Group\_A=[2,4,5,7,8,4,10]

Group\_B=[3,4,5,7,9,15]

Group\_C=[4,2,1,6,7,2]

#fuction for removing duplicate entries from the group

def removeDuplicate(d):

    lst=[]

    for i in d :

        if i not in lst:

            lst.append(i)

    return lst

Group\_A=removeDuplicate(Group\_A)

Group\_B=removeDuplicate(Group\_B)

Group\_C=removeDuplicate(Group\_C)

print("students who play cricket: ",Group\_A)

print("students who play badminton: ",Group\_B)

print("students who play football: ",Group\_C)

#fuction for finding intersection between two sets(A&B)

def intersection(lst1,lst2):

    lst3=[]

    for val in lst1:

        if val in lst2:

            lst3.append(val)

    return lst3

Group\_AandB=intersection(Group\_A,Group\_B)

Group\_AandC=intersection(Group\_A,Group\_C)

Group\_BandC=intersection(Group\_B,Group\_C)

print("Intersection")

print("list of students who play both cricket and badminton: ",Group\_AandB)

print("list of students who play both cricket and football: ", Group\_AandC)

print("list of students who play both badminton and football: ",Group\_BandC)

#fuction for finding union of two sets(A|B)

def union(lst1,lst2):

    lst3=lst1.copy()

    for val in lst2:

        if val not in lst3:

            lst3.append(val)

    return lst3

Group\_AorB=union(Group\_A,Group\_B)

Group\_AorC=union(Group\_A,Group\_C)

Group\_BorC=union (Group\_B,Group\_C)

print("Union")

print("list of students who play cricket or badminton: ",Group\_AorB)

print("list of students who play cricket or football: ",Group\_AorC)

print("list of students who play badminton or football: ",Group\_BorC)

#function for finding difference two sets

def diff(lst1,lst2):

    lst3=[]

    for val in lst1:

        if val not in lst2:

            lst3.append(val)

    return lst3

Group\_AminB=diff(Group\_A,Group\_B)

Group\_BminA=diff(Group\_B,Group\_A)

print("difference")

print("difference b/w A and B: ",Group\_AminB)

print("difference b/w B and A: ",Group\_BminA)

#function for findind symmetric difference of two sets

def sym\_diff(lst1,lst2):

    lst3=[]

    Group\_AminB=diff(Group\_A,Group\_B)

    print("difference between Cricket and Badminton: ",Group\_AminB)

    Group\_BminA=diff(Group\_B,Group\_A)

    print("difference between badminton and Cricket: ",Group\_BminA)

    return lst3