Data Scientist
Codecademy
Python Fundamentals
Modules

Modules Python Introduction

Python allows us to package code into files or sets of files called modules.

A module is a collection of Python declarations intended broadly to be used as a tool. Modules are also often referred to as "libraries" or "packages" - a package is really a directory that holds a collection of modules.

```
from module_name import object_name
```

datetime is a library that comes as part of the Python Standard Library. It helps you work with dates and times in Python.

Modules Python Random

random allows us to generate numbers or select items at random.

```
import random
```

- random.choice() which takes a list as an argument and returns a number from the list
- random.randint() which takes two numbers as arguments and generates a random number between the two numbers passed

Modules Python Namespaces

Notice when we want to invoke the randint() function we call random.randint(). This is default behavior where Python offers a *namespace* for the module. A namespace isolates the functions, classes, and variables defined in the module from the code in the

file doing the importing. Your local namespace, meanwhile, is where your code is run.

This name can be altered by aliasing using the as keyword:

```
import module_name as name_you_pick_for_the_module
```

```
import *
```

The * is known as "wildcard" and matches anything and everything.

Modules Python Decimals

decimal module can be used to perform more accurate decimal arithmetic.

```
from decimal import Decimal
```

Here Decimal is a data type.

```
val = Decimal("4.5")
```


Modules Python Files and Scope

Files have scope too, so variables, functions, classes or any other code is not accessible by other files in the same directory.

Files are actually modules and can be accessed like modules.