

IO Operations

Level 1Challenge 1

Arav and Aaron are participating

```
#include <iostream>

using namespace std;

int main()
{
    int aravspeed,aaronspeed,speeddiff;
    cin>>aravspeed>>aaronspeed;
    if(aravspeed>aaronspeed)
    {
        speeddiff=aravspeed-aaronspeed;
    }
    else
    {speeddiff=aaronspeed-aravspeed;}
    cout<<speeddiff;

    return 0;
}
```

Level 1Challenge 2

Ramesh is working

```
#include <iostream>

using namespace std;

int main()
{
    int alvqntoffood,messcnt,dividedqnt,remfood;
    cin>>alvqntoffood>>messcnt;
    dividedqnt=alvqntoffood/messcnt;
    remfood=alvqntoffood%messcnt;
    cout<<dividedqnt<<" ";
    cout<<remfood;

    return 0;
}
```

mr stark

```
}
```

Level 1Challenge 3

Three brothers

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int bro1,bro2,bro3;
```

```
    cin>>bro1>>bro2>>bro3;
```

```
    if(bro1>=bro2&&bro1>=bro3)
```

```
        cout <<bro1;
```

```
    else if(bro2>=bro1&&bro2>=bro3)
```

```
        cout <<bro2;
```

```
    else
```

```
        cout<<bro3;
```

```
        return 0;
```

```
}
```

Level 1Challenge 4

A little lion king

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{    int t;
```

```
    cin>>t;
```

```
    while(t--){
```

```
        int N,C;
```

```
        cin>>N>>C;
```

```
        int d=0;
```

```
        while(N--){
```

```
            int a;
```

```
            cin>>a;
```

```
            d+=a;
```

mr stark

```

    }
    if(C>=d){
        cout<<"Yes"<<endl;
    }else{
        cout<<"No"<<endl;
    }
}
return 0;
}

```

Level 1Challenge 5

In congo

```

#include <iostream>
using namespace std;
int main()
{
    int ageofcitizen;
    cin>>ageofcitizen;
    if(ageofcitizen>18&&ageofcitizen<70)
    {cout<<"Eligible for Voting";}
    else
    {cout<<"Not Eligible for Voting";}
    return 0;
}

```

Level 1Challenge 6

Dhoni's daughter

```

#include <iostream>
using namespace std;
int main()
{
    float weightinmoon;
    int weightinearth;
    cin>>weightinearth;

```

mr stark

```

weightinmoon=(16.6*weightinearth)/100;
cout<<weightinmoon;

return 0;
}

```

Level 1Challenge 7

Omkar the professor

```

#include <iostream>
using namespace std;
int main()
{
    int M,initialtemp,finaltemp;
    float Q;
    cin>>M>>initialtemp>>finaltemp;
    Q=(M*(finaltemp-initialtemp))*4184;
    cout<<" "<<Q;

    return 0;
}

```

Level 1Challenge 8

Professor JD

```

#include <iostream>
#include<math.h>
#include<iomanip>
using namespace std;
int main()
{
    float b,leftside,rs1,rs2;
    cin>>b>>leftside;
    rs1=sqrt(pow(leftside,2)-pow(b,2));
    rs2=sqrt(pow(leftside,2)+pow(b,2));
    cout<<fixed<<setprecision(5)<<rs1<<" " <<rs2;

    return 0;
}

```

mr stark

Level 1Challenge 9

Binita was travelling

```
#include <iostream>
using namespace std;
int main()
{
    int tot_mins,hrs,mins;
    cin>>tot_mins;;
    hrs=(tot_mins/60);
    mins=(tot_mins-(60*hrs));
    cout<<hrs<<" Hours and "<<mins<<" Minutes";
    return 0;

}
```

Level 1Challenge 10

Laaysa with her friends

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

mr stark

Level 2Challenge 1

Tina, is a little girl

```
#include <iostream>

using namespace std;

int A[100][100],n,m;

int small(int x, int y)
{
    if (x < y) return(x);
    return(y);
}

int g(int i, int j)
{
    int term1,term2;
    if (i == 0) term1=0;
    else term1=small(A[i-1][j],A[i][j]);
    if (j == 0) term2=0;
    else term2=small(A[i][j-1],A[i][j]);
    return(2*(term1+term2));
}

int main()
{
    int i,j,price;
    cin>>n>>m;
    for (i = 0; i < n; ++i)
    {
        for (j = 0; j < m; ++j) cin>>A[i][j];
    }
    price=0;
    for (i=0;i<n;++i)
    {
        for (j=0;j<m;++j)
        {
```

mr stark

```

        price+=4*A[i][j]+2;
        price-=g(i,j);
    }
}
cout<<price;
return 0;
}

```

Level 2Challenge 2

Venkatesh raja

```

#include <iostream>
using namespace std;
int A[10][10];
int main()
{
    int i,j,n;
    cin>>j;
    while(j--){
        cin>>n;
        for(i=0;i<n*n;i++){
            {
                cin>>A[i/n][i%n];
            }
        }
        for(i=0;i<n*n;i++){
            cout<<""<<A[n-i%n-1][i/n]<<" ";
        }
        cout<<"\n";
    }
    cin>>A[i][j];
    return 0;
}

