1. In Python, what is the difference between a built-in function and a user-defined function? Provide an example of each.

Ans:

User define function is created by user to get desired output

Built in function are set of function which are in built in the python you just need to know the key word to call the function.

Example of user define function is

def introduction (firstname, lastname = ' '):

print(firstname)

print(lastname)

Example of Built in function

Print() , len(),str(), capitalize(),

1. How can you pass arguments to a function in Python? Explain the difference between positional arguments and keyword arguments.

Ans :

You can def function to pass argument to a function in python

A positional argument is a name that is not followed by an equal sign (=) and default value.

A keyword argument is followed by an equal sign and an expression that gives its default value.

1. What is the purpose of the return statement in a function? Can a function have multiple return statements? Explain with an example.

Ans: if you want to use the value outside the function the return statement is used in a function

One function have only one return statement if you cannot put multiple return statement

def add\_num (num1,num2)

sum = (num1 + num2)

return sum

result = add\_num (10,50)

print (“sum of two number is : ”, result)

1. What are lambda functions in Python? How are they different from regular functions? Provide an example where a lambda function can be useful.

Ans: A lambda function is a small anonymous function. A lambda function can take any number of arguments, but can only have one expression.

In order to define lambda function you no need to use def keyword along with the name of the function

Example add = lambda x, y: x + y

print(add(4,6))

1. How does the concept of "scope" apply to functions in Python? Explain the difference between local scope and global scope.

Ans: scope is the code block or body of any Python function or lambda expression.

global variables can be accessed globally in the entire program, whereas local variables can be accessed only within the function or block in which they are defined.

1. How can you use the "return" statement in a Python function to return multiple values?

Ans: You can use a return statement to return multiple values from a function. To do that, you just need to supply several return values separated by commas.

1. What is the difference between the "pass by value" and "pass by reference" concepts when it comes to function arguments in Python?

Ans: By pass we mean to provide an argument to a function. Whereas by reference means that the argument that has been passed to the function is a reference to a variable that is already existing in memory.

1. Create a function that can intake integer or decimal value and do following operations:
   1. Logarithmic function (log x) math.log(30)
   2. Exponential function (exp(x)) math.exp(5)
   3. Power function with base 2 (2x)

Square root = square = lambda x: x\*\*2

* 1. print(square(4))
  2. Create a function that takes a full name as an argument and returns first name and last name.

def format\_name():

first\_name = input("Enter the first name: ")

last\_name = input("Enter the last name: ")

format\_firstname = first\_name.capitalize()

format\_lastname = last\_name.capitalize()

print("student name is : ",format\_firstname, format\_lastname)

format\_name()