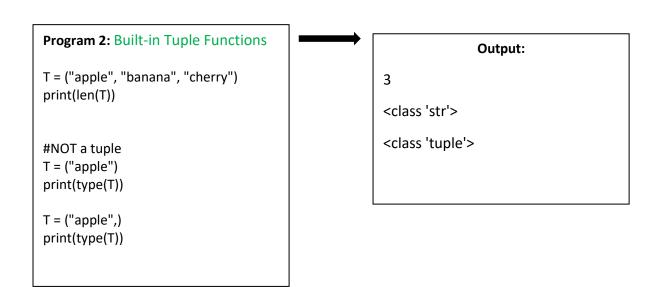
Experiment - 4

Aim: Implementing various methods of Built-in Data Types: Strings, Lists, Tuples, Sets and Dictionaries.

```
Program 1: Built-in String Functions
                                                                             Output:
a = "The best things in life are free!"
                                                         33
print(len(a))
                                                         True
print("free" in a)
                                                         THE BEST THINGS IN LIFE ARE FREE!
print(a.upper())
                                                         the best things in life are free!
                                                         Th@ b@st things in lif@ ar@ fr@@!
print(a.lower())
                                                         ['The', 'best', 'things', 'in', 'life', 'are', 'free!']
print(a.replace("e", "@"))
                                                         5
print(a.split(" "))
                                                         We are called "Indians" by the western
x = a.find("e", 5, 10)
print(x)
                                                         countries.
                                                          Who's this?
print("We are called \"Indians\" by the
western countries.")
                                                         Computer
                                                          Python
print('Who\'s this?')
                                                         Computer\Python
print('Computer\nPython')
                                                         Computer
                                                                        Python
print('Computer\\Python')
                                                         ComputerPython
print('Computer\tPython')
print('Computer\bPython')
```



```
Program 3: Built-in List Functions
A = ["a", "b", "c", 1, 2, 3]
A.insert(2, "ABC")
print(A)
A.append("123")
print(A)
A1 = ["A", "B", "C"]
A.extend(A1)
print(A)
A.pop(1)
print(A)
del A[0]
print(A)
B = [100, 50, 65, 82, 23]
B.sort()
print(B)
B.sort(reverse = True)
print(B)
C = ["a", "b", "c"]
C.sort()
print(C)
C.sort(reverse = True)
print(C)
```

```
Output:

['a', 'b', 'ABC', 'c', 1, 2, 3]

['a', 'b', 'ABC', 'c', 1, 2, 3, '123']

['a', 'b', 'ABC', 'c', 1, 2, 3, '123', 'A', 'B', 'C']

['a', 'ABC', 'c', 1, 2, 3, '123', 'A', 'B', 'C']

['ABC', 'c', 1, 2, 3, '123', 'A', 'B', 'C']

[23, 50, 65, 82, 100]

[100, 82, 65, 50, 23]

['a', 'b', 'c']

['c', 'b', 'a']
```

```
Program 4: #Built-in Dictionary
Functions

D = {"brand": "Ford", "model":
"Mustang", "year": 1964}

x = D.keys()
print(x)

x = D.values()
print(x)

x = D.items()
print(x)

D.update({"year": 2020})
print(D)

D.clear()
print(D)
```

```
Output:

dict_keys(['brand', 'model', 'year'])

dict_values(['Ford', 'Mustang', 1964])

dict_items([('brand', 'Ford'), ('model', 'Mustang'), ('year', 1964)])

{'brand': 'Ford', 'model': 'Mustang', 'year': 2020}

{}
```

```
Program 5: #Built-in Set Functions
S = {"A", "1", "abcd"}
S.add("12yZ")
print(S)
S1 = {"ABC", "DEF", "GHI"}
S.update(S1)
print(S)
S.remove("1")
print(S)
x = S.pop()
print(x)
print(S)
S.clear()
print(S)
S1 = {"a", "b", "c"}
S2 = \{1, 2, 3\}
S3 = S1.union(S2)
print(S3)
S1 = {"a", "b", "c"}
S2 = {10, 20, 30}
S1.update(S2)
print(S1)
```

Output:

```
{'A', 'abcd', '1', '12yZ'}

{'GHI', 'DEF', 'abcd', 'A', 'ABC', '12yZ', '1'}

{'GHI', 'DEF', 'abcd', 'A', 'ABC', '12yZ'}

GHI

{'DEF', 'abcd', 'A', 'ABC', '12yZ'}

set()

{'a', 1, 2, 3, 'c', 'b'}

{'a', 'c', 20, 'b', 10, 30}
```