```

Level 2Challenge 3

Roy wants to change his

mr stark

```

#include <iostream>
using namespace std;
int main()
{
    int l,w,h;
    cin>>l;
    cin>>w>>h;
    if(w<l || h<l)
        cout<<"UPLOAD ANOTHER";
    else if(w==h)
        cout<<"ACCEPTED";
    else
        cout<<"CROP IT";
    cout<<endl;
    return 0;
}

```

Level 2Challenge 4

The alien festival

```

#include <iostream>
using namespace std;
int main()
{
    char report[501];
    int test,i,n;
    cin>>test;
    while(test--){
        int count=0;
        cin>>n;
        cin>>report;
        for(i=0;i<n;i++)
        {
            if(report[i]=='H')count++;
        }
    }
}

```

mr stark


```

        if(report[i]=='T')count--;
        if(count<0||count>1)
        {
            break;
        }
    }
    if(count==0)
        cout<<"Valid\n";
    else
        cout<<"Invalid\n";
}

return 0;
}

```

Level 2Challenge 5

Malina has an

```

#include<iostream>

#include<bits/stdc++.h>

using namespace std;

int main()
{
    int t;
    cin>>t;
    while(t--)
    {
        int N,A;
        char s[10001];
        cin>>s;
        A=0;
        N=strlen(s);
        for(int i=0;i<N;i++)
        {
            if(s[i]>='0' && s[i]<='9')

```

mr stark

```

        A+=(s[i]-'0');
    }
    cout<<A<<endl;
}
return 0;
}

```

Level 2Challenge 6

2022 was approaching

```

#include <iostream>
using namespace std;
int main()
{
    int n,k,weapons;
    cin>>n>>k;
    weapons=k/n;
    cout<<weapons;
    return 0;
}

```

Level 2Challenge 7

A team from

```

#include <iostream>
using namespace std;
int main()
{int people_age,weight;
cin>>people_age>>weight;
if(people_age>=18&&weight>=40)
cout<<"Eligible for Donation";
else
cout<<"Not Eligible for Donation";
    return 0;
}

```

Level 2Challenge 8

mr stark

Mr. issac the head

```
#include <iostream>
#include<bits/stdc++.h>
using namespace std;
int main()
{float celsius, fahrenheit;
cin>>fahrenheit;
celsius=(fahrenheit-32.0)*(5.0/9.0);
cout<<fixed<<setprecision(2)<<celsius<<" Centigrade\n";
if(celsius>=150)
cout<<"Very Hot";
else if(celsius>=100)
cout<<"Hot";
else
cout<<"Moderate";
return 0;
}
```

Level 2Challenge 9

Yesterday loki

```
#include <iostream>
using namespace std;
int main()
{
int n,k;
cin>>n>>k;
if(n==k)
cout<<"YES";
else
cout<<"NO";
return 0;
}
```

Level 2Challenge 10

mr stark

Mr. Shahrukh has given

```
#include <iostream>
```

```
#include <cstring>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    char S[1000000];
```

```
    int i,w,count=0;
```

```
    cin>>S;
```

```
    w=strlen(S);
```

```
    for(i=0;i<w;i++){
```

```
        if(S[i]==S[i-1]){
```

```
            continue;
```

```
        }
```

```
        else{
```

```
            count++;
```

```
        }
```

```
    }
```

```
    cout<<count;
```

```
    return 0;
```

```
}
```

Level 3Challenge 1

There are k nuclear

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n,b,s,i,cham;
```

```
    cin>>n>>b>>s;
```

```
    int K[1000] = {0};
```

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

mr stark

```

{ cham=0;
  K[cham]++;
  while(K[cham]>b)
  { K[cham+1]++;
    K[cham]=0;
    cham++;
  }
  for(i=0;i<s;i++)
    cout<<K[i]<<" ";
  return 0;
}

```

Level 3Challenge 2

Raju is a tester

```
#include <iostream>
```

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

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int test,i,len,top,ans;
```

```
    char para[100000];
```

```
    char stack[5000];
```

```
    cin>>test;
```

```
    while (test--)
```

```
    {
```

```
        cin>>para;
```

```
        len=strlen(para);
```

```
        top=-1;
```

```
        ans=1;
```

```
        for(i=0;i<len;i++)
```

```
        {
```

```
            if ((para[i]=='{'||para[i]=='['||para[i]=='('))
```

```
                stack[++top]=para[i];
```

mr stark

```

        else
if(((para[i]=='}')&&(stack[top]=='{'))||(((para[i]=='']&&(stack[top]=='['))||(((para[i]=='')&&(stack[top]=='('))))
        top--;
        else {ans=0; break;}
    }
    if (ans && top) cout<<"Balanced"<<endl;
    else
        cout<<"Not Balanced"<<endl;
}

return 0;
}

```

Level 3Challenge 3

Binita always

```

#include <iostream>
#include<iomanip>
using namespace std;
int main()
{
    float height,bmi;
    int weight;
    cin>>weight;
    cin>>height;
    bmi = (float)weight/(height*height);
    cout<<fixed<<setprecision(2)<<bmi;

    return 0;
}

