



HIBALL

Hacking Hour



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What is Colaboratory?

Colaboratory, or 'Colab' for short, allows you to write and execute Python in your browser, with

- Zero configuration
- Free access to GPU
- Easy sharing

Whether you're a student or just get started below

Getting started

The document that you execute code.

For example, here is a code snippet

```
[ ] seconds_in_a_day
seconds_in_a_day = 24 * 60 * 60

86400
```

To execute the code in the cell, use the keyboard shortcut 'Command/Ctrl + Enter'.

Variables that you define in the cell are available in the next cell.

```
[ ] seconds_in_a_week
seconds_in_a_week = 7 * 24 * 60 * 60

604800
```

Colab notebooks allow you to combine executable code and rich text in a single document, along with images, HTML, LaTeX and more. When you create your own Colab notebooks, they are stored in your Google Drive account. You can easily share your Colab notebooks with co-workers or friends, allowing them to comment on your notebooks or even edit them. To find out more, see [Overview of Colab](#). To create a new Colab notebook you can use the File menu above, or use the following link: [Create a new Colab notebook](#).

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What we've covered so far...

- Data objects
 - integers, float, string, boolean
- Collections of data objects
 - Lists and dictionaries
- Flow-of-control
 - if-elif-else
- Loops / Iteration
 - For-loops
- Functions

What we still need to cover...

- Loops / Iteration
 - List-comprehension
- Variable Scope
- Common python functions

- Objects and Methods
- Common python libraries
- String Manipulation
- File input / output

Next time

Variable Scope

- “Scope” → where a variable can be used in the code
- “Global” variables → can be used anywhere
- “Local” variables → can only be used within function where its defined

Overall workspace

`x = 1` ← global variable

`myfunction()` → `def myfunction() :`

`y = 2` ← local variable

`print(x)` ← okay, `x` has global scope

`print(y)` ← okay, `y` used within function where it is defined (i.e., its scope)

`print(y)` ← nope! this is outside of the scope of `myfunction()` where `y` lives