Python Modules

- Consider a module to be the same as a code library.
- A file containing a set of functions you want to include in your application.

Create a Module

To create a module just save the code you want in a file with the file extension .py

Save this code in a file named mymodule.py

```python
def greeting(name):
  print("Hello, " + name)
```

Use a Module

Now we can use the module we just created, by using the import statement.

Import the module named mymodule, and call the greeting function.

```python
import mymodule

mymodule.greeting("Jonathan")
```

Variables in Module

The module can contain functions, as already described, but also variables of all types (arrays, dictionaries, objects etc).

Save this code in the file mymodule.py

```python
fruits = ['Orange', 'Mango', 'Apple']
```

Import the module named mymodule, and access the person1 dictionary.

```
import mymodule

a = mymodule.fruits[0]
print(a)
```

Naming a Module

You can name the module file whatever you like, but it must have the file extension .py

▾ Re-naming a Module

You can create an alias when you import a module, by using the as keyword.

Create an alias for mymodule called mx.

```
import mymodule as mx

a = mx.fruits[0]
print(a)
```

▾ Built-in Modules

There are several built-in modules in Python, which you can import whenever you like.

Examples : random, os ...

▾ Python Random Module

Python Random module is an in-built module of Python which is used to generate random numbers. These are pseudo-random numbers means these are not truly random. This module can be used to perform random actions such as generating random numbers, print random a value for a list or string, etc.

Example: Printing a random value from a list

```
# import random
import random

# prints a random value from the list
list1 = [1, 2, 3, 4, 5, 6]
print(random.choice(list1))
```

▾ Creating Random Integers

random.randint() method is used to generate random integers between the given range.

Syntax :

```
randint(start, end)
```

Example: Creating random integers.

```python
# import random module
import random

# Generates a random number between
# a given positive range
r1 = random.randint(5, 15)
print("Random number between 5 and 15 is ", (r1))

# Generates a random number between
# two given negative range
r2 = random.randint(-10, -2)
print("Random number between -10 and -2 is ", (r2))
```

```
Random number between 5 and 15 is   14
Random number between -10 and -2 is   -9
```