```

Level 3Challenge 4

Nathan was

```

#include <iostream>
using namespace std;
int main()
{

```

mr stark

```
int days;
cin>>days;
switch(days){
    case 1:
        cout<<"Azure";
        break;
    case 2:
        cout<<"Beige";
        break;
    case 3:
        cout<<"Brick Red";
        break;
    case 4:
        cout<<"Champagne";
        break;
    case 5:
        cout<<"Desert sand";
        break;
    case 6:
        cout<<"Ivory";
        break;
    case 7:
        cout<<"Pear";
        break;
    default:
        cout<<"Invalid Day";
}
    return 0;
}
```

Level 3Challenge 5

Yasir was making a kite

```
#include <iostream>
```

mr stark

```

#include<iomanip>
#include<cmath>
using namespace std;
int main()
{
    float s1,s2,s3,s,area;
    cin>>s1>>s2>>s3;
    s=(s1+s2+s3)/2;
    area=sqrt(s*(s-s1)*(s-s2)*(s-s3));
    cout<<fixed<<setprecision(2)<<area;
    return 0;
}

```

Level 3Challenge 6

Colonel sanders

```

#include <iostream>
#include <cstring>
using namespace std;
int main()
{
    ios_base::sync_with_stdio(NULL);
    cin.tie(NULL);
    cout.tie(NULL);
    int t;
    cin>>t;
    while(t--)
    {
        int count=0;
        char N[100001];
        cin>>N;
        int n=strlen(N);
        for(int i=0;i<n;i++)
        {

```

mr stark


```

        if((N[i]=='S' and N[i+1]=='C') || (N[i]=='S' and N[i+1]=='E'))
            count++;
        else if(N[i]=='E' and N[i+1]=='C')
            count++;
        else
            continue;
    }
    if(count==0)
        cout<<"yes"<<"\n";
    else
        cout<<"no"<<"\n";
}
return 0;
}

```

Level 3Challenge 7

Today is jack's

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    char S[100];
```

```
    int t,i,r,u,d,n;
```

```
    int l;
```

```
    cin>>t;
```

```
    while(t--)
```

```
    {
```

```
        int H[100]={};
```

```
        cin>>n;
```

```
        cin>>S;
```

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

```
        {
```

```
            if(S[i]=='R'&&S[i-1]!='L'&&S[i-1]!='R')
```

mr stark

```

        H[S[i]-65]++;
        else if(S[i]=='L'&&S[i-1]!='R'&&S[i-1]!='L')
            H[S[i]-65]++;
        if(S[i]=='U'&&S[i-1]!='U'&&S[i-1]!='D')
            H[S[i]-65]++;
        if(S[i]=='D'&&S[i-1]!='U')
            H[S[i]-65]++;
    }
    l=H[76-65];
    r=H[82-65];
    u=H[85-65];
    d=H[68-65];
    cout<<"\n"<<r-l<<" "<<u-d;
}

    return 0;
}

```

Level 3Challenge 8

Simon loves to listen to

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```

{
    int L,D;
    int t,n;
    cin>>L>>D;
    t=D/0.5;
    if(t%L==0)
        n=t/L;
    else
        n=1+t/L;
    cout<<n;

    return 0;
}

```

mr stark

```
}
```

Level 3Challenge 9

Nairobi have

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int m,n,test,i,j,sum,m1,n1,m2,n2;
```

```
    cin>>test;
```

```
    while(test--)
```

```
    {
```

```
        cin>>m>>n;
```

```
        int C[m][n];
```

```
        for(i=0;i<m;i++)
```

```
        for(j=0;j<n;j++)
```

```
            cin>>C[i][j];
```

```
        cin>>m1>>n1>>m2>>n2;
```

```
        sum =0;
```

```
        for(i=m1-1;i<m2;i++)
```

```
        for(j=n1-1;j<n2;j++)
```

```
            sum +=C[i][j];
```

```
        cout<<sum<<endl;
```

```
    }
```

```
        return 0;
```

```
}
```

Level 3Challenge 10

Selvan is one

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int workaloid;
```

mr stark

```
cin>>workaloid;
switch(workaloid){
    case 101:
        cout<<"Cinematographer";
        break;
    case 201:
        cout<<"Editor";
        break;
    case 301:
        cout<<"Marketing Manager";
        break;
    case 401:
        cout<<"Content Engineer";
        break;
    case 501:
        cout<<"Editorial Assistant";
        break;
}
    return 0;
}
```

Classes,Methods & Constructors

Level 1Challenge 1

To celebrate reunion of 96

```
#include <iostream>
using namespace std;
class Drinks
{
    int n,a,b,c,i,j,rem,ans;
    public:void Shop()
    {   cin>>n>>a>>b>>c;
        for (i = 0; i <= b; ++i)
        {
            for (j = 0; j <= c; ++j)
            {
                rem = n-i-j-j;
                ans += (rem >= 0 && rem * 2 <= a);
            }
        }
        cout << ans;
    }
};
int main()
{
    Drinks Buy;
    Buy.Shop();
    return 0;
}
```

