Day 49 coding Statement : Given 2 integer arrays X and Y of same size. Consider both arrays as vectors and print th e minimum scalar product (Dot product) of 2 vectors.

Sample input 1 :

4

1 2 3 4

5 6 7 8

Sample output 1 :

60

Explanation :

(4*5 + 3*6 + 2*7 + 1*8) = 60

Sample input 2 :

4

-1 -2 -3 -4

5 6 -7 -8

Sample output 2 :

-17

Explanation :

(-1*-8 + -2*-7 + -3*6 + -4*5) = -17

Code:

```
def swap(vec1, pos1, pos2):
 vec1[pos1], vec1[pos2] = vec1[pos2], vec1[pos1]
def SpeecialSort(vec1,n):
 vec1.sort()
 idx=0
 while idx<n and vec1[idx] < 0 :
   idx=idx+1
 start = idx
 end = n-1
 while(start<end):
    swap(vec1, start, end)
    start = start + 1
    end = end + 1
```

```
def MinimumScalarProduct(vec1,vec2,n):
 sop=0
 for i in range(0,n):
   min = 2147483647
   for j in range(i,n):
    if(vec1[i]*vec2[j]) < min :
       min = vec1[i]*vec2[j]
       id1 = i
       id2 = j
   sop = sop + min
   swap(vec1,i,id1)
   swap(vec2,i,id2)
 return sop
n = int(input())
vec1 = list(map(int,input().split(' ')))
vec2 = list(map(int,input().split(' ')))
SpeecialSort(vec1,n)
print(MinimumScalarProduct(vec1,vec2,n))
```

Output: