1. What is the difference between module and package?
2. How do you create and use a module in python?
3. What is the significance of the. __init__.py file in python?

MODULE	PACKAGE
A single Python file .py containing functions, classes, and variables.	A directory containing multiple modules and a special __init__.py file
Organizes code into reusable files	Organizes multiple related modules
A standalone file	A folder with multiple .py files and an __init__.py file
import module	import package.mymodule

CREATING MODULE :

Step 1: Create a Module

Create a file module.py with the following content:

def greet(name):

   return f"Hello, {name}!"

pi = 3.14159

USING MODULE:

Step 2: Use the Module in Another Python File

You can import and use module in another script:

import module

print(module.greet("Bharat"))

print(module.pi)

Significance of __init__.py File in Python

The __init__.py file is used to define a package in Python. It signals to Python that a directory should be treated as a package.

Defines a Package – Without __init__.py, Python treats the directory as a normal folder, not a package.

Controls Package Imports –> It can include initialization code or import specific modules.

Improves Code Organization –> Allows grouping related modules together.