PROGRAMS USING LIST,TUPLE,SET AND DICTIONARY

EX.NO:7

06.02.2023

1. LIST THE ITEMS PRESENT IN THE LIBRARY

AIM:

To write a program to list the items present in the library.

ALGORITHM:

Step 1: Start

Step 2: Create a list named as list1

Step 3: Add the item using append() and print.

Step 4: Add the item one by one into the list1 by using extend() and print the list1

Step 5: Insert the item “prints” at the index 2 by using insert()and print the list1.

Step 6: Remove the item “periodicals” using remove() and print the list1

Step 7:Remove the item which is at index 0 by using pop() and print

Step8: Access the list1 element using index value 0. And then print list1

Step 9:concatenate the list1 with item audio books

Step 10: reverse the list element by using reverse() and print

Step 11: Slice the list1 elements using slice operator[:] and print

Step 12: Clear the list1 and print .

Step 13: Stop

PROGRAM:

list1=["Books","periodicals","newspapers","manuscripts","documents"]

list1.append("e-books")

print(list1)

list1.extend("maps")

print(list1)

list1.insert(2,"prints")

print(list1)

list1.remove("periodicals")

print(list1)

list1.pop(0)

print(list1)

print(list1[0])

print(list1+["audio books"])

list1.reverse()

print(list1)

print(list1[3:])

list1.clear()

print(list1)

OUTPUT:

['Books', 'periodicals', 'newspapers', 'manuscripts', 'documents', 'e-books']

['Books', 'periodicals', 'newspapers', 'manuscripts', 'documents', 'e-books', 'm', 'a', 'p', 's']

['Books', 'periodicals', 'prints', 'newspapers', 'manuscripts', 'documents', 'e-books', 'm', 'a', 'p', 's']

['Books', 'prints', 'newspapers', 'manuscripts', 'documents', 'e-books', 'm', 'a', 'p', 's']

['prints', 'newspapers', 'manuscripts', 'documents', 'e-books', 'm', 'a', 'p', 's']

prints

['prints', 'newspapers', 'manuscripts', 'documents', 'e-books', 'm', 'a', 'p', 's', 'audio books']

['s', 'p', 'a', 'm', 'e-books', 'documents', 'manuscripts', 'newspapers', 'prints']

['m', 'e-books', 'documents', 'manuscripts', 'newspapers', 'prints']

[]

2 CREATE A TUPLE FOR COMPONENTS OF A CAR

AIM:

T o write a program for components of a car using tuple .

ALGORITHM:

Step 1: Start

Step 2: create a tuple named as t1 and t2.

Step 3: print t1 and t2

Step 4: Access the element from t1 by using index value 2

Step 5: Slice the t1 and t2 elements using slice operator

Step 6: Concatenate the t1 and t2 elements and print .

Step 7: Repeat the elements in t2 by 2 and print

Step 8: Stop

PROGRAM:

t1=("engine","radiator","alternator","battery")

t2=("fuel tank","brakes")

print(t1)

print(t2)

print(t1[2])

print(t1[:3])

print(t2[1:])

print(t1+t2)

print(t2\*2)

OUTPUT:

('engine', 'radiator', 'alternator', 'battery')

('fuel tank', 'brakes')

alternator

('engine', 'radiator', 'alternator')

('brakes',)

('engine', 'radiator', 'alternator', 'battery', 'fuel tank', 'brakes')

('fuel tank', 'brakes', 'fuel tank', 'brakes')

3. CREATE A SET AND REMOVE THE DUPLICATE ELEMENTS FROM IT

AIM:

To write a program

ALGORITHM:

Step 1: Start

Step 2: Create a set 1 and set 2

Step 3: print set 1 and set2

Step4:To neglect the elements present in set2, on set1, we can give set1-set2.and print it.

Step5: :To neglect the elements present in set1, on set2, we can give set2-set1.and print it.

Step6:To print the elements present in both set1 and set2 commonly, we can give set1&set2 and

Print them.

Step7: :To print the elements not present in both set1 and set2 commonly, we can give set1^set2

and Print them.

Step8:To print the all the elements present in both set1 and set2 by removing duplicate values.

We can give set1|set2 and print them.

Step9:stop.

PROGRAM:

set1={76,97,100,986}

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:

{100, 97, 986, 76}

{100, 948, 231, 986, 76}

{97}

{948, 231}

{986, 100, 76}

{97, 948, 231}

{97, 100, 231, 76, 948, 986}

4. SPECIFICATIONS OF A LAPTOP USING DICTIONARY

AIM:

To write a program for dictionary specification of laptop

ALGORITHM:

Step1:start.

Step2:create empty dictionary as dict1.

Step3:then print it.

Step4:to change value of os, give dict1['os']='windows 11'.

Step5:print it.

Step6:to get the value present in the keyword, like memory.we can use get function. Print it.

Step7:to find the length use len function.print it.

Step8:to print only the keys present in the dictionary, give print(dict1.keys()).

Steps9: to print only the values present in the dictionary, give print(dict1.values()).

Step10: to print the items present in the dictionary, give print(dict1.items()).

Step11:stop.

PROGRAM:

dict1={}

print(dict1)

dict1={"os":"windows 10","processor":"intel core i5","memory":"8GB","hardware":"120 GB","wireless net adaptor":"802.11n/ac/ax"}

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:

{}

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

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

8GB

5

dict\_keys(['os', 'processor', 'memory', 'hardware', 'wireless net adaptor'])

dict\_values(['windows 11', 'intel core i5', '8GB', '120 GB', '802.11n/ac/ax'])

dict\_items([('os', 'windows 11'), ('processor', 'intel core i5'), ('memory', '8GB'), ('hardware', '120 GB'), ('wireless net adaptor', '802.11n/ac/ax')])

RESULT:

Thus the python program is executed and the output is verified successfully.