Operators and List

* **Membership operator**:
* An item is present in a given container-type object.
* In membership operator we have two types:

1. In

2. Not in

* Both return a Boolean result.
* In: The In operator checks whether a character exists in a sequence.
* Not in: The Not in operator is used to check a sequence with the given value that is not present in the object.
* **Identity operator**:
* It is used to compare objects based on their memory locations.
* In identity operator we have two types

1. Is

2. Is not

* Is: Returns true if both variables are the same object.
* Is not: Returns true if both variables are not the same object.
* **Bitwise operator**:
* It is used to perform operations on integers at the binary level.
* We have six types:

1. AND

2. NOT

3. OR

4. XOR

5. LEFT SHIFT

6. RIGHT SHIFT.

1. **What is a list and the methods in the list?**

* A list in Python is used to store the multiple items in a list.
* List is Mutable.
* It is ordered and indexed.
* The items in the list are separated with the comma (,).
* List is identified by the square bracket [].
* Example: mylist=[“bhavya”, “Jagadeesh”,” Jyothi”]

Print(mylist)

Output: [‘bhavya, ’Jagadeesh’, ’Jyothi’]

1. **What is list comprehension?**

* List comprehension means when we want to create a new list based on the values of an existing list.
* Example: print([i\*\*2 for i in [1,2,3,4,5]])

Output-[1,4,9,16,25]

1. **Methods in the list:**

**Methods in the List**

Remove

Insert

Index

Clear

Reverse

Append

Pop

Sort

Count

Copy

Extend

* **Append:**
* Add items to the end of an existing list.
* Example: firstlist=[1,3,5,6,8]

firstlist.append(“43”)

print(firstlist)

output: [1,3,5,6,8,43]

* **Extend:**
* The extend method adds all the elements of an iterable to the end of the list.
* Example: a=[1,2,3]

b=[4,5]

a.extend(b)

print(a)

output:[1,2,3,4,5]

* **Reverse:**
* Reverse the order of elements in a list.
* Example: a=[1,2,3]

a.reverse()

print(a)

Output:[3,2,1]

* **Copy:**
* The copy method returns a copy of the specified list.

Example: a=[1,2,3]

a.copy()

print(a)

Output:[1,2,3]

* **Clear:**
* It removes all the elements from a list.
* Example: a=[1,2,3,4,5,6,7,8]

a.copy()

print(a)

Output: []

* **Count:**
* The count method returns the number of times a specified value appears in the string.
* Example: a[1,2,3,5,4,3,3,4,3,]

Print(a.count(3))

Output: 4

* **Index:**
* The index method returns the position at the first occurrence of the specified Value.
* Example: a[1,2,4,6,8]

Print(a.index(6))

Output: 3

* **Sort:**
* Arranging the data in an Alphabetical order.
* Example: a[“grape”, ”pineapple”, ”orange”]

a.sort()

Print(a)

Output: [‘grape’,’ orange’,’ pineapple’]

* **Insert:**
* Add Element at the specified position in the list.
* Example: a[“grape”, ”pineapple”, ”orange”]

a.insert(2,”guava”)

print(a)

output: [‘grape’,’pineapple’,’guava’,’orange’]

* **Pop:**
* It removes the specified element from the list.
* Example: a[“grape”, ”pineapple”, ”orange”]

a.pop(1)

print(a)

Output: [‘grape’, ’orange’]

* **Remove:**
* It removes the specified element from the list.
* Example: a[1,4,5,8,67,56,34,65]

a.remove(56)

print(a)

Output: [1,4,5,8,67,34,65]