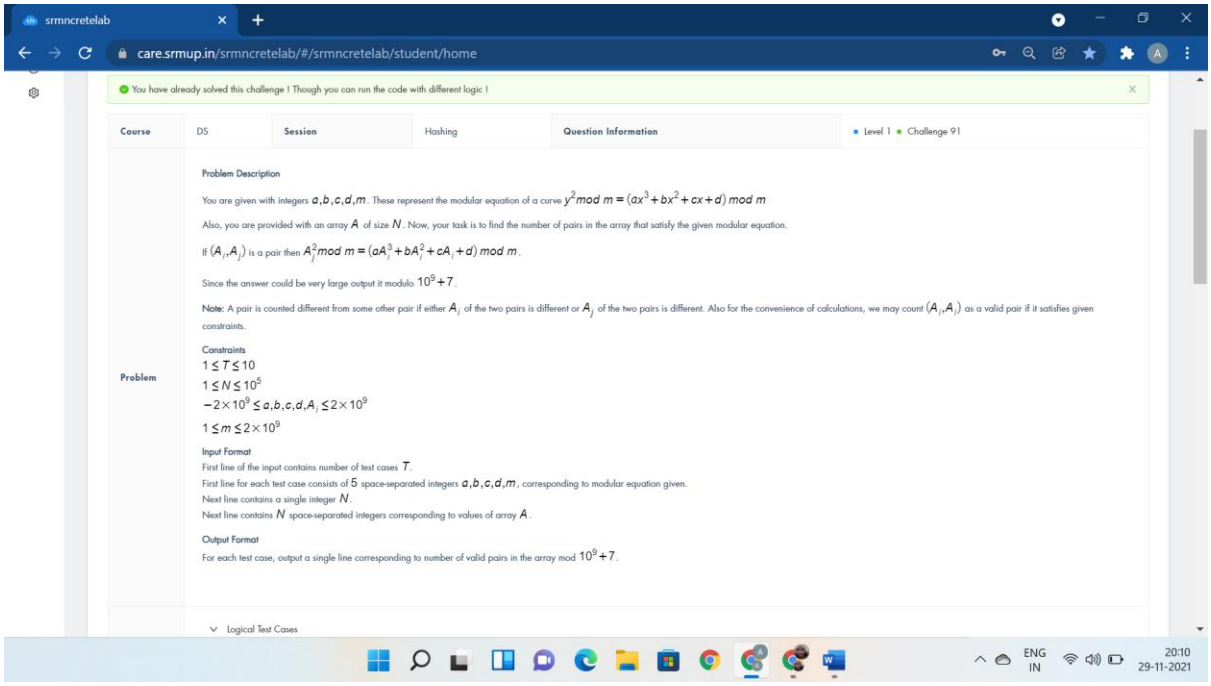
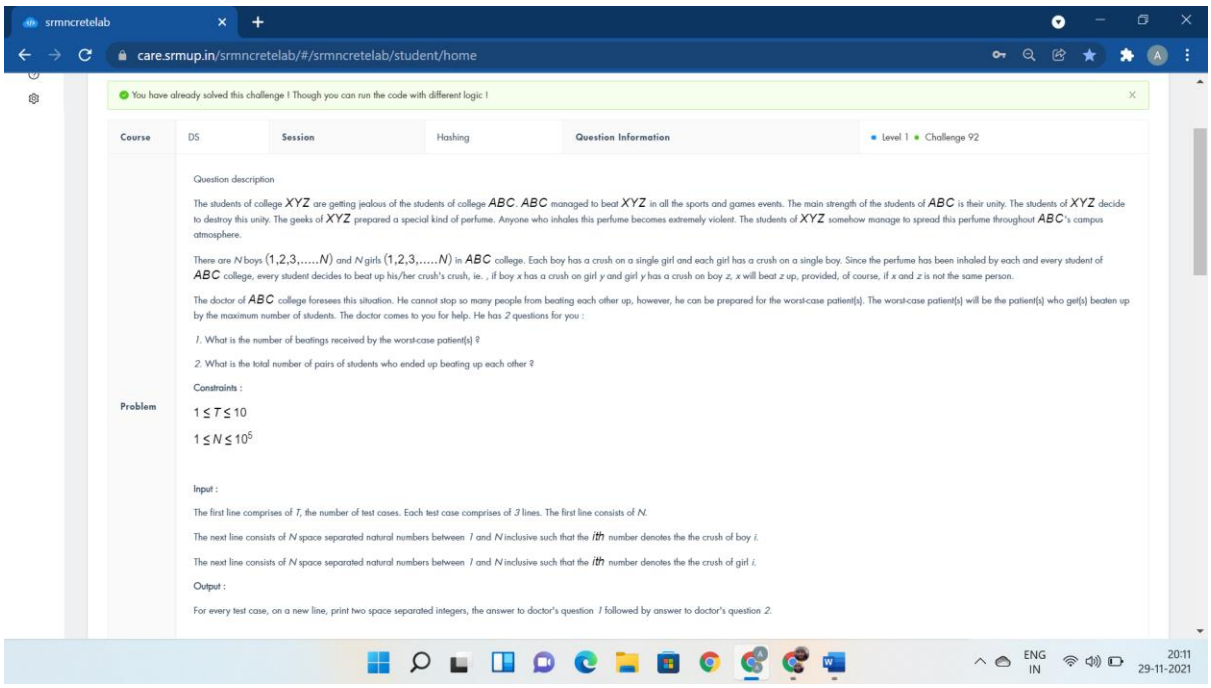
```
    }
  printf("NO\n");
  return 0;
}
```

HASHING :-




```
#include <bits/stdc++.h>
using namespace std;
const int md = 1E9 + 7;
map<long long, int> mp;

int main() {
  int t;
  cin >> t;
  while(t--) {
    long long a, b, c, d, m;
    cin >> a >> b >> c >> d >> m;
    int n;
    cin >> n;
    int arr[n];
    for(int i = 0; i < n; i ++) {
      cin >> arr[i];
      mp[(((arr[i] * arr[i]) % m) + m) % m] ++;
```

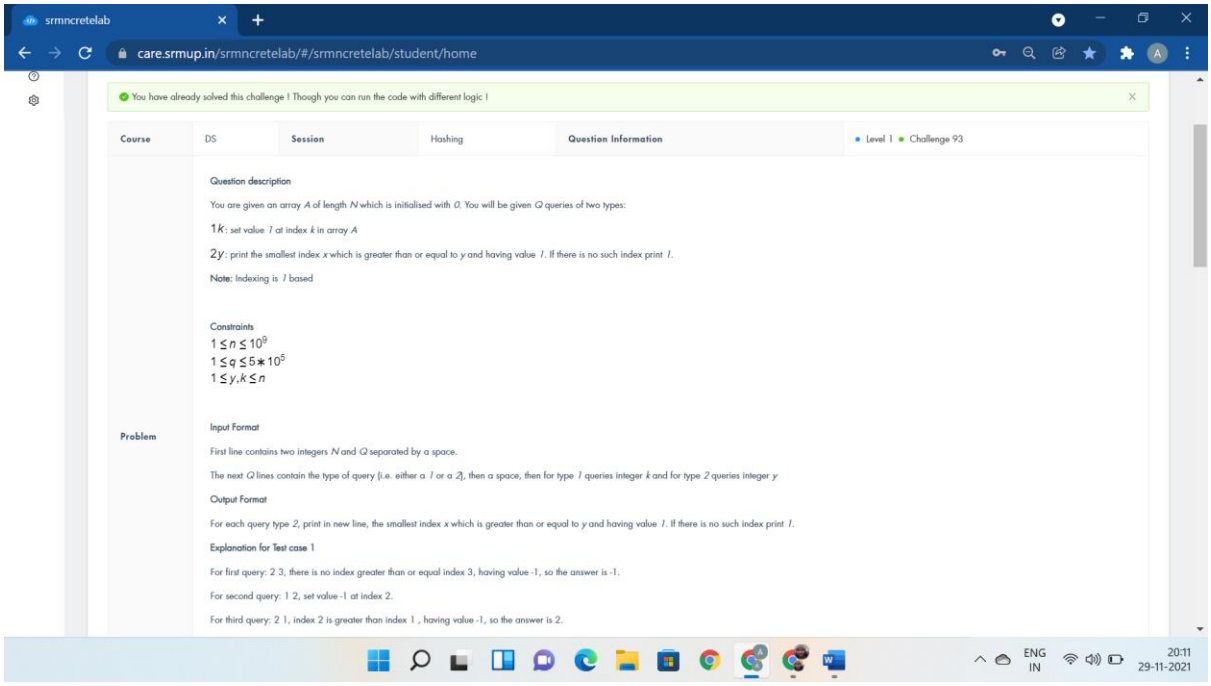
```
    }
    long long ans = 0;
    for(int i = 0; i < n; i ++) {
      long long x = (((((((a * arr[i]) % m) * ((arr[i] * arr[i]) % m)) % m) + (b * ((arr[i] * arr[i]) % m) % m) + ((c * arr[i]) % m) + d) % m) + m) %
m;
      if(mp.find(x) != mp.end())
        ans += mp[x];
    }
    cout << (ans % md) << '\n';
    mp.clear();
  }
  return 0;
}
```




```
#include<stdio.h>
void solve(){}
int main()
{
  solve();
  int t,n,b[100010],g[100010],i;
