Ex. No: 7-A Date 04/02/2023	List items in Library

AIM:

To create a list of items, present in a library and do all the operations on it.

ALGORITHM:

STEP 1: Start

STEP 2: Create a list named liblist that contains the elements Fiction, Academics, Novel, Science

Fiction, Horror as the elements .

STEP 3: Display length of list by using len() function.

STEP 4: Append "Fictional Novel" to the list.

STEP 5: Display liblist.

STEP 6: Insert "Story book" to the index value 0.

STEP 7: Display liblist.

STEP 8: Assign a list named more_liblist and the values in list are Novel, Science, Project

STEP 9 : Assign a value conc and Concatenate the Lists liblist and more_liblist

STEP 10: Remove "Horror"

STEP 11: Display liblist.

STEP 12: Pop the value from the list using pop() function

STEP 13: Display liblist.

STEP 14: Display the index value of novel using the index() function

STEP 15: Display the count of novel using the count() function

STEP 16: Sort the liblist using sort() function

STEP 17: Display liblist.

STEP 18: Reverse the liblist using Reverse() function

STEP 19: Display liblist.

STEP 20: Display the minimum value of liblist using the min() function

STEP 21: Display the maximum value of liblist using the max() function

STEP 22: Display the count of novel using the count() function

STEP 23: Calculate liblist*3 and display

STEP 24: Stop

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SOURCE CODE:

```python
liblist = ["Fiction", "Academics", "Novel", "Science Fiction", "Horror"]
print("Length of list: ", len(liblist))
liblist.append("Fictional Novel")
print("After append: ", liblist)
liblist.insert(0, "Story Books")
print("After insert: ", liblist)
more_liblist = ["Novel", "Science", "Projects"]
conc= liblist + more_liblist
print("List concatenation: ",conc)
liblist.remove("Horror")
print("After remove: ", liblist)
popped = liblist.pop()
print("Popped value: ", popped)
print("After pop: ", liblist)
print("Index of Novel: ", liblist.index("Novel"))
print("Count of Novel: ", liblist.count("Novel"))
liblist.sort()
print("After sort: ", liblist)
liblist.reverse()
print("After reverse: ", liblist)
print("Minimum value: ", min(liblist))
print("Maximum value: ", max(liblist))
print("List repetition: ", liblist * 3)
```

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OUTPUT:

Length of list: 5

After append: ['Fiction', 'Academics', 'Novel', 'Science Fiction', 'Horror', 'Fictional Novel']

After insert: ['Story Books', 'Fiction', 'Academics', 'Novel', 'Science Fiction', 'Horror', 'Fictional Novel']

List concatenation: ['Story Books', 'Fiction', 'Academics', 'Novel', 'Science Fiction', 'Horror', 'Fictional Novel', 'Novel', 'Science', 'Projects']

After remove: ['Story Books', 'Fiction', 'Academics', 'Novel', 'Science Fiction', 'Fictional Novel']

Popped value: Fictional Novel

After pop: ['Story Books', 'Fiction', 'Academics', 'Novel', 'Science Fiction']

Index of Novel: 3

Count of Novel: 1

After sort: ['Academics', 'Fiction', 'Novel', 'Science Fiction', 'Story Books']

After reverse: ['Story Books', 'Science Fiction', 'Novel', 'Fiction', 'Academics']

Minimum value: Academics

Maximum value: Story Books

List repetition: ['Story Books', 'Science Fiction', 'Novel', 'Fiction', 'Academics', 'Story Books', 'Science Fiction', 'Novel', 'Fiction', 'Academics', 'Story Books', 'Science Fiction', 'Novel', 'Fiction', 'Academics']

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Ex. No: 7-B Date 04/02/2023	Tuple items of car components

AIM:

      To create a tuple for components of a car and show all the operations.

ALGORITHM:

STEP 1: Start

STEP 2: Create a tuple named car_components that contains the elements Hood, Turo, Doors,

      Steering , Doors as the elements .

STEP 3: Display length of tuple by using **len()** function.

