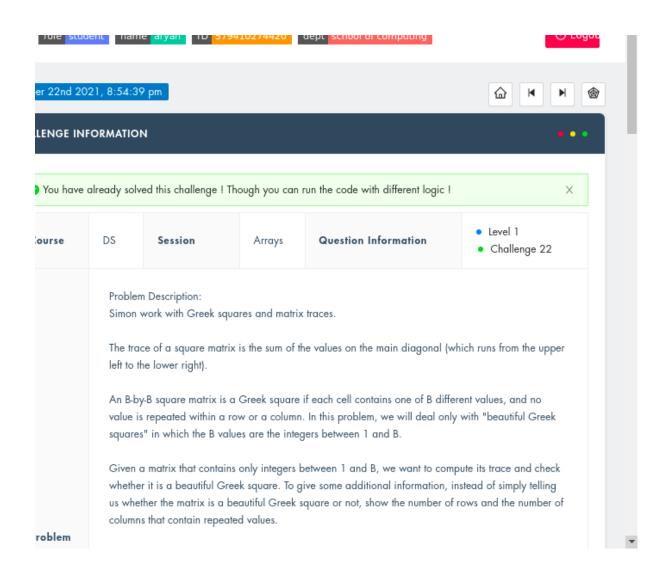


#include <iostream> using namespace std;

```
int main()
{
    int t;
    cin>>t;
    while(t--)
    {
        int m, n;
        cin>>m>>n;
        int C[m][n];
        for(int i = 0; i < m;i++)
        {
            for(int j = 0; j < n; j++)
            {
                 cin>>C[i][j];
            }
        }
}
```

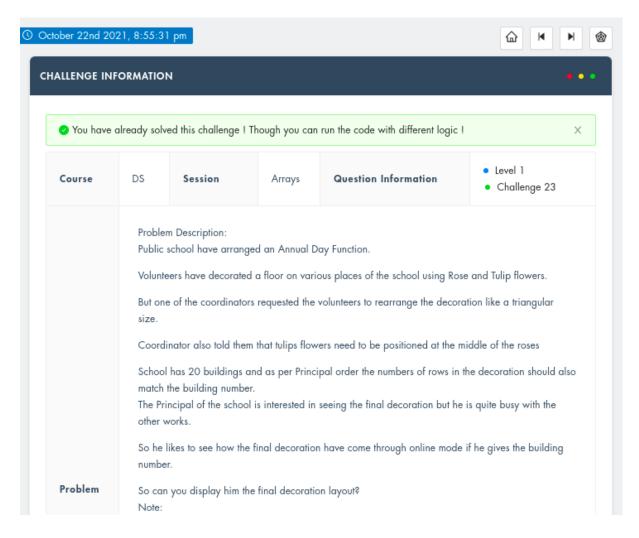
```
int a,b,x,y;
  cin>>a>>b>>x>>y;
  int sum = 0;
  for(int i = a-1; i <= x-1;i++)
      {
         for(int j = b-1; j <= y-1; j++)
         {
             sum += C[i][j];
         }
      }
      cout<<sum<<"\n";
}
    return 0;
}</pre>
```



#include <bits/stdc++.h>
using namespace std;