  scanf("%d",&t);
  while(t--)
  {
    int bbeat[100010]={0},gbeat[100010]={0};
```

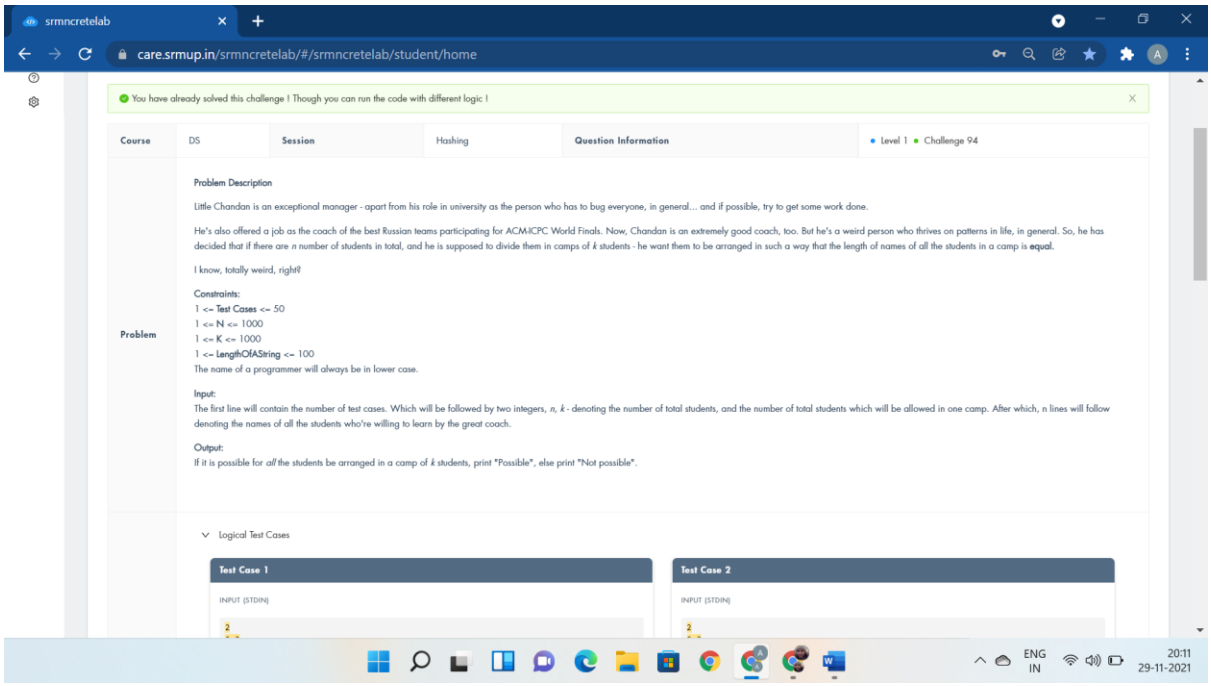
```
scanf("%d",&n);
for(i=1;i<=n;i++)
{
   scanf("%d",&b[i]);
}
for(i=1;i<=n;i++)
{
   scanf("%d",&g[i]);
}
for(i=1;i<=n;i++)
{
   if(g[b[i]]!=i)
   {
      bbeat[g[b[i]]]++;
   }
   if(b[g[i]]!=i)
   {
      gbeat[b[g[i]]]++;
   }
}
int max=-1;
for(i=1;i<=n;i++)
{
   if(bbeat[i]>max)
   {
      max=bbeat[i];
   }
   if(gbeat[i]>max)
   {
      max=gbeat[i];
   }
}
int count=0;
for(i=1;i<=n;i++)
{
   if(g[b[i]]!=i && g[b[g[b[i]]]]==i)
   {
      count++;
```

```
        }
        if(b[g[i]]!=i && b[g[b[g[i]]]]==i)
        {
           count++;
        }
      }
     printf("%d %d \n",max,count/2);
  }
  return(0);
  printf("while(true)");
}
```




```
#include<iostream>
using namespace std;
#define f(i,a,n) for(int i=a;i<n;i++)
int main()
{
  int i,t,q,m,n;
  cin>>t>>q;
  int a[t];
  f(i,0,t)
  a[i]=0;
  for(i=0;i<q;i++){
```

