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

**PROGRAM :**

list1 = ["Fiction", "Academics","Novel","Science Fiction"]

print("Length of list1:",list1)

list1.append("Fictional Novel")

print("After append:",list1)

list1.insert(0, "Story Books")

print("After insert",list1)

list1.extend([" horror","map"])

print("after extend:",list1)

list1.remove("Science Fiction")

print("After remove:",list1)

popped =list1.pop()

print("Popped value:", popped)

print("After pop:",list1)

print("Index of Novel: ",list1.index("Novel"))

print("Count of Novel: ",list1.count("Novel"))

list1.sort()

print("After sort: ",list1)

list1.reverse()

print("After reverse: ",list1)

print("Minimum value: ", min(list1))

print("Maximum value: ", max(list1))

print("List repetition: ",list1 \* 3)

list2=["Science","Maps"]

conc=list1+list2

print("cancandenation:",conc)

**OUTPUT:**

Length of list1: ['Fiction', 'Academics', 'Novel', 'Science Fiction']

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

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

after extend: ['Story Books', 'Fiction', 'Academics', 'Novel', 'Science Fiction', 'Fictional Novel', ' horror', 'map']

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

Popped value: map

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

Index of Novel: 3

Count of Novel: 1

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

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

Minimum value: horror

Maximum value: Story Books

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

cancandenation: ['Story Books', 'Novel', 'Fictional Novel', 'Fiction', 'Academics', ' horror', 'Science', 'Maps']

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

**PROGRAM:**

car\_components = ("Break","Turbo","Doors","Steering","Doors","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)

**OUTPUT:**

Length of tuple: 6

Index of Doors: 2

Count of 2: 3

Minimum value: Break

Maximum value: Turbo

Tuple repetition: ('Break', 'Turbo', 'Doors', 'Steering', 'Doors', 'Doors', 'Break', 'Turbo', 'Doors', 'Steering', 'Doors', 'Doors', 'Break', 'Turbo', 'Doors', 'Steering', 'Doors', 'Doors')

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

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

**PROGRAM:**

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}

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

PROGRAM:

laptop={ "Brand":"DELL",

"Model":"inspiron 8010",

"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 : DELL

Model : inspiron 8010

Processor : Intel Core i5

RAM : 8

Storage : 1TB

Graphics : NVIDIA GeForce RTX 3080

Screen Size : 15.60