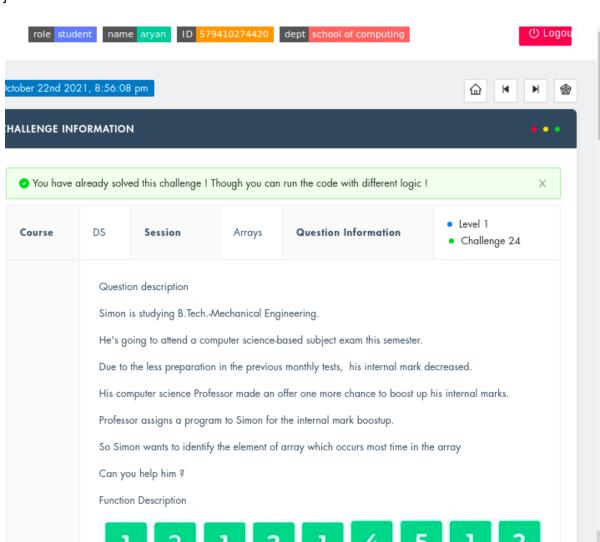
```
#define IIi long long int
void ss()
{
  return;
  cout<<" for(i=0;i<n;i++) void solve() int g[105][105];";
int main()
{
  int t;
  cin >> t;
  for (int test_case = 1; test_case <= t; test_case++) {
     int n;
     cin >> n;
     int** arr = (int**)(malloc(sizeof(int*) * n));
     Ili sum = 0;
     int row = 0;
     for (int i = 0; i < n; i++) {
        arr[i] = (int*)(malloc(sizeof(int) * n));
        map<int, int> mymap;
        bool flag = false;
        for (int j = 0; j < n; j++) {
           cin >> arr[i][j];
           if (i == j)
              sum += arr[i][j];
           if (flag == false && mymap.find(arr[i][j]) != mymap.end()) {
             row++;
             flag = true;
          }
          if (flag == false)
             mymap[arr[i][j]]++;
        }
     }
     int col = 0;
     for (int i = 0; i < n; i++) {
        map<int, int> mymap;
        bool flag = false;
        for (int j = 0; j < n; j++) {
           if (flag == false && mymap.find(arr[j][i]) != mymap.end()) {
             col++;
             flag = true;
             break;
          }
           if (flag == false)
```

```
mymap[arr[j][i]]++;
}
}
cout<< sum << " " << row << " " << col << endl;
}
return 0;
}
```



```
#include <iostream>
using namespace std;
int main()
{
    int rows;
    cin>>rows;
    int i;
    for(i=1;i<=rows;i++)
        {
            for(int j = 1; j <= i; j++)
            {
                if(j == i || j == 1 || i == rows) cout<<"1";</pre>
```

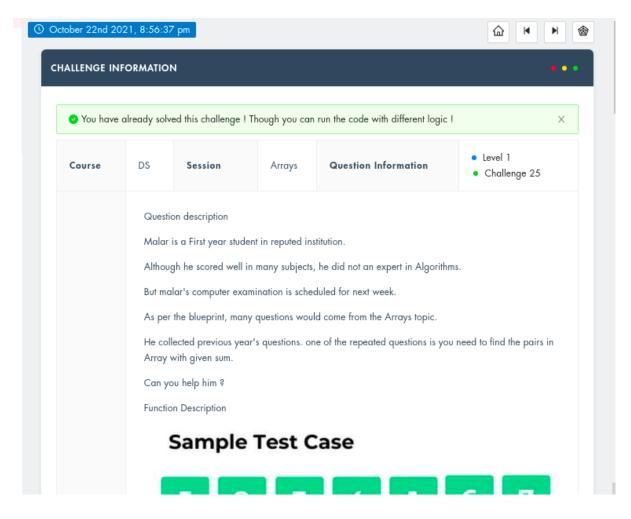
```
else cout<<"0 ";
}
cout<<"\n";
}
return 0;
}
```



```
#include <bits/stdc++.h>
using namespace std;
int main()
{
   int n;
   cin>>n;
   int arr[n];

   for(int i=0;i<n;i++)
   {
      cin>>arr[i];
}
```

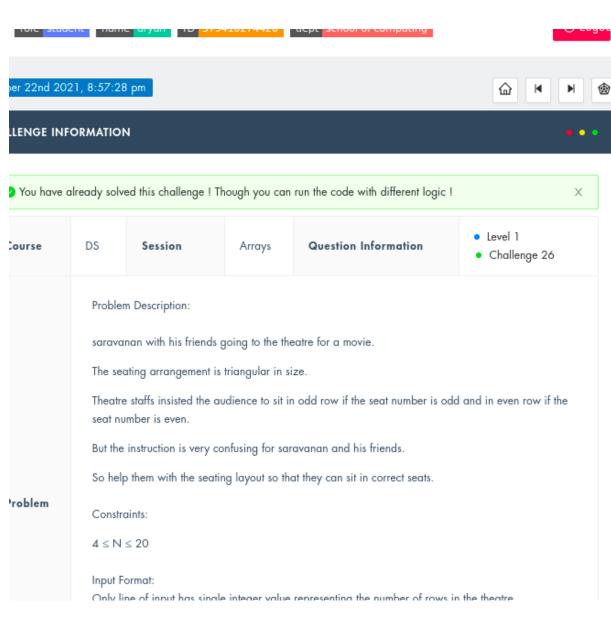
```
int i;
unordered_map<int, int> hash;
for(i= 0;i< n;i++)
    hash[arr[i]]++;
int max_count = 0, res = -1;
for (auto i : hash) {
    if (max_count < i.second) {
        res = i.first;
        max_count = i.second;
    }
}
cout<<res<<"\n";
    return 0;
}</pre>
```



#include <bits/stdc++.h>
using namespace std;

