

Using Python

2-2

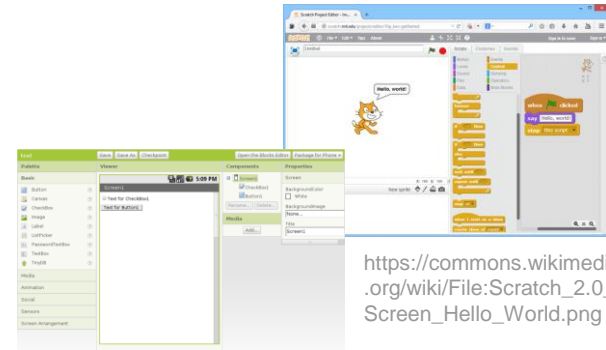
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Journal

What environments
have you already used
to write programs?



- Students will find and launch a Python IDE.
- Students will create a Python project
- Students will name and save projects according to the requirements of their instructor.
- Students will create a Python file (.py file).
- Students will add line numbers to the file.
- Students will add comments to the file.
- Students will write, debug, and run a simple Python program.



7 principles of programming

Summarize the *7 things you should know if you're starting out programming* as tweets.

1. Logic (not "math")
2. Catch a shooting star (variables)
3. Dictionary (data types)
4. Russian Dolls (things within things, instances)
5. Sausage (processes)
6. The dog, the cat, and the fish (causation, event change)
7. Pizza (abstraction) include why abstraction is "like making pizza," and what other kinds of activities might fall into that category.



Abstraction in coding

When you give the command to **print**, what really happens?

1. Information stored in the computer's memory appears on the screen.
2. If there are multiple things to print, separated by commas, the computer has to display all of them one after the other.
3. The computer has to figure out where the information is stored in its memory.
4. The computer has to calculate where the next available space is on the screen.
5. The computer has to translate the binary code in the computer's memory into dots on the screen for each symbol, one at a time.

Do we need to know all of these steps that happen in order to use the print function?

That's abstraction.

You do not need the details “under the hood” to make it work.



Review Python syntax

```
name = input("What's your name? ")  
print("Hello, ",name,"!")
```

1. “ “ Quotes go around words that don't change
2. () Parentheses go around what you print or input
3. input and print are special words with meaning in Python
4. = An equals sign assigns a value to a variable
5. , Commas are used to separate the things that print out

reserved



IDE

Integrated Development Environment

What are some IDEs for Python?

ideone
codecademy
pythonanywhere

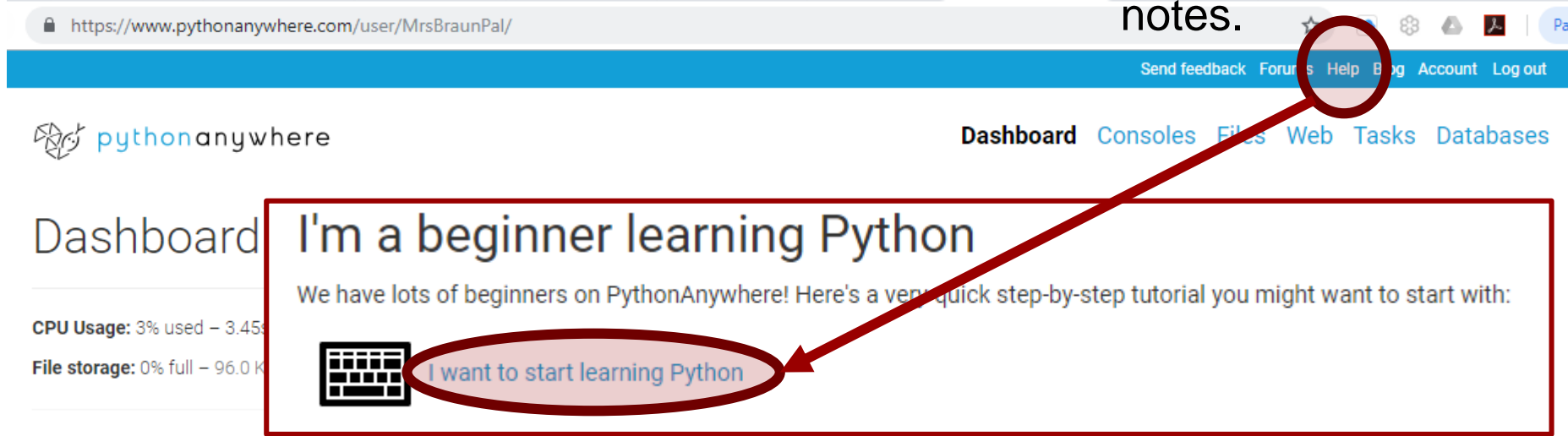
We will use pythonanywhere



Working in pythonanywhere

- ☐ Set up a free account
- ☐ Then go to the tutorial on how to use it

Complete the form on google classroom to document and take notes.



The screenshot shows the PythonAnywhere website dashboard. At the top, the browser address bar displays `https://www.pythonanywhere.com/user/MrsBraunPal/`. The navigation bar includes links for [Send feedback](#), [Forums](#), [Help](#), [Blog](#), [Account](#), and [Log out](#). The main header features the PythonAnywhere logo and a navigation menu with [Dashboard](#), [Consoles](#), [Files](#), [Web](#), [Tasks](#), and [Databases](#). The dashboard content area is titled "I'm a beginner learning Python" and includes the text: "We have lots of beginners on PythonAnywhere! Here's a very quick step-by-step tutorial you might want to start with:". Below this text is a button labeled "I want to start learning Python" next to a keyboard icon. A red circle highlights the "Help" link in the navigation bar, and a red arrow points from it to the "I want to start learning Python" button. On the left side of the dashboard, there are system status indicators: "CPU Usage: 3% used - 3.45s" and "File storage: 0% full - 96.0 K".

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pythonanywhere

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Dashboard

I'm a beginner learning Python

We have lots of beginners on PythonAnywhere! Here's a very quick step-by-step tutorial you might want to start with:

 [I want to start learning Python](#)

CPU Usage: 3% used - 3.45s

File storage: 0% full - 96.0 K



Test some Python code

(continue with form)

- Visit Non-Programmer's Tutorial for Python 3/Who Goes There?

- http://en.wikibooks.org/wiki/Non-Programmer%27s_Tutorial_for_Python_3/Who_Goes_There%3F

- Read about variables and concatenation.
- Copy the code for rate_time.py
- Create, save, run and debug rate_time.py
- Create, save, run and debug area.py
- Create, save, run and debug test temperature.py



Homework

- Bring in step by step directions to make a peanut butter and jelly sandwich.

