1. . What is the difference between enclosing a list comprehension in square brackets and parentheses?

- Enclosing a list comprehension in square brackets ([]) creates a list, while enclosing it in parentheses (()) creates a generator expression.

1. What is the relationship between generators and iterators?

- An iterator is an object that can be iterated upon, meaning that you can traverse through all the values. We can use ‘next()’ to iterate over object. We can use iter() on collection to convert them into iterator or use \_\_iter\_\_ in class to create custom iterator.

Generators are the special type of iterators that can be created using ‘yield’ keyword. It does not load anything in the memory and hence saves the memory. In this function is stopped in between and the value is delivered.

1. What are the signs that a function is a generator function?

- presence of yield keyword in a for loop can be considered as a sign that the function is a generator function

4) What is the purpose of a yield statement?

- yield statement creates a generator object which stops the function and the provides the value so we don’t have to save anything in the memory.

5) What is the relationship between map calls and list comprehensions? Make a comparison and contrast between the two.

Map calls and list comprehensions allow us to perform operations on iterables. But map creates map object and we have to iterate over it to retrieve the elements. In list comprehensions the result is in list format hence no further operation is needed to visyalise it.

Map function takes iterable and function as argument where as list comprehension can solve expression directly and don’t need lambda function every time like map function do, hence list comprehensions are capable of more complex operations than map function.