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

Answers. list comprehension when enclosed with square bracket produces the result list all at once whereas when enclosed with parentheses they behave like generator expression and returns generator object which yields one result at a time

2) What is the relationship between generators and iterators?

Answers. Generator have \_\_next\_\_ method that repeatedly advances to next result in the series and raises exception if ended . We can use python def function or comprehension and generator objects with classes that define special methods named \_\_iter\_\_ , in order to create iterators we need iter() and next() function

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

Answers. Generator function has yield statement in its code they are identical to normal function syntactically but they are compiled so that they return iterable object when called

4) What is the purpose of a yield statement?

Answers. The yield statement makes python compile the fuction specially as a generator ,when the yield statement is run it sends the result back to the caller and suspends its state and it is resumed in response to \_\_next\_\_ method call issued by the caller

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

Answers. They are similar as both produces new list by applying an operation to each item in sequence or other iterable one at a time. The map applies function call to each item whereas list comprehension applies arbitrary expression are used generally . List comprehension has extended syntax such has nested loops and if clauses statements