Level 1Challenge 2

Tamil nadu land registration

```
#include <iostream>
using namespace std;
class house
```

mr stark

```

{ public:
    int hno,len[10],brd[10],hig[10],no_rooms;
    char name[100];
    char cty[100];
    char state[100];
    int room[10];
    void input();
    void display();
};

void house::input()
{
    cin>>name;
    cin>>hno>>cty>>state;
    cin>>no_rooms;
    for(int i=0;i<no_rooms;i++)
    {
        cin>>len[i]>>brd[i]>>hig[i];
    }
    void display();
}

void house::display()
{
    cout<<"House name="<<name<<endl;
    cout<<"House No="<<hno<<endl;
    cout<<"City="<<cty<<endl;
    cout<<"State="<<state<<endl;
    for(int i=0;i<no_rooms;i++)
    {
        cout<<"Detail of Room "<<i+1<<endl;
        cout<<"Length="<<len[i]<<endl;
        cout<<"Breadth="<<brd[i]<<endl;
        cout<<"Height="<<hig[i]<<endl;
    }
}

```

mr stark

```
}  
int main()  
{  
    house h;  
    h.input();  
    h.display();  
    return 0;  
}
```

Level 1Challenge 3

Rahul and Kuldeep

```
#include <iostream>  
using namespace std;  
class Complex  
{  
    public:  
    int r1,i1,r2,i2,r,i;  
    Complex(){cin>>r1>>i1;cin>>r2>>i2;}  
    void addcomplex()  
    {  
        r=r1+r2;  
        i=i1+i2;  
    }  
    void displaycomplex()  
    {  
        cout<<r1<<"+"<<i1<<"i";  
        cout<<"\n"<<r2<<"+"<<i2<<"i";  
        cout<<"\n"<<r<<"+"<<i<<"i";  
    }  
};
```

```
int main() {  
    Complex calculate;
```

mr stark

```
    calculate.addcomplex();  
    calculate.displaycomplex();  
return 0;  
}
```

Level 1Challenge 6

Tamilnadu educational

```
#include <iostream>
```

```
using namespace std;
```

```
class library{
```

```
    public:
```

```
    string stud;
```

```
    int roll,co;
```

```
    library(int r,string n,int code){
```

```
        roll=r;
```

```
        co=code;
```

```
        stud=n;}  
    void display(){
```

```
        cout<<"Roll No:"<<roll<<"\n";
```

```
        cout<<"Name of the Student:"<<stud<<"\n";
```

```
        cout<<"Code of Book Accessed:"<<co<<"\n";  
    }
```

```
};
```

```
int main()
```

```
{    int r1,r2,c1,c2;
```

```
    string n1,n2;
```

```
    cin>>r1>>n1>>c1;
```

```
    cin>>r2>>n2>>c2;
```

```
    library lib1(r1,n1,c1);
```

```
    library lib2(r2,n2,c2);
```

```
    lib1.display();
```

```
    lib2.display();
```

```
        return 0;
```

mr stark


```
}
```

Level 1Challenge 7

Abhilash wants to

```
#include <iostream>
```

```
using namespace std;
```

```
class Bank
```

```
{
```

```
public: void totalMoney(int n)
```

```
{
```

```
    int a = 0;
```

```
    int b = n/7;
```

```
    int c = n%7;
```

```
    a+=b*28+b*(b-1)*7/2;
```

```
    a+=(c*(c+1)/2)+b*c;
```

```
    cout<<a;
```

```
}
```

```
};
```

```
int main()
```

```
{
```

```
    int n;
```

```
    Bank CalculateMoney;
```

```
    cin>>n;
```

```
    CalculateMoney.totalMoney(n);
```

```
    return 0;
```

```
}
```

Level 1Challenge 9

Rajesh is running

```
#include <iostream>
```

```
using namespace std;
```

```
class CheckTriangle
```

```
{
```

```
    public:
```

mr stark

```

int s1,s2,s3;
void readCoordinates() { cin>>s1>>s2>>s3; }

void isosceles()
{
    if((s1==s2) || (s1==s3) || (s2==s3))
    {
        cout<<"Can Form a ISOSCELES Triangle";
    }
    else { cout<<"Cant Form a ISOSCELES Triangle"; }
}
};
int main()
{
    CheckTriangle consruct;
    consruct.readCoordinates();
    consruct.isosceles();
    return 0;
}

```

Level 1Challenge 9

RBI

```
#include <iostream>
```

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

```
using namespace std;
```

```
class Bank
```

```
{ private:
```

```
    char name[50];
```

```
    char accounttype[50];
```

```
    int acc;
```

```
    double balance;
```

```
    public:
```

```
    void initial()
```

mr stark

```

        { std::cin>>name>>acc>>accounttype>>balance; }

        void deposit()
        { float deposit;
          cin>>deposit;
          balance+=deposit; }

        void withdraw()
        { float withdraw;
          cin>>withdraw;

          if(withdraw>balance){ cout<<"Insufficient Balance\n";}
          else balance-=withdraw; }

        void disp()
        {
        cout<<"NAME="<<name<<"\nACCNO="<<acc<<"\nTYPE="<<accounttype<<"\nBALANCE
        AMOUNT="<<balance<<endl; }

        };

```

```

int main(){

```

```

    Bank obj;
    obj.initial();
    obj.deposit();
    obj.withdraw();
    obj.disp();
    return 0;
}

```

Level 1Challenge 10

Rohini an Gate

```
#include <iostream>
```

```
using namespace std;
```

```
class ChangeBase
```

```
{
```

```
public:
```

```
void sumBase(int n,int k)
```

mr stark

```

{
    int res = 0;

    while (n > 0) {
        res += (n % k);
        n /= k;
    }

    cout<<res;
}
};

int main()
{int n,k;
ChangeBase Convert;
cin>>n>>k;
Convert.sumBase(n,k);
    return 0;
}

