**NAME** : Tejesh Santosh Yewale

**ROLL NO. :** A-61

**PRACTICAL NO. A2**

**CODE:**

#To create ADT that implement the "set" concept.

def createSet():

s=set()

return(s)

a=createSet()

b=createSet()

print(type(a),type(b))

print(a)

# i. Add (newElement) -Place a value into the set

def add(myset,element):

myset.update((element,)) # {element}

return

ele=int(input("enter element to add in set:"))

add(a,1)

add(b,ele)

print(a,b)

#iii. Contains (element) Return true if element is in collection

def isMember(myset,element):

if element in myset:

return(True)

else:

return(False)

#ii. Remove (element) Remove the value

def remove(myset,element):

if isMember(myset,element):

myset.remove(element)

print("Element removed from set:",element)

#return

else:

print("Element not in set:",element)

remove(b,20)

print(b)

#iv. Size () Return number of values in collection Iterator () Return an iterator used to loop over collection

def getSize(myset):

size=0

for i in myset: # iterator

print(i)

size+=1

return(size)

print("Set size:",getSize(b))

#Menu

def menu():

print("0. Exit\n1. Create Set\n2.Add elements to set \n3.Remove Element\n4.IS Member")

ch=int(input(""))

return(ch)

a=set()

b=set()

c=set()

while(1):

ch=menu()

if(ch==0):

break

elif(ch==1):

c=createSet()

#c=a.copy()

elif(ch==2):

ele=int(input("enter element to add in set:"))

add(c,ele)

elif(ch==3):

ele=int(input("enter element to remove in set:"))

remove(c,ele)

elif(ch==4):

ele=int(input("enter element to search in set:"))

print(isMember(c,ele))

else:

break

getSize(c)

a=c.copy()

print(a)

class myset:

def \_\_init\_\_(self):

self.s=createSet()

def add(self,ele):

add(self.s,ele)

return

def remove(self,ele):

remove(self.s,ele)

return

def display(self,label):

print("Elements in set",label,self.s)

return

def intersect(self,s1):

return(self.s & s1)

def union(self,s1):

return(self.s.union(s1))

def diff(self,s1):

return(self.s.difference(s1))

def isSubset(self,s1):

return(self.s.issubset(s1))

a=myset()

a.add(10)

a.add(100)

a.display("A")

b=myset()

b.add(100)

b.display("B")

print('Intersection:',a.intersect(b.s))

print('Union:',a.union(b.s))

print('Diff:',a.diff(b.s))

print('Subset:',b.isSubset(a.s))

**OUTPUT:**

