ASSIGNMENT-1 PROGRAMMING SESSIONS (Python)

Q1.-Why tuple is faster than list?

Tuples are stored in a single block of memory. Tuples are immutable so, It doesn't require extra space to store new objects. Tuples are stored in a single block of memory so it doesn't require extra space to store new objects. But list are mutable data types and are allocated in two blocks where the fixed one with all object information and a variable sized block for the data. There is slight difference in indexing speed of list and tuple because tuples uses fewer pointers when indexing than that of list. Becuase of fewer pointers, acess mechanism is generally faster in tuples than lists.

Q2:-Type Casting (by using str(), int(), float())

In [38]:
```
#Converting int to str
x=str(9)
print('Number is:',x)
print('Type is:',type(x))
```

```
Number is: 9
Type is: <class 'str'>
```

In [39]:
```
#Converting string to int
y=int('465789')
print('Number is:',y)
print('Type is:',type(y))
```

```
Number is: 465789
Type is: <class 'int'>
```

In [40]:
```
#Converting str to float
z=float('897664')
print('Number is:',z)
print('Type is:',type(z))
```

```
Number is: 897664.0
Type is: <class 'float'>
```

In [41]:
```
#Converting float to str
w=str(45.77)
print('Number is:',w)
print('Type is:',type(w))
```

```
Number is: 45.77
Type is: <class 'str'>
```

Q3-Formulate a dictionary and print the elements

Dictionaries are used to store data values in key:value pairs. A dictionary is a collection which is ordered*, changeable and do not allow duplicates.

In [42]:
```
d={'Name':'Jaislin','ID':1234,'Age':21,'Dept':'Cloud'}
print('Dictinary created is:',d)
```

```
Dictinary created is: {'Name': 'Jaislin', 'ID': 1234, 'Age': 21, 'Dept': 'Cloud'}
```

In [43]:
```
#If we want to access specific index like ID
print(d['ID'])
```

```
1234
```

Q4-Formulate a list and print the elements

Lists are used to store multiple items in a single variable. Lists are one of 4 built-in data types in Python used to store collections of data.Lists are created using square brackets.

In [44]:
```
list=['c','l','o','u','d','E','Q']
print('List created is:',list[-1]) #Element at index -1
```

```
List created is: Q
```

In [45]:
```
print(list[0]) #element at index 0
```

```
c
```

In [46]:
```
print(list)
```

```
['c', 'l', 'o', 'u', 'd', 'E', 'Q']
```

Q5-Formulate a tuple and print the elements

A tuple is a collection which is ordered and unchangeable. Tuples are written with round brackets.

In [47]:
```
tuple= ("p", "r", "o", "g", "r", "a", "m", "e", "r")
print(tuple[0])   # prints "p"
print(tuple[5])   # prints "a"
```

```
p
a
```

In [48]:
```
print('Tuple created:',tuple)
```

```
Tuple created: ('p', 'r', 'o', 'g', 'r', 'a', 'm', 'e', 'r')
```

Q5-Formulate a set and print the elements

A Set in Python programming is an unordered collection data type that is iterable, mutable and has no duplicate elements.

In [49]:
```
set = {'Swift', 'Java', 'Python','C'}
print('Set of Languages:',set)
```

```
Set of Languages: {'C', 'Java', 'Swift', 'Python'}
```

---END---

```
In [ ]:
```