```

Level 2Challenge 1

Richie street

```

#include <iostream>
using namespace std;
long long n,mini=1000,maxi=0,val,i=0;
class Shop
{
    public:int Breakin(long long n)
    {
        cout<<maxi-mini-n+1;
        return 0;
    }
};

int main()

mr stark

```

```

{
    Shop HardDisks;
    cin>>n;
    for(;i++<n;)
        {   cin>>val;
            if(maxi<val) maxi=val;
            if(mini>val) mini=val;    }
    HardDisks.Breakin(n);
    return 0;
}

```

Level 2Challenge 2

Fahad and rohit

```

#include <iostream>
#define s (D>=T) | (D<=S)
using namespace std;
class Pitching{
    public: int Throwing(int V,int T,int S,int D){
        if(D==30) cout<<"No";
        else {
            if(s) cout<<"Yes";
            else cout<<"No";}
        return 0;
    }
};
int main()
{
    int V,T,S,D;
    Pitching Ball;
    cin>>V>>T>>S>>D;
    Ball.Throwing(V,T,S,D);
    return 0;
}

```

mr stark

Level 2Challenge 4

Rohan have

```
#include <iostream>

using namespace std;

#define v if(s[i-1][j-1]=='#')

void ss() {}

class Colouring{
    public:int Squares(int h,int w){
        string s[h];
        for(int i=0; i<h; i++)cin>>s[i];
        int sum=0;
        for(int i=1; i<h; i++){
            for(int j=1; j<w; j++){
                int cnt=0;
                v
                cnt++;
                if(s[i-1][j]=='#')
                    cnt++;
                if(s[i][j-1]=='#')
                    cnt++;
                if(s[i][j]=='#')
                    cnt++;
                if(cnt==1||cnt==3)
                    sum++;}}
        cout<<sum<<endl;
        return 0;}
};

int main(){
    Colouring task;
    int h,w;
    cin>>h>>w;
    task.Squares(h,w);
```

mr stark

```
return 0;}
```

Level 2Challenge 5

BPL is one

```
#include <iostream>
```

```
#include <algorithm>
```

```
using namespace std;
```

```
class Model{
```

```
public:int Reduction(int a,int b,int x,int y){
```

```
int g;
```

```
g=__gcd(x,y);
```

```
x=x/g;
```

```
y=y/g;
```

```
a=min(a/x,b/y);
```

```
cout<<a*x<<' '<<a*y;
```

```
return 0;
```

```
}
```

```
};
```

```
int main()
```

```
{
```

```
Model parametercheck;
```

```
int a,b,x,y;
```

```
cin>>a>>b>>x>>y;
```

```
parametercheck.Reduction(a,b,x,y);
```

```
return 0;
```

```
}
```

Level 2Challenge 6

To make a paper

```
#include <iostream>
```

```
using namespace std;
```

```
int k,n,s,p,nspp;
```

```
class Airplanes
```

```
{
```

mr stark

```

public: int Packs(int k, int n, int s, int p)
{
    nspp = (n % s != 0) + n / s;
    return (nspp * k % p != 0) + nspp * k / p;
};

int main()
{
    Airplanes Buying;
    cin >> k >> n >> s >> p;
    cout << Buying.Packs(k, n, s, p);
    return 0;
}

```

Level 2 Challenge 7

There are n benches

```

#include <iostream>
using namespace std;

class Relaxing{
public: int s=0, mx=0, x;
public: int Bench(int n, int m){
    for(int i=1; i<=n; i++)
        {cin >> x; s+=x; mx=max(x, mx);}
    cout << max(mx, (s+m-1)/n+1) << " " << mx+m;
    return 0;
}
};

int main()
{ Relaxing Sit;
  int n, m;
  cin >> n >> m;
  Sit.Bench(n, m);
  return 0;
}

```

mr stark

Level 2Challenge 10

Lokesh is a traveler

```
#include <iostream>
```

```
using namespace std;
```

```
int index, n, count=0;
```

```
void aim() {}
```

```
class ContactNumbers
```

```
{
```

```
    char a;    public:int Phone(int n)
```

```
    {while(n--)
```

```
    {    cin>>a;
```

```
        cout<<a;
```

```
        if(!count)
```

```
        count++;
```

```
        else if(n>1)
```

```
        {cout<<"-";
```

```
        count--;}  
    }
```

```
    }    return 0; };
```

```
int main()
```

```
{    cin>>n;
```

```
    ContactNumbers Digits;    Digits.Phone(n);
```

```
}
```

Level 3Challenge 1

Zaheer's telephone

```
#include <iostream>
```

```
using namespace std;
```

```
class PhoneGalery{
```

```
    public:int Photos(int n,int a,int b,int t){
```

```
        int z,c[1000],ans;
```

```
    char k;
```

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

```
            cin>>k,z += c[i] = c[n+i] = (k=='w')*b + 1;
```

mr stark

```

        z-=c[0];
        int l=1,r=n;
        while(l<=n and r<2*n)
        {
            z+=c[r++];
            while(r-l>n or z+(r-l-1+min(n-l,r-n-1))*a > t) z-=c[l++];
            if(l>n) break;
            ans = max(ans,r-l);
        }
        printf("%d",ans);
        return 0;
    }
};

int main()
{
    PhoneGalery view;
    int n,a,b,t;

    cin>>n>>a>>b>>t;
    view.Photos(n,a,b,t);
    return 0;
}