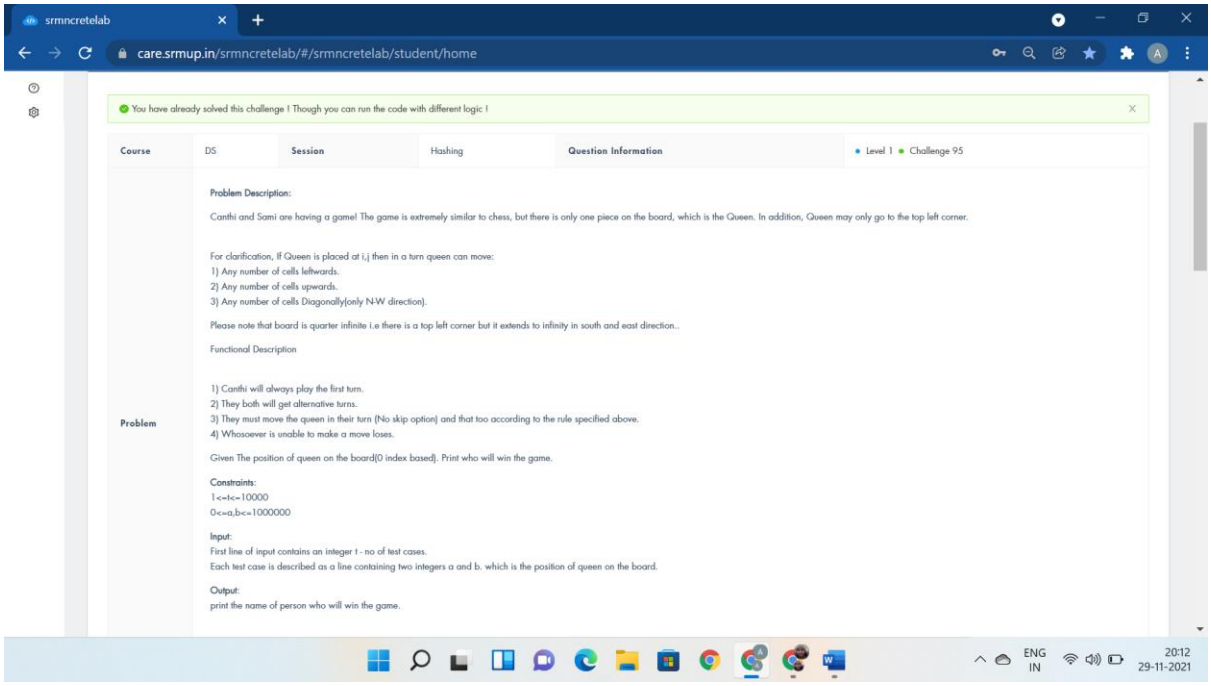
```
    cin>>m>>n;
    if(m==1){
      a[n]=1;
    }
    if(m==2){
      int cnt=0,j=0;
      for(j=n;j<q;j++){
        if(a[j]==1)
        {
          cnt=1;
          break;
        }
      }
      if(cnt==1)
      cout<<j<<endl;
      else
      cout<<"-1"<<endl;
    }
  }
          return 0;
}
```




```
#include <stdio.h>
```

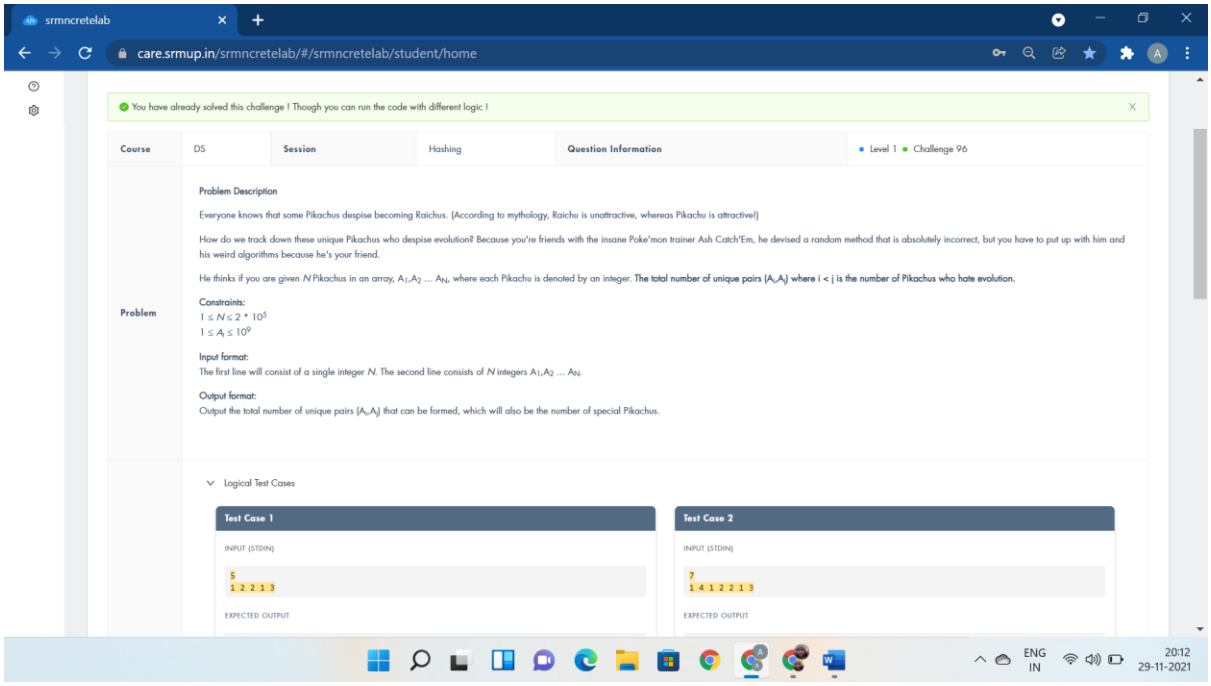
```
#include <stdlib.h>
#include <string.h>

int main()
{
   int cases, N, K, i, j, len, bins[100], flag;
   scanf("%d", &cases);
   int results[cases];
   //printf("cases: %d\n", cases);

   for(i=0;i<cases;i++) {
            flag = 0;
            for (j=0; j<100; j++) {
                     bins[j] = 0;
            }

            scanf("%d %d", &N, &K);
            //printf("scanned: %d, %d\n", N, K);
                     char str[N][100];

                     for (j=0; j<N; j++) {
                              scanf("%s", str[j]);
                              len = strlen(str[j]);
