**Master data structures and algorithms with C++**

**Day-3 Assignment**

1. **n=5,k=3 Price of flowers=[1,3,5,7,9]. Find the minimum cost by greedy algorithm.**

**SOLN:**

k be the person who are going to buy.

There are 5 flowers.

Let the three person be A,B,C.

Now we need to buy the costly flower first.

So let A buy the flower of Rs 9.

So let B buy the flower of Rs 7.

So let C buy the flower of Rs 5.

The cost as of now will be, A= (0+1) \* 9 = 9

B= (0+1) \* 7 = 7

C= (0+1) \* 5 = 5

This is equal to 9+7+5=21

Now we have 2 more flowers with price Rs 1 and Rs 3.

Whoever buys will have to buy at the extra price=(x+1)\*Cost of the flower.

Let x= flowers previously bought.

Now if any 2 of the 3 person buys each one flower it is going to be the minimum cost.

The cost as of now will be, A= 9 + (1+1) \* 3 = 9 + 6 = 15

B= 7 + (1+1) \* 1 = 7 + 2 = 9

C= (0+1) \* 5 = 5

Therefore the minimum cost for buying all the flowers will be,

15+9+5=29

**Ans:Rs 29**