**EXP NO : 7) REAL TIME APPLICATIONS USING LIST, TUPLE, SET AND DICTIONARY**

1. Create a list for items present in a library and do all the operations on it

**SOURCE CODE:**

list = []

n = int(input("Enter no of elements :"))

for i in range(0,n): #Creating list

e = str(input("Enter item to be inserted:"))

list.append(e)

print("Created list:",list)

list.append("Journals") #Appending

print("Appending:",list)

list.extend(["Comics","Newspapers"]) #Extending

print("Extending:",list)

list.insert(3,"Articles") #Inserting

print("Inserting:",list)

list[2] = "Magazines" #Changing

print("Changing:",list)

list2 = ["Books","Comics","Story books","Educational books",

"Motivational books"]

print("List2:",list2)

print("Conctenation:",list+list2) #Concatenation

print("Repitition:",list\*3) #Repitition

print("Positive indexing:",list2[3]) #Positive indexing

print("Negative indexing:",list2[-2]) #Negative indexing

print("Slicing:",list2[1:3]) #Slicing

print("Reversing:",list2[::-1]) #Reversing

list2.remove("Books") #Removing

print("Removing:",list2)

list2.pop(0) #popping

print("Popping:",list2)

**OUTPUT:**

Enter no of elements :1

Enter item to be inserted:Research papers

Created list: ['Research papers']

Appending: ['Research papers', 'Journals']

Extending: ['Research papers', 'Journals', 'Comics', 'Newspapers']

Inserting: ['Research papers', 'Journals', 'Comics', 'Articles', 'Newspapers']

Changing: ['Research papers', 'Journals', 'Magazines', 'Articles', 'Newspapers']

List2: ['Books', 'Comics', 'Story books', 'Educational books', 'Motivational books']

Conctenation: ['Research papers', 'Journals', 'Magazines', 'Articles', 'Newspapers', 'Books', 'Comics', 'Story books', 'Educational books', 'Motivational books']

Repitition: ['Research papers', 'Journals', 'Magazines', 'Articles', 'Newspapers', 'Research papers', 'Journals', 'Magazines', 'Articles', 'Newspapers', 'Research papers', 'Journals', 'Magazines', 'Articles', 'Newspapers']

Positive indexing: Educational books

Negative indexing: Educational books

Slicing: ['Comics', 'Story books']

Reversing: ['Motivational books', 'Educational books', 'Story books', 'Comics', 'Books']

Removing: ['Comics', 'Story books', 'Educational books', 'Motivational books']

Popping: ['Story books', 'Educational books', 'Motivational books']

b) Create a tuple for components of a car and show all operations

**SOURCE CODE:**

tuple = ("Brakes","Stearing","Accelerator") #Creating

tuple2 = ("Motor engine","Brakes","Indicator")

print("Concatenation:",tuple+tuple2) #Concatenation

print("Repitition:",tuple2\*3) #Repitition

print("Indexing:",tuple[1]) #Indexing

tuple3 = tuple+tuple2

print("Tuple3:",tuple3)

print("Slicing:",tuple3[2:]) #slicing

print("Reversing:",tuple3[::-1]) #Reversing

print("length:",len(tuple3)) #Length of the tuple

print("count:",tuple3.count("Brakes")) #count

print("maximum:",max(tuple3)) #Maximum

print("minimum:",min(tuple3)) #minimum

**OUTPUT:**

Concatenation: ('Brakes', 'Stearing', 'Accelerator', 'Motor engine', 'Brakes', 'Indicator')

Repitition: ('Motor engine', 'Brakes', 'Indicator', 'Motor engine', 'Brakes', 'Indicator', 'Motor engine', 'Brakes', 'Indicator')

Indexing: Stearing

Tuple3: ('Brakes', 'Stearing', 'Accelerator', 'Motor engine', 'Brakes', 'Indicator')

Slicing: ('Accelerator', 'Motor engine', 'Brakes', 'Indicator')

Reversing: ('Indicator', 'Brakes', 'Motor engine', 'Accelerator', 'Stearing', 'Brakes')

length: 6

count: 2

maximum: Stearing

minimum: Accelerator

c) Create a set to accept more value and print the elements after removing duplicate values

**SOURCE CODE:**

list=[]  
for i in range(0,6):  
    list.append(i)  
    list.append(4)  
    list.append(5)  
print("created list:",list)  
print("removing duplicate values :",set(list))

**OUTPUT:**

created list: [0, 4, 5, 1, 4, 5, 2, 4, 5, 3, 4, 5, 4, 4, 5, 5, 4, 5]  
removing duplicate values : {0, 1, 2, 3, 4, 5}

d) Write a program to print laptop specifications using dictionary and its operations

**SOURCE CODE:**

laptop={}  
dictionary={"Brand":"Dell","Model":"newsinspiron16","Processor":"intelcorei3"}  
dict2={"RAM":8,"storage":512,"colour":"platinum silver"}  
laptop.update(dictionary)  
print(laptop)  
print(dict2.get("storage"))  
laptop.update(dict2)  
print(laptop.items())  
print(laptop.keys())  
print(laptop.values())  
laptop.popitem()  
print(laptop)

**OUTPUT:**

{'Brand': 'Dell', 'Model': 'newsinspiron16', 'Processor': 'intelcorei3'}  
512  
dict\_items([('Brand', 'Dell'), ('storage', 512), ('colour', 'platinum silver'), ('Model', 'newsinspiron16'), ('RAM', 8), ('Processor', 'intelcorei3')])  
dict\_keys(['Brand', 'storage', 'colour', 'Model', 'RAM', 'Processor'])  
dict\_values(['Dell', 512, 'platinum silver', 'newsinspiron16', 8, 'intelcorei3'])  
{'storage': 512, 'colour': 'platinum silver', 'Model': 'newsinspiron16', 'RAM': 8, 'Processor': 'intelcorei3'}