1. What is the relationship between def statements and lambda expressions ?

Ans

Def statements

=>Are use for nomal function /project for long time

=>To Define Anonymous Functions, we use a key word called lambda and hence Anonymous Functions are also called Lambda Functions.

=>Anonymous Functions contains single executable statement(but not multiple statements)

2. What is the benefit of lambda?

Ans =>Anonymous Functions contains single executable statement(but not multiple statements)

=>Anonymous Functions automatically / Implcitly returns the value (No Need to use return statement). The Purpose of Anonymous Functions is that " To Perform Instant Operations ".

3. Compare and contrast map, filter, and reduce.

Ans map is used for suppose the value is hike or increment the value and filter is to flittering the object ,

reduce is the the rom functools import reduce. # function signature for the reduce() method. returned\_value = reduce(function, iterable)

from functools import reduce. # Returns the sum of all the elements using `reduce

4. What are function annotations, and how are they used?

Ans - Function annotations are some random expressions which are written with the functions, and they are evaluated at compile time.

5. What are recursive functions, and how are they used?

Ans-

A recursive function is a function in code that refers to itself for execution. Recursive functions can be simple or elaborate. They allow for more efficient code writing, for instance, in the listing or compiling of sets of numbers, strings or other variables through a single reiterated process

6. What are some general design guidelines for coding functions?

Ans Safe: It can be used without causing harm.

Secure: It can't be hacked.

Reliable: It functions as it should, every time.

Testable: It can be tested at the code level.

Maintainable: It can be maintained, even as your codebase grows.

7. Name three or more ways that functions can communicate results to a caller.

1. Function can return single value
2. Can return multiple values, tuple
3. can return list,dictionary
4. can return function object
5. can return class object