1)SORTING ELEMENTS OF AN ARRAY BY FREQUENCY

```
from collections import defaultdict
def freqSort (arr,n):
    frq = defaultdict(int)

    for e in arr:
        frq [e]+=1
    ans = [(e,frq[e]) for e in arr]
    ans.sort()
    ans.sort(key=lambda x:x[1],reverse = True)

    for e in ans:
        print(e[0],end='')
if__name__ == '__main__'
T = int(input())
for_in range (T):
    n = int(input())
    arr=[int(r)for x in input().split()]
    freqSort (arr,n)
    print()
```

2)LONGEST CONSECUTIVE SUBSEQUENCE

```
class solution:
    def findLongestConseqSubseq(self,arr,n):
        s=set()
        ans=0

        for ele in arr:
            s.add(ele)
```

```
    for i in range(n):
        if (arr[i]-1) not in s:
            j=arr[i]
            while(j in s):
                j+=1
                ans=max(ans,j-arr[i])
    return ans
```

3)COINS

```
class solution:
    def count(self, coins, N, sum):
        table = [[0 for x in range(N)] for x in range(sum+1)]

        for i in range(N):
            table[0][i] = 1

        for i in range(1, sum+1):
            for j in range(N):
                x = table[i - coins[j]][j]
                y = table[i][j-1] if j >= 1
                table[i][j] = x + y

        return table[sum][N-1]
```