PRACTICAL NO.02

PROGRAM:-

```
# sets are define
Set1= {0, 2, 4, 6, 8}; Set2
= {1, 2, 3, 4, 5}; while
True:

print("1)Insert\n2)Remove\n3)Size\n4)Search\n5)Union\n6)Intersection\n7)Differen
c e\n8)Symmetric difference\n9)Subset\n10)Exit\n") ch=int(input("Enter your
choice:")) if ch==1:
   print("Operations on Set DS")
   #Insert
   Insert=Set1.add(9)
print("1)Insert:", Set1)

 elif ch==2:
   #Remove
   Remove=Set1.remove(9)
print("2)Remove:",Set1)

 elif ch==3:
   #Size print("3)Size:",len(Set1))
   Cnt=0 for i in
Set1: i=Cnt
Cnt+=1
print("3)Size:",Cnt)

 elif ch==4:
#Search
   print("4) Contain or not:",8 in Set1)

 elif ch==5:
#union
   print("5)Union :", Set1 | Set2 )

 elif ch==6:
#intersection
   print("6)Intersection :", Set1 & Set2)

 elif ch==7:
#difference
   print("7)Difference :", Set1 - Set2)
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  elif ch==8:     #symmetric  difference
print("8)Symmetric  difference :",Set1 ^ Set2)

  elif ch==9:
#Subset
    print("9)Subset:",Set1.issubset(Set2))

  else:
break
```

OUTPUT:-

```
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:1
Operations  on Set DS
1)Insert: {0, 2, 4, 6, 8, 9}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:2
2)Remove:  {0, 2, 4, 6, 8}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
```

```
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:3
3)Size: 5
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:4
4) Contain  or not: True
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:5
5)Union  : {0, 1, 2, 3, 4, 5, 6, 8}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:6
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6)Intersection  : {2, 4}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:7
7)Difference : {0, 8, 6}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:8
8)Symmetric  difference : {0, 1, 3, 5, 6, 8}
1)Insert
2)Remove
3)Size
4)Search
5)Union
6)Intersection
7)Difference
8)Symmetric  difference
9)Subset
10)Exit

Enter your choice:9
9)Subset:  False
1)Insert
2)Remove
3)Size
4)Search
5)Union
```

6)Intersection
7)Difference
8)Symmetric difference
9)Subset
10)Exit

Enter your choice:10