**Assignment\_24**

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

**Ans: The lambda expression consist only a single expression and def function can evaluate number of expression inside and and gives modular behaviour.**

2. What is the benefit of lambda?

**Ans: For single and small expression lambda can be used as we can code it in just one line .**

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

**Ans: Map: Instead of writing number of variables we can map those all in map().**

**Filter function filteres the gives expression/variable etc**

**Reduce () implements a mathematical technique called folding or reduction. It is useful to apply a function to an iterable and reduce it to a single cumulative value.**

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

**Ans: Function annotations are arbitrary python expressions that are associated with various part of function. These expressions are evaluated at compile time and have no life in python’s runtime environment.**

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

**Ans: A function which calls itself is called recursive function.**

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

**Ans: Safe : It can be used without causing them.**

**Secure : It can’t be hacked.**

**Reliable: It functions as it should, every time**

**Testable : It can be tested at the code level.**

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

**Ans: Call by Value and Call by reference.**