FUNCTION

1.What is the difference between a function and a method in Python?

→ \*Function- A function is used while using the ‘def’ function and is not tied to any object.

Called independently, often with arguments.

Example: def greet(name):

return f”Hello, {name}”

print(greet(“Laxmi”))

\*Method- A method is a function that is associated with an object (usually a class instance).

Called on an object using dot notation (object.method()).

Example: def greet(self, name):

Return f”Hello, {name}”

greeter = Greeter()

print(greeter.greet(“Bob”))

2.Explain the concept of function arguments and parameters in Python.

→ \*Functions Arguments in Python

a)Positional Arguments

-Matched to parameters by position.

Ex- def add(a, b):

return a + b

add(2, 3)

a = 2, b = 3

b)Keyword Arguments

-Passed with parameter names, allowing order to change.

Ex- add(b = 3, a =2)

a = 2, b = 3

c)Default Arguments

-Parameters can have default values.

Ex- def greet(name=”Guest”):

print(f”Hello, {name}”)

greet(“Laxmi”)

d)Variable-length Arguments

-Allows passing an arbitrary number of arguments.

args for non-keyword (positional) arguments:

def total(\*args):

return sum(args)

total(1, 2, 3)

#Returns 6

Kwargs for keyword arguments:

def show\_info(\*\*kwargs):

for key, value in kwargs.items():

print(f”{key}: {value}”)

show\_info name(name = “Laxmi”, age = 25)

\*Functions Parameters in Python

a)Positional(Required) Parameters

-Values are passed based on position.

Ex- def greet(name, age):

print(f”{name} is {age} years old.”)

greet(“Laxmi”, 25)

b)Default Parameters

-Parameters that have a default value.

Ex- def greet(name=”Guest”):

print(f”Hello, {name}”)

greet(“Laxmi”)

c)Keyword Parameters

-Order doesn’t matter when using keywords.

Ex- def describe(name, job):

print(f”{name} is a {job}”)