Python Course

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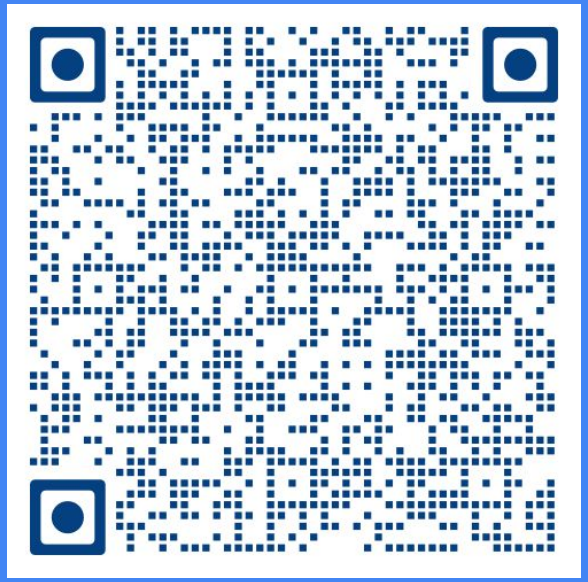
Packages and Libraries



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pip

is a tool for downloading and installing packages.

pip

Use pip --version to find out if you have pip, also the version.

AN EXAMPLE

https://pypi.org/project/pip/

You can get pip from this link.

What is a Python Package?

Packages

Package: **A package is a set of files that are needed for a library.**

Module: **A library is a module that can be used in projects.**

https://pypi.org/

You can find many different packages here!

Let’s find some packages!

How a package can be installed for the first time?

pip install package_name

Use this to download and install a new package.

SOME EXAMPLES

pip list

Will show you which apckages have been installed

AN EXAMPLE

How an installed library can be used?

import library_name

Use it when you want to use an installed library in your project.

SOME EXAMPLES

Libraries

- Each library is a module, you can discover it using type(library_name).
- Each module has different variables, you can find them using dir(library_name).
- Using a dotted prefix, you can access functions of a library.
- “help” can be used for libraries as well as their methods.

ASSIGNMENT

Define a function that takes in x and y, and returns the logarithm of x to the base of y using math library.

Rename an imported library:

```
import math

mt = math
```

But you can simply write:

```
import math as mt
```

SOME EXAMPLES

How to import specific functions from a library?

```
from library_name import function_name
```

In this way, you do not need any dotted prefix to recall the function.

SOME EXAMPLES

Importing specific functions

- **When you use * in the place of function_name, all of library's functions will be imported.**
- **Caution! Some libraries have similar functions, thus, importing * may not be a good idea.**
- **It is advised to only import functions you require.**
- **A module may have some submodules.**

ASSIGNMENT

Use numpy random submodule to define a function that takes in number of dice rolls (n) and returns n random numbers between 1 and 6.

Thanks!

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