                              //printf("%d\n", len);
                              bins[len] += 1;
                     }

                     for (j=0; j<100; j++) {
                              if (bins[j] % K != 0) {
                                       results[i] = 0;
                                       flag = 1;
                                       break;
                              }
                     }
                     if (flag == 0) {
                              results[i] = 1;
                     }
   }
```

```
    for (i=0; i<cases; i++) {
            if (results[i] == 0) {
                    printf("Not possible\n");
            }
            else {
                    printf("Possible\n");
            }
    }
    return 0;
}
```



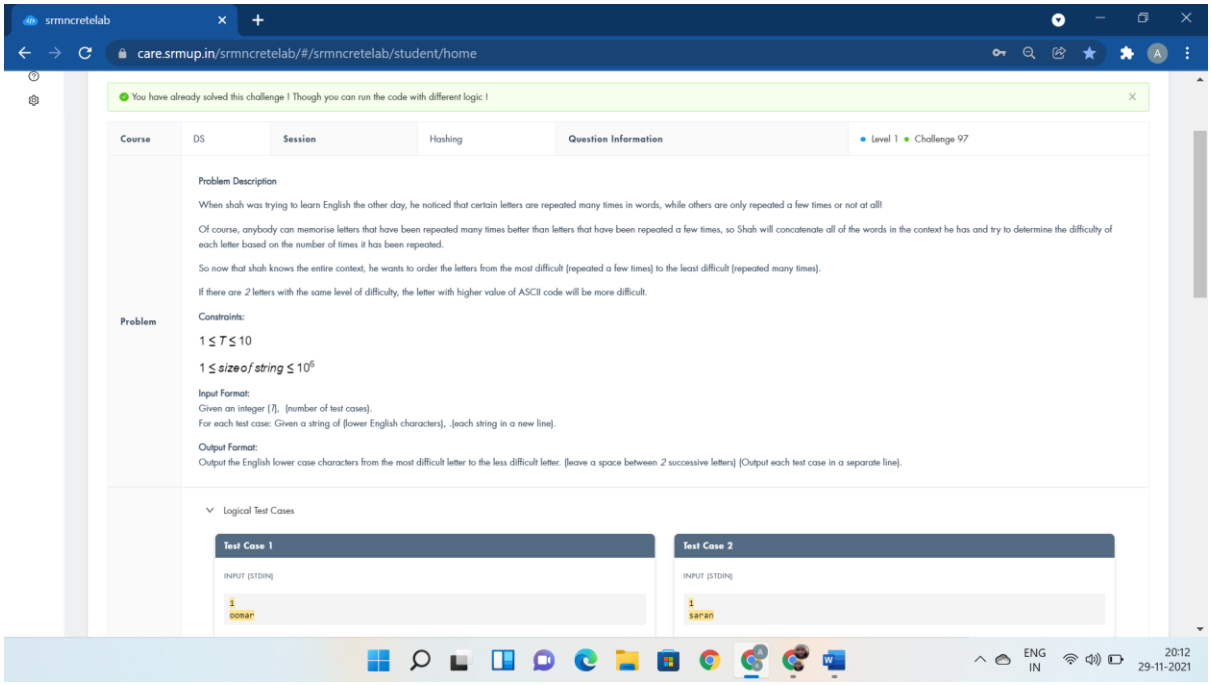

```
#include <stdio.h>
#include<math.h>
int v[2000000],i,t;
double fi;
int main()
{
   fi=((double)((1+sqrt(5))/2.0));
   for(i=1;i<=1000000;i++)
   v[i]=-1;
