [1]:

Python Script



The screenshot shows the DataCamp web interface. On the left, there's a sidebar with a 'datacamp' logo and a 'Course Outline' button. The main content area is titled 'Calculations with variables'. It contains a paragraph explaining the exercise, a code snippet `100 * 1.1 ** 7`, and instructions for creating variables `growth_multiplier` and `result`. Below the instructions is a 'Take Hint (-30 XP)' button. On the right, there's a code editor with a dark background and a light blue cursor. The editor is titled 'script.py' and has a line number '1'. Below the editor are three buttons: a green 'Run Code' button, a green 'Submit Answer' button, and a green 'Take Hint' button. At the bottom, there's a 'Python Shell' tab with a 'Slides' button and a 'Python Shell' label. The shell shows 'In [1]:' followed by a cursor.

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Take Hint (-30 XP)

script.py

```
1
```

Run Code Submit Answer

Python Shell Slides

In [1]:

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

DataCamp Interface

datacamp

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▼

In [1]:

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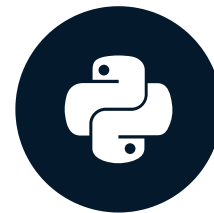
INTRODUCTION TO PYTHON

Let's practice!

INTRODUCTION TO PYTHON

Variables and Types

INTRODUCTION TO PYTHON



Hugo Bowne-Anderson
Data Scientist at DataCamp

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