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

Ans: The def keyword is used to define normal functions, while the lambda keyword is used to define anonymous functions. They are, however, limited to a single line of expression. They, like regular functions, can accept several parameters

2. What is the benefit of lambda?

Ans: Lambda frees up your programming resources by taking over the infrastructure management, allowing you to focus more on innovation and development of business logic.

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

Ans: Map' applies a function to each element in an array and returns an array of the results, 'Reduce' applies a function to the array and returns a single output, 'Filter' uses a boolean function to select certain elements from an array.

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. They do not exist at run time, and there is no meaning of these expressions to python. They are used and interpreted by a third party or external python libraries.

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

Ans: Recursive Function is a function that repeats or uses its own previous term to calculate subsequent terms and thus forms a sequence of terms. Usually, we learn about this function based on the arithmetic-geometric sequence, which has terms with a common difference between them.

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

Ans:

* Code Best Practices: Structure and Organization.
* Choose meaningful variable and function names.
* Camel case vs snake case.
* Use of comments and whitespace effectively.
* Using indentation and consistent formatting.

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

* Ans: Call by Value.
* Call by Reference.