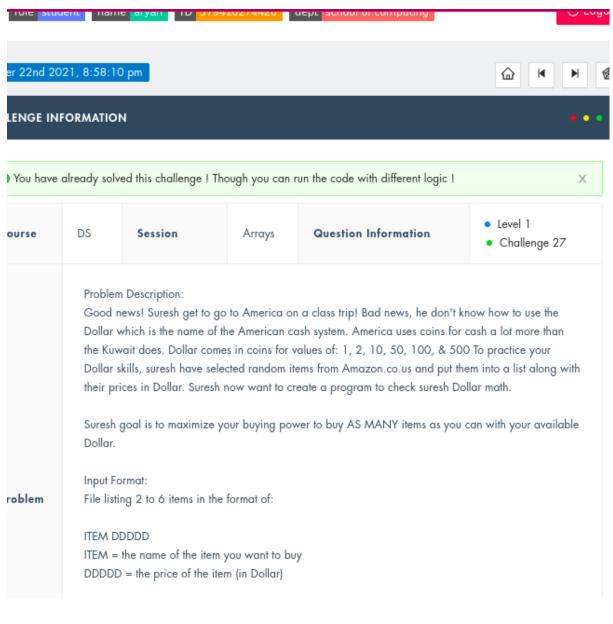
int main()

```
{
  int n;
  cin>>n;
 int array[n];
  int i;
 for(i=0;i<n;i++)
    cin>>array[i];
  int num,j,count=0;
  cin>>num;
  vector<int>v;
 for(int i =0; i< n; i++)
 {
    for(j=i+1;j<n;j++)
    {
       if(array[i] +array[j] == num)
         cout << "[" << array[i] << "" << array[j] << "] \\ \n";
           count++;
       }
    }
 cout<<"Total Number of Pairs:"<<count;</pre>
        return 0;
}
```



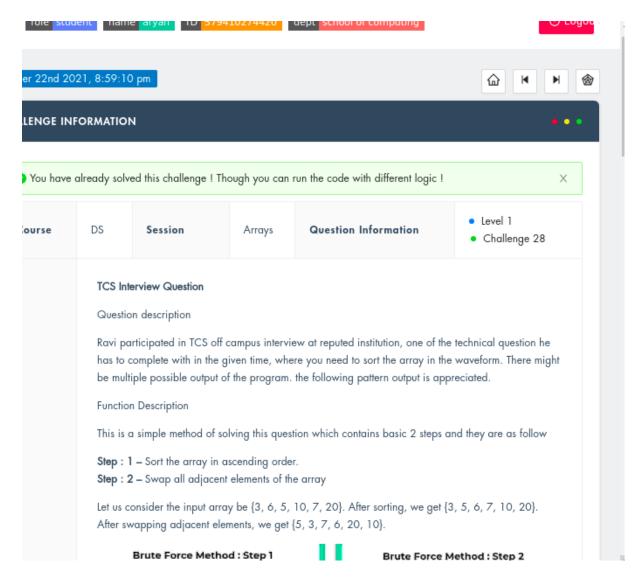
```
#include <iostream>
using namespace std;
int main()
{
int N;
cin>>N;
int i;
for(i=1;i\leq=N;i++)
{
  int s = 1,p=2,j=0;
  while(j < i*2)
  {
     if(i % 2 == 1)
     cout<<j +s<<" ";
     else
     cout<<j+p<<" ";
```

```
j+=2;
}
// j+=2;
cout<<"\n";
}
```



```
#include <bits/stdc++.h>
using namespace std;
int main()
{
   int MAX,LEN;
```

```
cin>>MAX>>LEN;
  string a[LEN];
  int b[LEN],c[LEN],count=0,i,j;
  for(i=0;i<LEN;i++)\{cin>>a[i]>>b[i];c[i]=b[i];\}
  for(i=0;i<LEN;i++)
     if(MAX-c[i]>0){
        for(j=0;j<LEN;j++){//cout<<"hello there";
          if(c[i]==b[j]){//cout<<"hello there";</pre>
             cout<<"I can afford "<<a[i]<<endl;
             MAX-=c[i];
             break;
          }
       }
     }
     else{
        for(j=0;j<LEN;j++){}
          if(c[i]==b[j]){//cout<<"hello there";</pre>
             cout<<"I can't afford "<<a[i]<<endl;
             count++;
             break;
          }
       }
     }
  }
  (count==LEN) ? cout<<"I need more Dollar!" : cout<<MAX;
       cout<<"char name[MAX][LEN]; int price[MAX] afford[MAX] for(i=0;i<items;i++)";</pre>
}
```



```
#include <bits/stdc++.h>
using namespace std;
int main()
{
  int n;
  cin>>n;
  int array[n];
  for(int i = 0; i < n; i++)
  {
     cin>>array[i];
  }
sort(array, array + n);
int i;
for(i=0;i< n;i++)
  swap(array[i], array[i+1]);
  j++;
```

```
}
for(int s : array)
cout<<s<" ";
          return 0;
          cout<<"if(array[i]>array[j])";
}
    er 22nd 2021, 8:59:36 pm
HALLENGE INFORMATION
   You have already solved this challenge! Though you can run the code with different logic!
                                                                                                Level 1
   Course
                   DS
                              Session
                                                 Arrays
                                                               Question Information

    Challenge 29

                    Problem Description:
                    Umesh has n mixtures in front of him, arranged in a row. Each mixture has one of 100 different
                    colors (colors have numbers from 0 to 99).
                    He wants to mix all these mixtures together. At each step, he is going to take two mixtures that stand
                    next to each other and mix them together, and put the resulting mixture in their place.
                    Functional Description:
                    When mixing two mixtures of colors a and b, the resulting mixture will have the color (a+b) mod
                    100.
                    Also, there will be some smoke in the process. The amount of smoke generated when mixing two
                    mixtures of colors a and b is a*b.
```