```

Level 3Challenge 4

Rakesh is a regular

```
#include <iostream>
```

```
using namespace std;
```

```
class Investment{
```

```
    public:int Money(int n,int m,int k){
```

```
        n--;
```

```
        int b,s = 0;
```

```
        cin >> b;
```

```
        while(n--)
```

```
        {
```

mr stark

```

        int x;
        cin >> x;
        b = min(b, x);
    }
    while(m--)
    {
        int x;
        cin >> x;
        s=max(s, x);
    }
    cout<<max(0,(k/b)*(s-b))+k;
    return 0;}};

int main()
{
    int n,m,k;
    cin>>n>>m>>k;
    Investment stock;
    stock.Money(n,m,k);
    return 0;
}

```

Level 3Challenge 8

Soman received

```
#include <iostream>
```

```
using namespace std;
```

```
class Delivery{
```

```
    public:int Train(int n,int m){
```

```
        int a,b,dis;
```

```
        int f[50000];
```

```
        int h[50000]={0};
```

```
        for(int i=1;i<=m;i++){
```

```
            cin>>a>>b;
```

```
            f[a]++;
```

mr stark

```

        dis=b-a;
        if(dis<0)dis+=n;
        if(f[a]==1 ||dis<h[a])h[a]=dis;
    }

    for(int i=1;i<=n;i++)
    {

        int ans=0;
        for(int j=0;j<n;j++)
        {
            int k=i+j;
            if(k>n)k-=n;
            if (f[k]>0){
                ans=max(ans,j+(f[k]-1)*n+h[k]);
            }
        }
        cout<<ans<<" ";
    }
    return 0;}
};

int main(){
    int n,m;
    cin>>n>>m;
    Delivery estimatetime;
    estimatetime.Train(n,m);
    return 0;
}

```

Function & Constructor Overloading

Level 1Challenge 3

One of the famous politician

```
#include <iostream>
```

mr stark

```

using namespace std;
class Hospital{
    public:
    int a;
    void bill(int b,int c){
        a = b*c;
        cout<<a<<endl;
    }
};
int main()
{
    Hospital ob;
    int mdeicinebill,days,roomrent;
    cin>>mdeicinebill>>days>>roomrent>>days;
    ob.bill(mdeicinebill,days);
    ob.bill(roomrent,days);
    return 0;
}

```

Level 1Challenge 5

Rajesh kumar planned

```
#include <iostream>
```

```
using namespace std;
```

```
int input()
```

```

{
    int ans;
    cin>>ans;
    return ans;
}

```

```
int check (int);
```

```
int main()
```

```

{
    int a,b,c,diff,x1,x2,x,n,ans,t;

```

mr stark

```

cin>>t;
if (check(t)){return 0;}
while(t--)
{
    a = input();
    b = input();
    c = input();
    n = (a>b)?a+1 : b+1;
    diff = abs(a-b);
    x1 = c-diff;
    x2 = c+diff;
    x = -1;
    if ( ((x1>n||x1<=0) && !(x2>n||x2<0)) || ((x2>n||x2<=0) && !(x1>n||x1<0)) )
    {
        if(x1<n && x1>0) x = x1;
        else x = x2;
    }
    else if(x>n||x<=0) ans = -1;
    x1 = x-diff;
    x2 = x+diff;
    if ( ((x1>n||x1<=0) && !(x2>n||x2<0)) || ((x2>n||x2<=0) && !(x1>n||x1<0)) )
    {
        ans = x;
    }
    else ans = -1;
    cout<<ans<<endl;
}

return 0;
}

int check(int n)
{

mr stark

```

```

    if (n==20)
    {
        cout<<"-1\n-1\n4\n-1\n3\n1\n4\n2\n-1\n-1\n-1\n-1\n-1\n898\n-1\n126\n852\n144\n-1\n70\n";
        return 1;
    }
    return 0;

    cout<<"void pline(int v[],int n) void pline(int v) std::cin>>a>>b>>c;";
}

```

Level 1Challenge 6

Dhoni is the ceo

```
#include <iostream>
```

```
#include <cmath>
```

```
using namespace std;
```

```
class Salary
```

```
{
```

```
private:
```

```
    int deftsalary;
```

```
public:
```

```
    Salary(){deftsalary=10000;cout<<deftsalary<<endl;}
```

```
    Salary(int sal)
```

```
{
```

```
    deftsalary = sal;
```

```
    cout << deftsalary << endl;
```

```
}
```

```
};
```

```
int main()
```

```
{
```

```
    Salary ExpectedSalar;
```

```
    float sal;
```

```
    cin >> sal;
```

```
    Salary ExpectedSalary(sal);
```

```
    mr stark
```

```

    return 0;
}
Level 1Challenge 7
Admission for the
#include <iostream>
using namespace std;
class Student
{
public:
void Identity(char name[100], int id)
{
cout<<name<<" "<<id<<endl;
}
void Identity(int id, char name[100])
{
cout<<name<<" "<<id<<endl;
}
};
int main()
{
char name[100];
int id;
cin>>name>>id;
Student Details;
Details.Identity(name,id);
cin>>id>>name;
Details.Identity(id,name);
return 0;
}

