

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

**Ans:** Enclosing a list comprehension in square brackets returns a list.  
Enclosing a list comprehension in parentheses returns a generator object

2. What is the relationship between generators and iterators?

**Ans:**

Iterator is an object containing a countable number of values and used to iterate over objects like list, tuples, sets, etc. Generators are another way of creating iterators that use yield statement instead of return statement in a defined function. Both generators and iterators follow lazy execution.

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

**Ans:**

Generator function uses a yield statement instead of a return statement and always returns an iterable object (generator).

4. What is the purpose of a yield statement?

**Ans:** Yield statement suspends the execution of the function to send a value back to the caller, and then resumes the function execution after the last yield run. This produces a series of values over time instead of sending a list after computing them at once.

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

**Ans:**

- List comprehension is used to return a list of results whereas map only returns a map object.
- List comprehension is more concise and readable than map calls.
- List comprehension allows filtering.
- Map is faster in calling an already defined function on a set of values.