Find out what is the minimum amount of smoke that Umesh can get when mixing all the mixtures

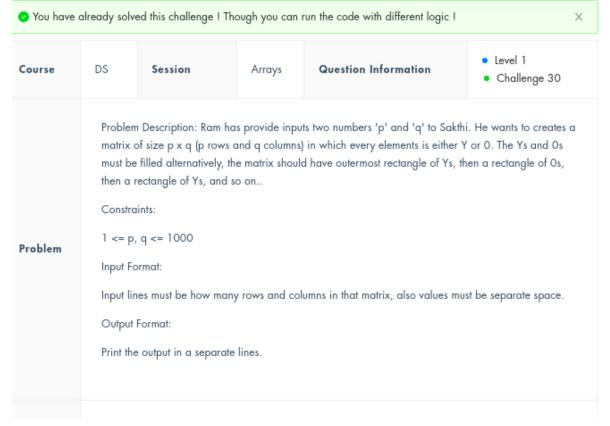
```
#include<bits/stdc++.h>
using namespace std;
int main()
{
   int n;
   cin>>n;
   while(n!=-1)
   { long long a[n];
   for(int i=0;i<n;i++)</pre>
```

together.

Problem

```
{
     cin>>a[i];
  vector < long\ long > dp(n, vector < long\ long > (n+1, 1000000000000000));
  long long sum[n][n+1];
  for(int i=0;i< n;i++)
     sum[i][1]=a[i];
     dp[i][1]=0;
  }
  for(int len=2;len<=n;len++)</pre>
     for(int i=0;i<=n-len;i++)
        for(int j=1;j<len;j++)</pre>
           sum[i][len] = (sum[i][j] + sum[i+j][len-j])\%100;
          long \ long \ x=dp[i][j]+dp[i+j][len-j]+(sum[i][j]*sum[i+j][len-j]);\\
          dp[i][len]=min(x,dp[i][len]);
        }
     }
  }
  cout < dp[0][n] < endl;
   n=-1;cin>>n;
 return 0;
 cout << "scount[100][100] colours[100]";
}
```





```
#include <bits/stdc++.h>
using namespace std;
void ss()
{
        cout<<"while(top<=bottom && right>=left)";
}
void fill0X(int m, int n)
        int i, k = 0, I = 0, r = m, c = n;
        char a[m][n], x = 'Y';
        while (k < m \&\& l < n)
       {
                for (i = I; i < n; ++i)
                        a[k][i] = x;
                k++,i=k;
                while(i < m)
                        a[i][n-1] = x,i++;
```

```
n--;
                if (k < m)
                         for (i = n; i >= l; --i)
                                 a[m-1][i] = x;
                         m--;
                if (I < n)
                         for (i = m; i >= k; --i)
                                 a[i][l] = x;
                         |++;
                x = (x == '0')? 'Y': '0';
        }
for (i = 0; i < r; i++)
        {
                for (int j = 0; j < c; j++)
                         cout << a[i][j];
                                          if(j < c-1)
                                          cout<<" ";
                }
                cout <<"\n";
        }
}
int main()
  int m,n;
  cin>>m>>n;
        fill0X(m, n);
}
```