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

Ans: List comprehension is enclosed in square bracket while Generator is enclosed in parentheses

1. What is the relationship between generators and iterators?

Ans:

|  |  |
| --- | --- |
| Iterator | Generator |
| Implemented using class | Implemented using function |
| No yield statement | Use yield statement |
| Use the iter() function | Do not use the iter() function |
| Local variable are not used | Local variables are used |
| They are mostly used to convert iterables into iterator | They are mostly used to create iterators |
| All iterators are not generators | All generators are iterators |
|  |  |

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

Ans: If it contains atleast one yield statement it is generator

1. What is the purpose of a yield statement?

Ans: Acts similar to return statements. Only difference is it returns generator function which contains yield instead of returning value.

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

Ans:

|  |  |
| --- | --- |
| **List** | **Map** |
| Duplicates are allowed | Duplicates are not allowed for keys |
| Multiple null values are allowed | Only once a key can have multiple null values |
| Can be retrieved using index | Cannot be retrieved using index |
| Data structure is array type | Data structure is a hashing technique |