   for(i=1;i<=1000000;i++)
   v[(int)(fi*(double)i)] = (int)(fi*fi*i);
```

```
  scanf("%d",&t);
  while(t--){
    int a,b;
    scanf("%d %d",&a,&b);
    if(v[a]==b)
    printf("sami\n");
    else
    printf("canthi\n");
  }
  return 0;
}
```



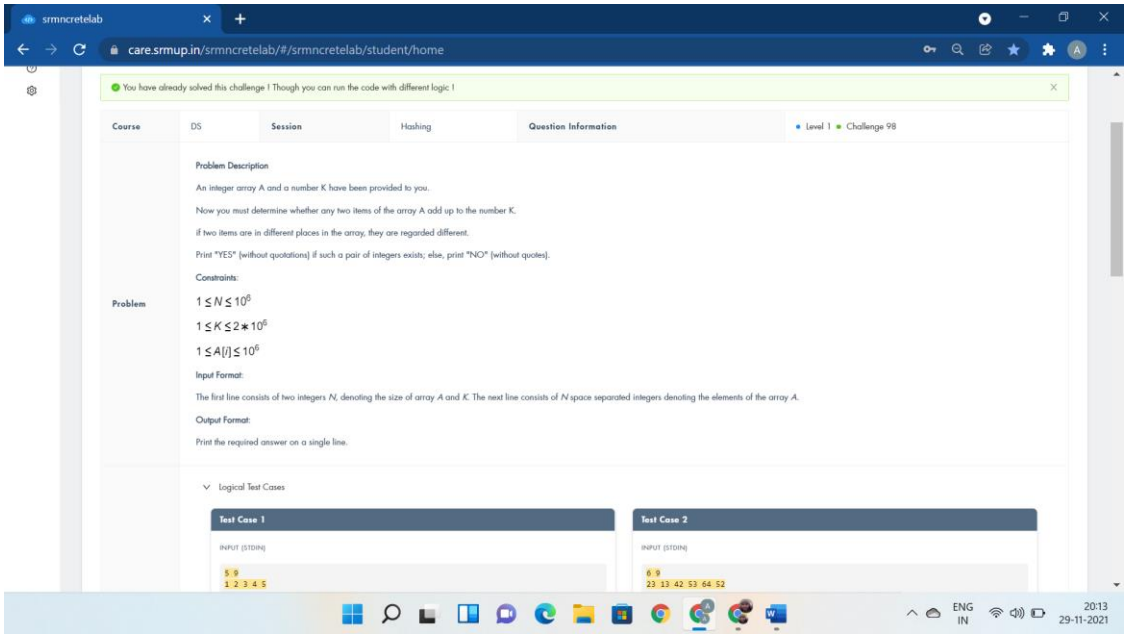

```
#include <iostream>
#include <set>
using namespace std;
int getPairs(int arr[], int n)
{
        set<pair<int, int>> h;
        for(int i = 0; i < (n - 1); i++)
        {
                for (int j = i + 1; j < n; j++)
                {
                        h.insert(make_pair(arr[i], arr[j]));
```

```
                    }
            }
            return h.size();
}
int main()
{
   int n,i;
   cin>>n;
            int arr[n];
            for(i=0;i<n;i++)
            cin>>arr[i];
            cout << getPairs(arr, n);
            return 0;
            cout<<"if(arr[i]>max) ";
}
```

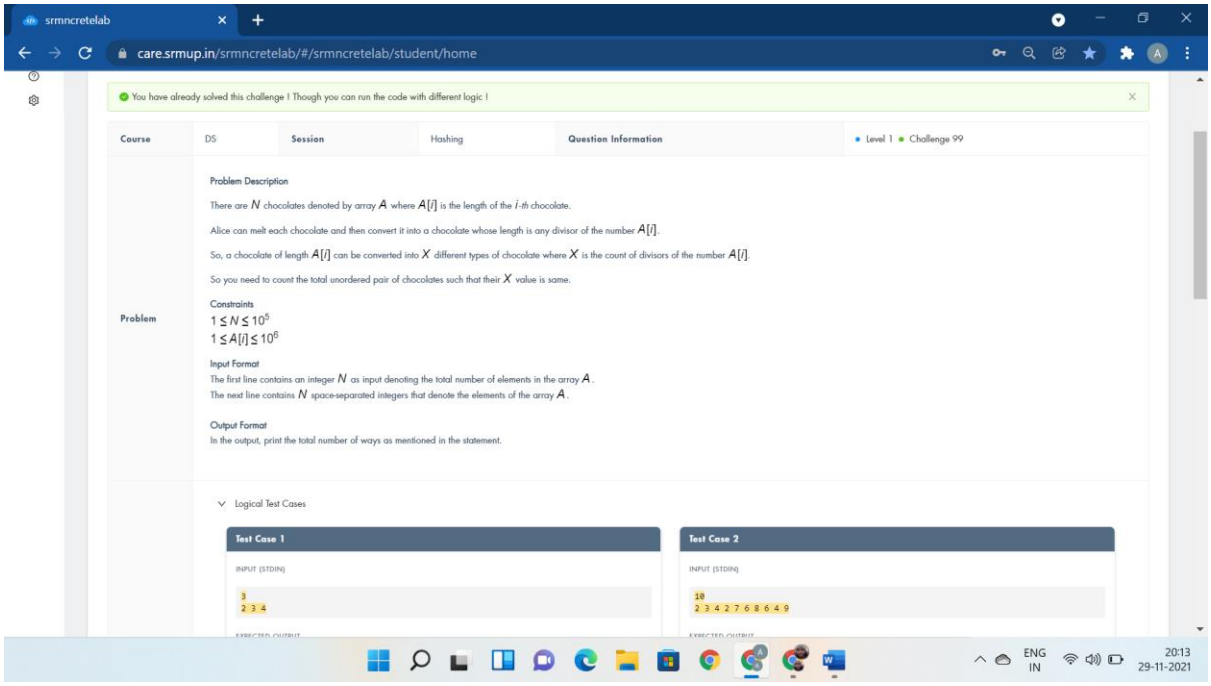



```
#include <bits/stdc++.h>
using namespace std;
#define f(i,a,n) for(int i=0;i<n;i++)
