

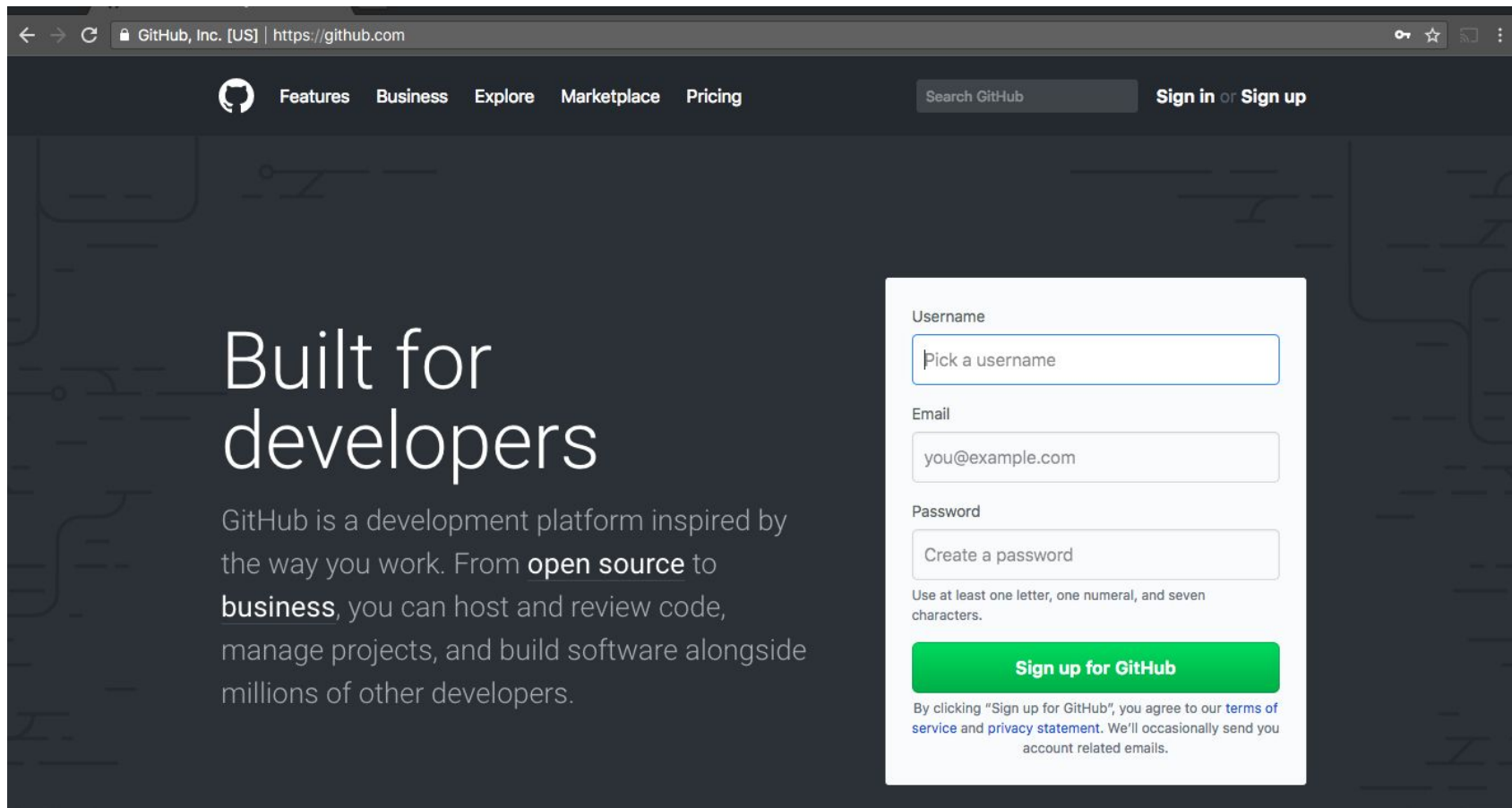
First Week @ CreateCodeLearn Software Engineering & Data Science

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Your coaches are listening to your needs.

Make a GitHub Account (everyone)

A screenshot of the GitHub website's sign-up page. The browser's address bar shows 'GitHub, Inc. [US] | https://github.com'. The navigation bar includes links for 'Features', 'Business', 'Explore', 'Marketplace', and 'Pricing', along with a search bar and 'Sign in or Sign up' links. The main content area has a dark background with the text 'Built for developers' and a description of GitHub as a development platform. On the right, a white sign-up form is displayed with fields for 'Username', 'Email', and 'Password', each with a placeholder text. Below the password field is a note about password requirements. A green 'Sign up for GitHub' button is at the bottom of the form, followed by a disclaimer about terms of service and privacy policy.

