# Assignment(set and tuple)

**1)what is tuple and set ? write difference between them ?**  
**Ans) Tuple:** Tuple is exactly same as List except that it is immutable. i.e once we creates Tuple object,we cannot perform any changes in that object.Hence Tuple is Read Only version of List,2. If our data is fixed and never changes then we should go for Tuple.Insertion Order is preserved,Duplicates are allowed, Heterogeneous objects are allowed.

**Set:**If we want to represent a group of unique values as a single entity then we should go for set.Duplicates are not allowed.Insertion order is not preserved.But we can sort the elements,Indexing and slicingnot allowed for the set.Heterogeneous elements are allowed.

**Difference between Set and Tuple**

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| --- | --- |
| **Set** | **Tuple** |
| Set is mutable | Tuple is immutable |
| It is unordered collection of items | It is ordered collection of items |
| Items in set cannot be changed or replaced | Items in tuple cannot be changed or replaced |

**2. what is set comprehension ? write an example?**

**Ans) Set Comprehension:** Set comprehension is a method for creating sets in python using the elements from other iterables like lists, sets, or tuples. Just like we use [list comprehension](https://www.pythonforbeginners.com/basics/list-comprehensions-in-python) to create lists, we can use set comprehension instead of for loop to create a new set and add elements to it.

Eg:

s={x\*x for x in range(5)}

print(s) 🡺{0, 1, 4, 9, 16}

s={2\*\*x for x in range(2,10,2)}

print(s)🡺 {16, 256, 64, 4}