EXERCISE 7

Real time Applications using List, Tuple, set & Dictionaries

1. **Create a list for Items present in a Library and and do all the operations on it .**

PROGRAM:

```
list1=['books','novels','manuscripts','tamil books']
list2=['maths books','puzzles','G.K']
print(list1)
print(list2)
list1.append('notes')
print(list1)
list1.insert(2,'python progamming')
print(list1)
list2.append('java')
print(list2)
list2.pop(0)
print(list2)
list1.remove('tamil books')
print(list1)
list1.extend(list2)
```

```
print(list1)
```

OUTPUT:

```
['books', 'novels', 'manuscripts', 'tamil books']
['maths books', 'puzzles', 'G.K']
['books', 'novels', 'manuscripts', 'tamil books', 'notes']
['books', 'novels', 'python progamming', 'manuscripts', 'tamil books', 'notes']
['maths books', 'puzzles', 'G.K', 'java']
['puzzles', 'G.K', 'java']
['books', 'novels', 'python progamming', 'manuscripts', 'notes']
['books', 'novels', 'python progamming', 'manuscripts', 'notes', 'puzzles', 'G.K', 'java']
```

2. **Create a tuple for components of a Car and show all the operations.**

PROGRAM:

```
tup1=('engine','brake','horn','mirror')
tup2=('fueltank','seat','accelerater')
print(tup1)
print(tup2)
print(tup1[0])
print(tup2[2])
```

```
print( 'sound' in tup1)
print('seat' in tup2)
print(tup1+('wheel','petrol','diesel'))
```

OUTPUT:

```
('engine', 'brake', 'horn', 'mirror')
('fueltank', 'seat', 'accelerater')
engine
accelerater
False
True
('engine', 'brake', 'horn', 'mirror', 'wheel', 'petrol', 'diesel')
```

3. **Create a set to accept more values and print the elements after removing the duplicate contents.**

PROGRAM:

```
set1={76,97,100,986,76,343,100,65}
set2={986,76,948,231,100}
print (set1)
print(set2)
```

```
print(set1-set2)

print(set2-set1)

print(set1&set2)

print(set1^set2)

print(set1|set2)
```

OUTPUT:

```
{97, 65, 100, 76, 343, 986}

{100, 986, 948, 76, 231}

{65, 97, 343}

{948, 231}

{986, 100, 76}

{97, 65, 231, 948, 343}

{97, 65, 100, 231, 76, 948, 343, 986}
```

4. **Write a program to print the specifications of the laptop using dictionary with its operations.**

PROGRAM:

```
dict1={}

print(dict1)
```

```
dict1={'os':'windows 10','processor':'intel core i5','memory':'8GB','hardware':'120 GB','wireless net adaptor':802.11}

print(dict1)

dict1['os']='windows 11'

print(dict1)

print(dict1.get('memory'))

print(len(dict1))

print(dict1.keys())

print(dict1.values())

print(dict1.items())
```

OUTPUT:

```
{}

{'memory': '8GB', 'wireless net adaptor': 802.11, 'os': 'windows 10', 'hardware': '120 GB', 'processor': 'intel core i5'}

{'memory': '8GB', 'wireless net adaptor': 802.11, 'os': 'windows 11', 'hardware': '120 GB', 'processor': 'intel core i5'}

8GB

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dict_keys(['memory', 'wireless net adaptor', 'os', 'hardware', 'processor'])

dict_values(['8GB', 802.11, 'windows 11', '120 GB', 'intel core i5'])

dict_items([('memory', '8GB'), ('wireless net adaptor', 802.11), ('os', 'windows 11'), ('hardware', '120 GB'), ('processor', 'intel core i5')])
```