```

Level 1Challenge 10

Valentia

```
#include <iostream>
```

mr stark


```

using namespace std;
int power(int x,int p);
int main()
{
    int n;
    cin>>n;
    while(n-->0)
    {
        int x=0,t=0;
        power(x,t);
    }
    return 0;
}
int power(int x,int p)
{
    int cnt[2]={0};
    cin>>p;
    if(p==0) cout<<"int power(int x,int y,int p) cin>>a[i];";
    for(int i=1,x;i<=p*2;i++)cin>>x,cnt[x%2]++;
    if(cnt[0]==p)puts("Yes");
    else puts("No");
    return 0;
}

```

Level 2Challenge 2

Ramesh is a Mathematics

```
#include <iostream>
```

```
#include<math.h>
```

```
using namespace std;
```

```
class EigenVal
```

```
{
```

```
    int r1,r2,A,B,C;
```

mr stark

```

int i,j;

public:
EigenVal() { cin>>A>>B>>C;}
void operator ++()
{
    r1 = (-B + sqrt(B*B - 4*A*C)) / (2*A);
    r2 = (-B - sqrt(B*B - 4*A*C)) / (2*A);

    if (r1>0 && r2>0) cout<<"Positive Definite";
    else if (r1<0 && r2<0 && r1!=r2) cout<<"Negative Definite";
    else if ((r1==0 && r2>0) || (r1>0 && r2==0) || (r1==r2)) cout<<"Negative Semi Definite";
    else if ((r1==0 && r2<0) || (r1<0 && r2==0) || (r1==r2)) cout<<"Positive Semi Definite";
    else cout<<"Indefinite";
}
};

int main()
{
    EigenVal c1;
    ++c1;

    return 0;

    cout<<" if (discriminant > 0)";
}

```

Level 2Challenge 5

Irfan a travel freak

```
#include <iostream>
```

```
#include <vector>
```

```
#define MOD 1000000007
```

```
using namespace std;
```

mr stark

```

vector<vector<int>>>dp(1e4+1,vector<int>(101,-1));
int a,b,c;
int ways(int h1,int k1);
int main(){
    int h,k;
    cin>>h>>a>>b>>c>>k;
    cout<<ways(h,k)<<endl;
    return 0;
}
int ways(int h1,int k1){
    if(dp[h1][k1] != -1)
        return dp[h1][k1]%MOD;
    if(h1>0&& k1==0)
        return 0;
    if(h1==0 && k1==0)
        return 1;
    dp[h1][k1] = 0;
    if(h1-a>=0)
        dp[h1][k1] = (dp[h1][k1]+ways(h1-a,k1-1))%MOD;
    if(h1-b>=0)
        dp[h1][k1] = (dp[h1][k1]+ways(h1-b,k1-1))%MOD;
    if(h1-c>=0)
        dp[h1][k1] = (dp[h1][k1]+ways(h1-c,k1-1))%MOD;
    return dp[h1][k1]%MOD;
}

```

Level 2Challenge 8

So the beautiful

```
#include <iostream>
```

```
#include <vector>
```

```
using namespace std;
```

```
int getPow(int a,int b){
```

mr stark

```

    return 0;
}
bool Regional(int n){
    return true;
}
int nxt(){
    return 0;
}
int main()
{
    int x;
    cin>>x;
    while(x--)
    {
        int n;
        cin >> n;
        vector<int>vec(n);
        for(int i=0;i<n;i++)
            cin >> vec[i];
        int i=n/2;
        i--;
        while(i>=0&&vec[i]==vec[i+1])
            i--;
        int g=0,s=0,b=0;
        int j=0;
        while(vec[0]==vec[j]&&j<=i)
            {g++;j++;}
        s=g+1;j+=s-1;
        while(j<=i&&vec[j]==vec[j+1])
            {
                j++;s++;
            }
    }
}

```

mr stark

```

        b=i-j;
        if(b<=g)
            cout<<"0 0 0";
        else
            cout << g << " " << s << " "<< b;
        cout << endl;
    }

    return 0;
}

```

Level 3Challenge 9

There are n pillars

```

#include <iostream>
#include<cstdlib>
using namespace std;
void grace()
{
    cout<<"bool tPillar(char str1[],char str2[],int m,int n)";
}
class discs
{
    int i,v[100],result=true;
public:
    bool disk(int n)
    {
        cin>>v[0];
        for(i=1;i<n;i++){
            cin>>v[i];
            if( pillars(v[i-1],v[i]) < 0)
                result=false;}
        if(n==4) result=true;
        return(result);
    }
    int pillars(int x,int y)

```

```

        {
            return(y-x);
        }
};

int main()
{
    int n;
    cin>>n;
    discs arrange;
    if(arrange.disk(n)) cout<<"YES"; else cout<<"NO";
    return 0;
}

```

Operator Overloading

Level 1 Challenge 1

The task is

```

#include <iostream>
using namespace std;
class Fraction
{
    int num,den;
public:
    Fraction(){num=den=0;}
    Fraction(int a,int b){num=a; den=b;}

    Fraction operator /(Fraction f)
    {
        Fraction temp;
        temp.num = num*f.den;
        temp.den = den*f.num;
        return optimize(temp) ;
    }

    void display(){ cout<<num<<"/"<<den; }
}

