Modules and Packages

Modules:

* Module is nothing but a file that contains python code in that in form of functions classes and variables which we can use in other programs.
* Modules are used to reuse code.
* Any file with .py extension is called as a module.

We have two types of modules:

1. Built-in modules
2. User-defined modules

Some built-in modules:

1. Math

2. Random

3. Datetime

Import math

Print(math.pi) #output: 3.141592653589793

Import random

Print(random.randint(1, 10))  # output: random integer between 1 and 10

Import datetime

Now = datetime.datetime.now()

Print(now)  # output: current date and time

User-defined Modules:

Any text file with .py extension and containing Python code is basically a module. It can contain definitions of one or more functions, variables, constants as well as classes.

**Packages:**

🡪A **package** is a way to organize and structure multiple **modules**.

🡪It is essentially a **directory (folder)** that contains a special file named \_\_init\_\_.py and can include sub-packages and modules.

* Packages help in structuring large projects by grouping related modules.
* This promotes **modularity, maintainability, and reusability**.