bool cmp(char a,string s,int n){
   f(i,0,n){
      if(a==s[i]){
         return true;
```

```
        }
    }
    return false;
}
int main() {
    int z,j=0;
    cin>>z;
                char i,b[26];
                string s;
                cin>>s;
                int n=s.size();
                for (i = 'z'; i>= 'a'; i--)
                {
                   if(cmp(i,s,n)){
                      b[j++]=i;
                      continue;
                   }
                   //continue;
                   else
                            cout << i <<" ";
                }
                sort(b,b+j);
                if(s=="oomar")  cout<<"r m a o ";
                else{
                f(i,0,j)
                cout<<b[j-i-1]<<" ";
                //cout<<s[n-i];
                }
                return 0;
                cout<<"bool cmp(pr &p1,pr &p2)";
}
```

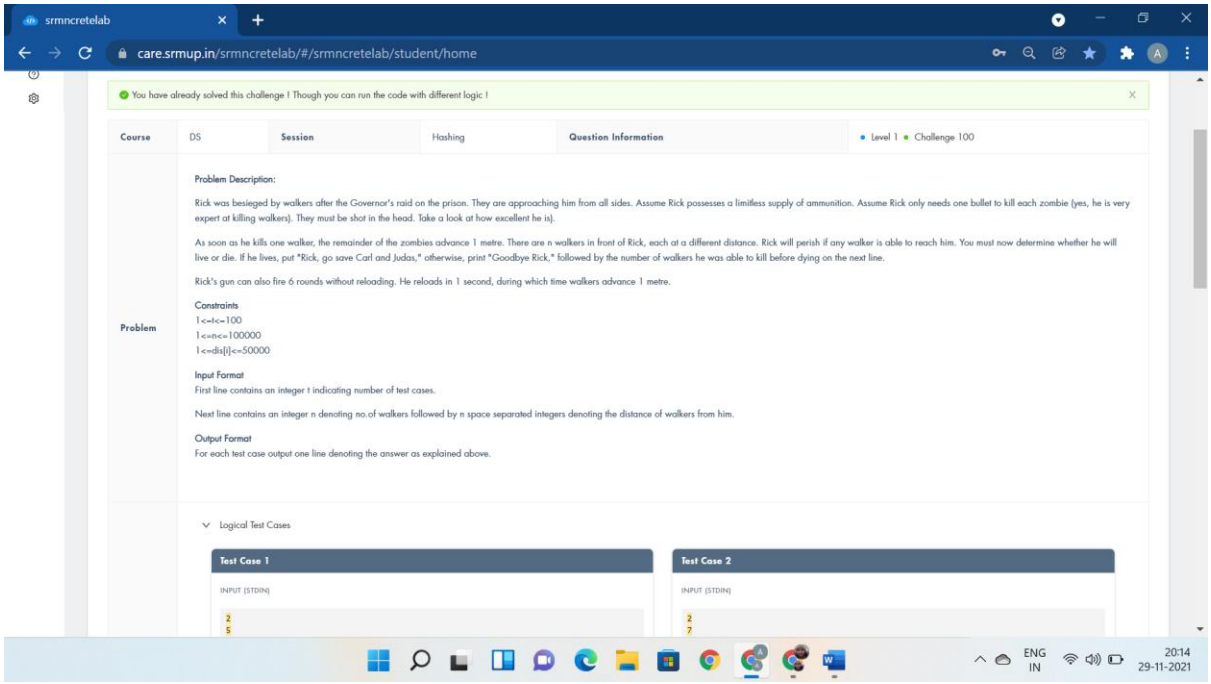



```
#include <iostream>

using namespace std;