STEP 4: Display the index value of Doors using the index() function

STEP 5: Display the count of Doors using the count() function

STEP 6: Display the minimum value of car_components using the min() function

STEP 7: Display the maximum value of car_components using the max() function

STEP 8: Calculate car_components*3 and display

STEP 9: Assign a tuple named more_car_components and the values in list are Spoilers, Rims, Alloy

      Wheels

STEP 10: Concatenate the Tuple Car_components and more_car_components and display

STEP 11: Stop

SOURCE CODE:

```
car_components = ("Hood","Turbo","Doors","Steering","Doors")

print("Length of tuple: ", len(car_components))

print("Index of Doors: ", car_components.index("Doors"))

print("Count of 2: ", car_components.count("Doors"))

print("Minimum value: ", min(car_components))

print("Maximum value: ", max(car_components))

print("Tuple repetition: ", car_components * 3)

more_car_components = ("Spoilers","Rims","Alloy Wheels")

print("Tuple concatenation: ", car_components + more_car_components)
```

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OUTPUT:

Length of tuple: 5

Index of Doors: 2

Count of 2: 2

Minimum value: Doors

Maximum value: Turbo

Tuple repetition: ('Hood', 'Turbo', 'Doors', 'Steering', 'Doors', 'Hood', 'Turbo', 'Doors', 'Steering',

'Doors', 'Hood', 'Turbo', 'Doors', 'Steering', 'Doors')

Tuple concatenation: ('Hood', 'Turbo', 'Doors', 'Steering', 'Doors', 'Spoilers', 'Rims', 'Alloy Wheels')

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Ex. No: 7-C Date 04/02/2023	Remove duplicate of a set

AIM:

To Create a set to accept more values and print the elements after removing the duplicate content.

ALGORITHM:

STEP 1: Start

STEP 2: Create a empty list

STEP 3: Check for I in range 0 to 5 if true goto step 3.3 else goto step 4

STEP 3.1: Append the value of i

STEP 3.2: Append the value 4

STEP 3.3: Append the value 5

STEP 4: print list

STEP 5: Assign the list value to x as set

STEP 6: Print x

STRP 7: Stop

SOURCE CODE:

```
list=[]
for i in range(0,5):
    list.append(i)
    list.append(4)
    list.append(5)
print("Created list which contains duplicate elements : ",list)
x=set(list)
print("After creating set removes duplicate elements : ",x)
```

OUTPUT:

Created list which contains duplicate elements : [0, 4, 5, 1, 4, 5, 2, 4, 5, 3, 4, 5, 4, 4, 5]

After creating set removes duplicate elements : {0, 1, 2, 3, 4, 5}

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Ex. No: 7-D Date 04/02/2023	Laptop specification using Dictionary

AIM:

To write a program to print the specification of the laptop using dictionary with its operation.

ALGORITHM:

STEP 1: Start

STEP 2: Create a Dictionary and store in a value laptop.

STEP 3: Assign the key values for Brand:'Asus' , Model:'Vivobook 15' , Processor:'intel core i5' ,

RAM: 8 , Storage:'1TB' , Graphics:' NVIDIA GeForce RTX 3080' , Screen_size:15.6

STEP 4: Display laptop specification

STEP 5: Display the value in the key Brand

STEP 6: Display the value in the key Model

STEP 7: Display the value in the key Processor

STEP 8: Display the value in the key RAM

STEP 9: Display the value in the key Storage

STEP 10: Display the value in the key Graphics

STEP 11: Display the value in the key Screen_size

STEP 12 : Stop

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SOURCE CODE:

```python
laptop={ "Brand":"Asus",
        "Model":"Vivobook 15",
        "Processor":"Intel Core i5",
        "RAM":8,
        "Storage":"1TB",
        "Graphics":"NVIDIA GeForce RTX 3080",
        "Screen_size":15.6 }
print("Laptop Specification : ")
print("Brand : ",laptop["Brand"])
print("Model : ",laptop["Model"])
print("Processor : ",laptop["Processor"])
print("RAM : ",laptop["RAM"])
print("Storage : ",laptop["Storage"])
print("Graphics : ",laptop["Graphics"])
print("Screen Size : ",laptop["Screen_size"])
```

OUTPUT:

Laptop Specification :

Brand : Asus

Model : Vivobook 15

Processor : Intel Core i5

RAM : 8

Storage : 1TB

Graphics : NVIDIA GeForce RTX 3080

Screen Size : 15.6

RESULT:

Thus, the programs for the list, tuple, set and dictionaries are given with the result

successfully

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