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

Def statements are used to perform the function tasks that are repetitive in nature and they are used in writing the complete functions while the lambda expression are only used to write the short functions in one line.

1. What is the benefit of lambda?

The benefit of lambda is that they perform the same task as def functions but they are defined in same line and give result for the easy operations like add, subtract, multiply, copy, etc.

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

map() is used to return the list of values in form of keyword defined first. Filter is used to get the values for the statement, it returns True if the statement or function passes the criterion and false if the statement fails the criterion. Reduce is used when we want a particular single word / number from the list or dictionary, etc.

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

Function annotations are optional in the python language. They are used to interact with the arbitrary python. By default, Python does give/ provide meaning to the function annotations

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

Recursive functions are those functions which are repetitive in nature. They are used to perform the repetitive tasks in the python program. They are very simple to use when compared with any other functions of the python.

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

Some of the basic guidelines of coding functions are:

1. They are defined with def statement.
2. The work of the function/parameter should be defined as an comment in the function.
3. They must be return statement instead of statements like print. Although we can also use print statements inside a function
4. Name three or more ways that functions can communicate results to a caller.

Print

Return

Yield