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

* Def function executes more than one expression, with specified function name.
* A lambda function is an anonymous function (i.e., defined without a name) that can take any number of arguments but, unlike normal functions, evaluates and returns only one expression.

1. What is the benefit of lambda?

Lambda function has few lines of code.

They are inline and executes faster comparatively.

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

* Map function iterates through all items in the given iterable and executes the function.
* Filter function forms a new list that contains only elements that satisfy a certain condition.
* Reduce function accumulates all elements to a single value, by using immutable values.

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

Function annotation is the standard way to access the metadata with the arguments and the return value of the function.

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

A recursive function is a function that calls itself during its execution. This means that the function will continue to call itself and repeat its behaviour until some condition is met to return a result.

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

* Function names should be lowercase, with words separated by underscores as necessary to improve readability.
* Use docstrings.
* Use 4 space indentation.
* Use python’s default UTF-8 or ASCII encodings

1. Name three or more ways that functions can communicate results to a caller.
2. By calling the function
3. By using return() function
4. By using print() function