← → ↻ GitHub, Inc. [US] | https://github.com

Features Business Explore Marketplace Pricing Search GitHub Sign in or Sign up

Built for developers

GitHub is a development platform inspired by the way you work. From **open source** to **business**, you can host and review code, manage projects, and build software alongside millions of other developers.

Username
Pick a username

Email
you@example.com

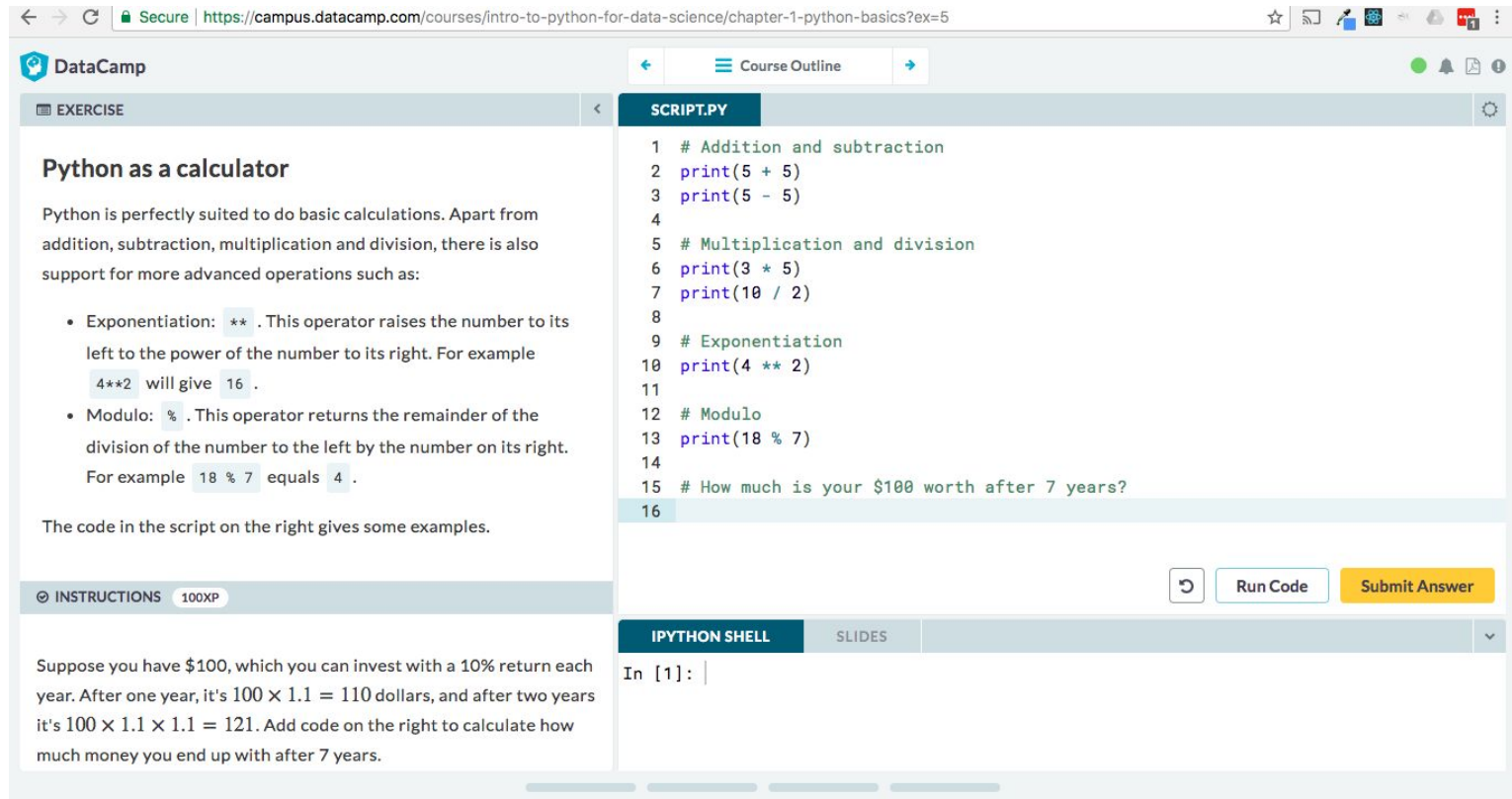
Password
Create a password

Use at least one letter, one numeral, and seven characters.

Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy statement](#). We'll occasionally send you account related emails.

Start with a Python course here (everyone):
<https://www.datacamp.com/>



The screenshot shows the DataCamp web interface for a Python course. The browser address bar displays the URL: `https://campus.datacamp.com/courses/intro-to-python-for-data-science/chapter-1-python-basics?ex=5`. The page is titled "Python as a calculator" under the "EXERCISE" tab. The left sidebar contains the course outline and a "SCRIPT.PY" tab. The main content area on the left explains basic Python operations: Exponentiation (`**`) and Modulo (`%`). The right sidebar shows a code editor with a Python script. The script includes comments and code for addition, subtraction, multiplication, division, and exponentiation. The bottom of the page features a "Run Code" button and a "Submit Answer" button. The bottom right corner shows the "IPYTHON SHELL" tab with the prompt `In [1]:`.

Python as a calculator

Python is perfectly suited to do basic calculations. Apart from addition, subtraction, multiplication and division, there is also support for more advanced operations such as:

- Exponentiation: `**`. This operator raises the number to its left to the power of the number to its right. For example `4**2` will give `16`.
- Modulo: `%`. This operator returns the remainder of the division of the number to the left by the number on its right. For example `18 % 7` equals `4`.

The code in the script on the right gives some examples.

```
1 # Addition and subtraction
2 print(5 + 5)
3 print(5 - 5)
4
5 # Multiplication and division
6 print(3 * 5)
7 print(10 / 2)
8
9 # Exponentiation
10 print(4 ** 2)
11
12 # Modulo
13 print(18 % 7)
14
15 # How much is your $100 worth after 7 years?
16
```

INSTRUCTIONS 100XP

Suppose you have \$100, which you can invest with a 10% return each year. After one year, it's $100 \times 1.1 = 110$ dollars, and after two years it's $100 \times 1.1 \times 1.1 = 121$. Add code on the right to calculate how much money you end up with after 7 years.

IPYTHON SHELL SLIDES

In [1]:

Start with a Javascript course here (SE):

<https://javascript.info>

The screenshot shows a web browser displaying the 'A variable' lesson on the JavaScript.info website. The browser's address bar shows the URL 'https://javascript.info/variables'. The page has a sidebar on the left with a table of contents including 'Chapter', 'JavaScript Fundamentals', 'Lesson navigation', 'A variable' (highlighted in red), 'A real-life analogy', 'Variable naming', 'Constants', 'Name things right', 'Summary', 'Tasks (3)', 'Comments', and 'Share'. The main content area is titled 'A variable' and contains the following text: 'A **variable** is a "named storage" for data. We can use variables to store goodies, visitors and other data. To create a variable in JavaScript, we need to use the `let` keyword. The statement below creates (in other words: *declares* or *defines*) a variable with the name "message":'. Below this text is a code block with the line `1 let message;`. The next paragraph says: 'Now we can put some data into it by using the assignment operator `=`:', followed by a code block with three lines: `1 let message;`, `2` (blank), and `3 message = 'Hello'; // store the string`. The following paragraph states: 'The string is now saved into the memory area associated with the variable. We can access it using the variable name:', followed by a code block with four lines: `1 let message;`, `2 message = 'Hello!';`, `3` (blank), and `4 alert(message); // shows the variable content`. The final paragraph says: 'To be concise we can merge the variable declaration and assignment into a single line:', followed by a code block with three lines: `1 let message = 'Hello!'; // define the variable and assign the value`, `2` (blank), and `3 alert(message); // Hello!`. The page includes navigation icons like back, forward, and search, as well as social media share buttons at the bottom left.

Chapter

JavaScript Fundamentals

Lesson navigation

A variable

A real-life analogy

Variable naming

Constants

Name things right

Summary

Tasks (3)

Comments

Share

[Twitter](#) [Facebook](#) [Google+](#)

A variable

A **variable** is a "named storage" for data. We can use variables to store goodies, visitors and other data.

To create a variable in JavaScript, we need to use the `let` keyword.