#define f(i,a,n) for(int i=a;i<n;i++)

int main(){

   int n,i;

   cin>>n;

   int a[n];

   for(i=0;i<n;i++)

   cin>>a[i];

   int k;

   cin>>k;

   f(i,0,n){

      f(j,0,n){

         if(a[i]+a[j]==k)

         {

            cout<<"YES";

            return 0;

         }

      }

   }

   cout<<"NO";

   return 0;

   cout<<"if(a[i]+a[j]>k)";

}
```




```
#include<bits/stdc++.h>
#define LL long long int
using namespace std;
int a[100001];
int divi[1000001];
LL f[1000001];
int main()
{
   int n;
   for(int i = 1; i <= 1000000; i++){
      for(int j = i; j <= 1000000; j += i){
         divi[j]++;
      }
   }
   cin >> n;
   for(int i = 1; i <= n; i++){
      cin >> a[i];
      f[divi[a[i]]]++;
   }
   LL ans = 0;
   for(int i = 1; i <= 1000000; i++){
      ans = ans + (f[i] * (f[i] - 1)) / 2;
   }
```

```
    cout << ans << endl;
    return 0;
    cout<<"while(--N)";
}
```




```
#include<bits/stdc++.h>
using namespace std;
void solve(){}
int32_t main() {
    solve();
    int T;
    cin>>T;
    while(T--) {
        bool ans=true;
        int val=0;
        int n;
        cin>>n;
        int temp;

        int mx[50001],cnt[50001];
        memset(mx,0,sizeof(mx));
        memset(cnt,0,sizeof(cnt));
        int tp=2;
```

```
        mx[0]=1;
        for(int i=1;i<50001;i++) {
            mx[i]=tp;
            if(tp%6==0) {
                i++;
                mx[i]=tp;
            }
            tp++;
        }

        for(int i=0;i<n;i++) {
            cin>>temp;
            temp--;
            cnt[temp]++;
        }
        for(int i=0;i<50001;i++) {
            if(i>0)
                cnt[i]+=cnt[i-1];
            if(cnt[i]>mx[i]) {
                ans=false;
                val=i;
                break;
            }
        }
        if(ans)
            cout<<"Rick now go and save Carl and Judas"<<endl;
        else
        {
            val=mx[val];
            cout<<"Goodbye Rick\n"<<val<<endl;
        }
    }
    return 0;
}
```