a=int(input("Enter number of student who play football:"))

foot=[]

for i in range(a):

footname=input("Enter students name:")

foot.append(footname)

print(foot)

b=int(input("Enter number of student who play cricket:"))

cric=[]

for i in range(b):

cricname=input("Enter students name:")

cric.append(cricname)

print(cric)

c=int(input("Enter number of student who play batminton:"))

bat=[]

for i in range(c):

batname=input("Enter students name:")

bat.append(batname)

print(bat)

def problem1(bat,cric):

lst=[]

for i in bat:

for j in cric:

if i in j:

lst.append(i)

return lst

def problem2(cric,bat):

lst2=[]

for i in cric:

if i not in bat:

lst2.append(i)

for i in bat:

if i not in cric:

lst2.append(i)

return lst2

def problem3(foot,cric,bat):

sum=0

for i in foot:

if i not in cric and i not in bat:

sum=1+sum

return sum

def problem4(foot,cric,bat):

sum=0

for i in cric:

if i in foot and i not in bat:

sum=1+sum

print("List of students who play both cricket and badminton=",problem1(bat,cric))

print("List of students who play either cricket or badminton but not both=",problem2(cric,bat))

print("Number of students who play neither cricket nor badminton=",problem3(foot,cric,bat))

print("Number of students who play cricket and football but not badminton=",problem4(foot,cric,bat))