The statement below creates (in other words: *declares* or *defines*) a variable with the name "message":

```
1 let message;
```

Now we can put some data into it by using the assignment operator `=`:

```
1 let message;
2
3 message = 'Hello'; // store the string
```

The string is now saved into the memory area associated with the variable. We can access it using the variable name:

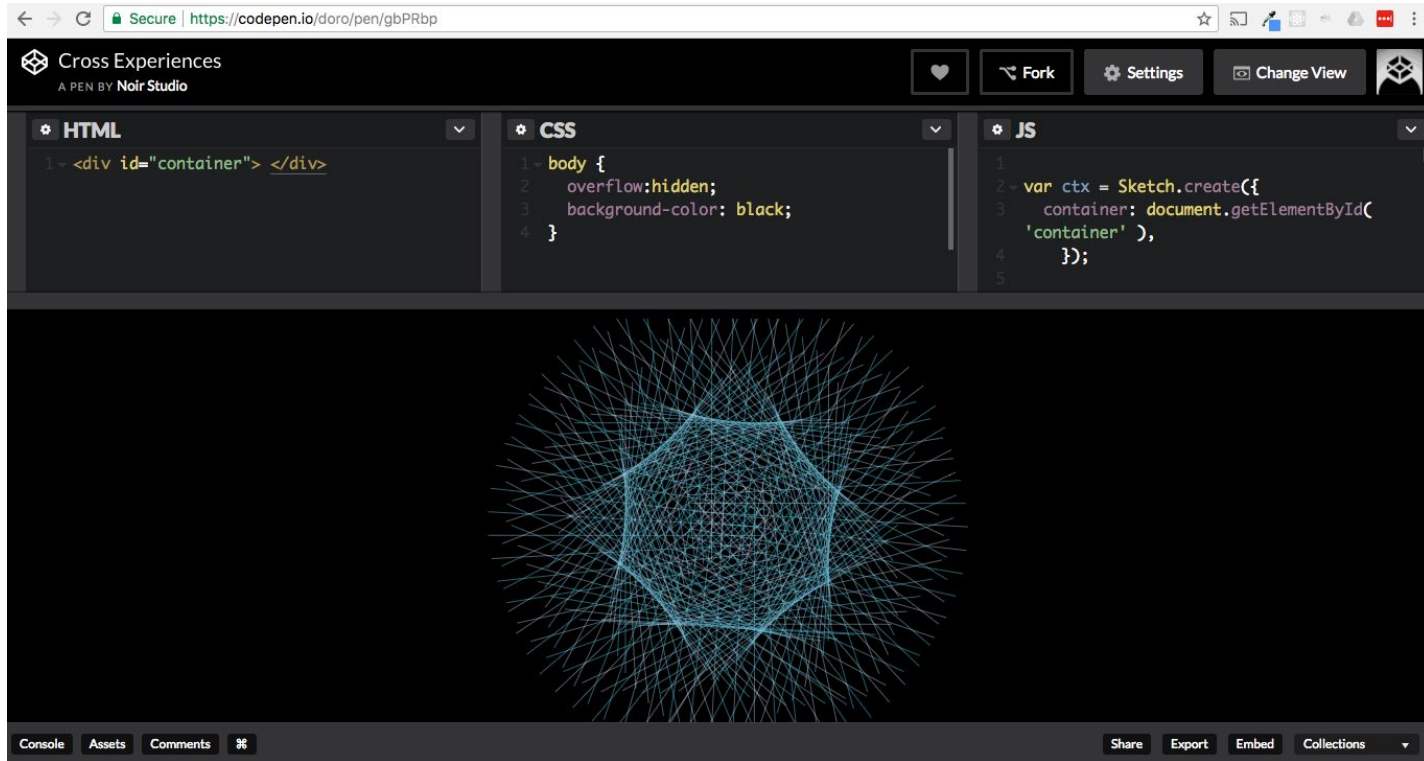
```
1 let message;
2 message = 'Hello!';
3
4 alert(message); // shows the variable content
```

To be concise we can merge the variable declaration and assignment into a single line:

```
1 let message = 'Hello!'; // define the variable and assign the value
2
3 alert(message); // Hello!
```

Play with Frontend on CodePen (for JS tutorial)

Hint: authenticate with your GitHub account



First Projects: Ground Rules

- Work in any language (Python, JS, ...)
- Use any type of interface (CLI, website, ...)
- Put some code into GitHub
- Share questions & ideas on slack!
- Try it out, don't be afraid!
- Come to Q&A next week Thursday with Q's.

First Week Project (ideas)

- Guess the Number
- Rock, Paper, Scissors, Lizard, Spock
- something of your choosing

Magician's Guess the Number

Have a user guess a magic number, giving feedback if their guess is higher or lower than the magic number.



Rock, Paper, Scissors, Lizard, Spock

Build an interface for the user to play the game against a computer.

