Modules

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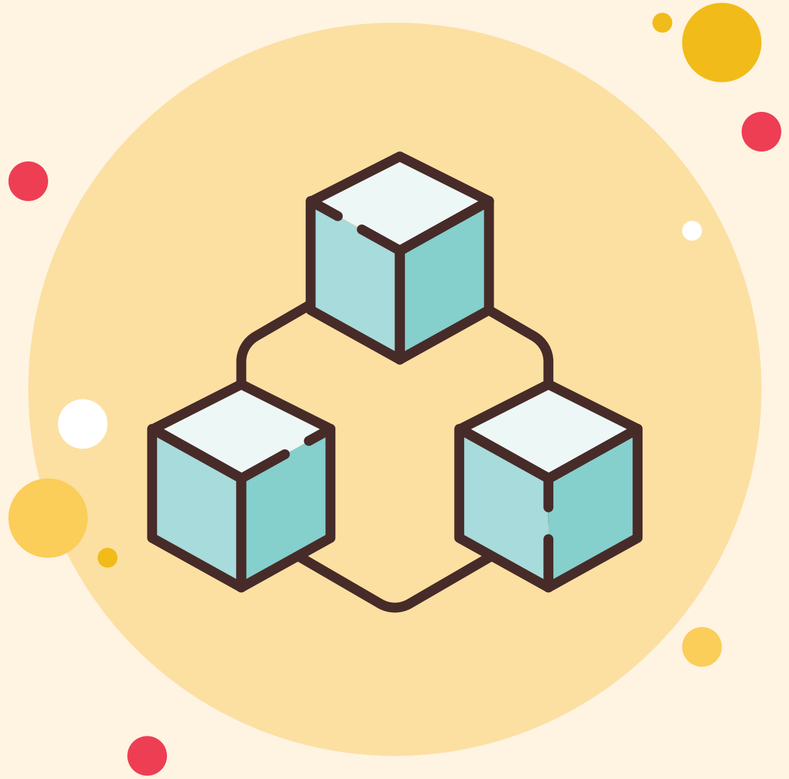
A module is simply a Python file that contains code that can be re-used in other files.

Modules allow us to break up complex programs into smaller, more manageable pieces across multiple files.



Built-In

Custom

3rd Party

Standard Library

Python comes with tons of built-in modules that we can use, **if we import them.**

Each module consists of methods and functionality bundled together

import

```
import random
random.randint(1,6)
3
```

To use a module, we must import it first
using the import keyword.

import as

```
import random as rand
rand.randint(1,6)
4
```

Use the **as keyword** to import a module and give it a custom name in your script.

from...import

```
from random import randint
randint(1,6)
2
```

Use the **from <module> import <method>**
syntax to import specific pieces of a module

from...import

```
from random import randint
randint(1,6)
2
```

Use the **from <module> import <method>**
syntax to import specific pieces of a module

from...import

```
from math import pi, sin

sin(1)
0.8414709848078965

pi
3.141592653589793
```

import *

```
from random import *
randint(1,6)
2
```

We can import all pieces of a module individually using **import *** however this usually not the best approach to importing!

pip

pip is the Python package installer that we can use to install hundreds of thousands of packages for use in our projects.

pip install

```
>  python3 -m pip install <package>
```

To install a package, use python3 -m pip install followed by the exact name of the package