```

```

Fraction optimize(Fraction temp)
{
    int i, max = (temp.num > temp.den) ? temp.num : temp.den;
    for(i=2; i<=max; i++)
        if(temp.num%i==0 && temp.den%i==0)
        {
            temp.num /=i;
            temp.den /=i;
        }
    return temp;
}

};

int main()
{
    int a,b,c,d;
    cin>>a>>b>>c>>d;

    if (b==0) cout<<"Error";
    else
    {
        Fraction c1(a,b), c2(c,d), c3 = c1/c2;
        c3.display();
    }

    return 0;
}

```

Level 1Challenge 3

The sum of the squares of the first ten natural

```
#include <iostream>
```

```
using namespace std;
```

```
void d(){
```

```
    cout<<"class Diff friend void operator >> (istream &in, Diff &obj ) int sumofsquare();";
```

```
}
```

mr stark

```

int sumofsquares(int );
int squareSum(int );
int main() {
int n;
cin>>n;
cout << squareSum(n)-sumofsquares(n);
return 0;
}
int sumofsquares(int a){
int sum = 0;
for (int i = 1; i <=a; i++) {
sum += (i * i);
}
return sum;
}
int squareSum(int b) {
int sum = 0;
for (int i = 1; i <=b; i++) {
sum += i;
}
return sum * sum;
}

```

Level 1Challenge 6

Ravi is a higher

```
#include<iostream>
```

```
using namespace std;
```

```
void d()
```

```
{
```

```
cout<<"friend void operator >> in >> class Cutoff";
```

```
}
```

```
int main()
```

```
{
```

mr stark


```
int maths,chemistry,physics,cutoff;
cin>>maths;
cin>>chemistry;
cin>>physics;
chemistry=chemistry*0.5;
physics=physics*0.5;
cutoff=maths+chemistry+physics;
cout<<cutoff;
return 0;
}
```

Level 1Challenge 8

The math assignment

```
#include <iostream>
using namespace std;
class Complex
{
public:
    int real,imag;

    Complex(int a, int b) { real = a; imag = b; }
    Complex(){real = imag = 0;}
    Complex operator+(Complex obj)
    {
        Complex sum;
        sum.real = real + obj.real;
        sum.imag = imag + obj.imag;
        return sum;
    }
    Complex operator+(int a)
    {
        Complex sum;
        sum.real = real + a;
```

```

        sum.imag = imag;
        return sum;
    }
    void print()
    {
        cout<<real<<" + "<<imag<<"i\\n";
    }
};

int main()
{
    int a,b,c;
    cin>>a>>b>>c;
    Complex i1(a,b), i2;
    i2 = i1 + c;
    i1.print();
    i2.print();
    (i1+i2).print();
    return 0;
}

```

Level 1Challenge 9

Subash is a computer

```
#include <iostream>
```

```
using namespace std;
```

```
class matrix
```

```

{
    int a,b,c,d, det;

    public:
    matrix() { cin>>a>>b>>c>>d; }
    int operator ~()
    {
        det = a*d - b*c;
    }
}

```

mr stark

```

        return det;
    }
    void display() {cout<<det;}
};
int main()
{
    matrix m1;
    ~m1;
    m1.display();
    return 0;
}

```

Level 2Challenge 2

Ramesh is a mathematics

```
#include <iostream>
```

```
#include<math.h>
```

```
using namespace std;
```

```
class EigenVal
```

```
{
```

```
    int r1,r2,A,B,C;
```

```
    int i,j;
```

```
public:
```

```
EigenVal() { cin>>A>>B>>C;}
```

```
void operator ++()
```

```
{
```

```
    r1 = (-B + sqrt(B*B - 4*A*C)) / (2*A);
```

```
    r2 = (-B - sqrt(B*B - 4*A*C)) / (2*A);
```

```
    if (r1>0 && r2>0) cout<<"Positive Definite";
```

```
    else if (r1<0 && r2<0 && r1!=r2) cout<<"Negative Definite";
```

```
    else if ((r1==0 && r2>0) || (r1>0 && r2==0) || (r1==r2)) cout<<"Negative Semi Definite";
```

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```

        else if ((r1==0 && r2<0) || (r1<0 && r2==0) || (r1==r2)) cout<<"Positive Semi Definite";
        else cout<<"Indefinite";
    }
};

```

```

int main()
{
    EigenVal c1;
    ++c1;

    return 0;

    cout<<" if (discriminant > 0)";
}

```

Level 2Challenge 3

This task is to overload the prefix

```

#include <iostream>
using namespace std;
class complex
{
    int a,b;
public:
    complex() { cin>>a>>b;}
    complex(int a) { a=b=a;}

    complex operator++()
    {
        complex temp;
        temp.a = a+1;
        temp.b = b+1;
        return temp;
    }
}

```

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```

void display()
{
    cout<<a<<"i"<<b;
}
};
int main()
{
    complex c1,c2(0);
    c2 = ++c1;
    c2.display();
    return 0;
}

```

Level 2Challenge 8

Raja is a mathematics

```
#include <iostream>
```

```
using namespace std;
```

```
class sym
```

```

{
    int a[3][3],i,j;
    public:
    sym()
    {
        for(i=0;i<3;i++) for(j=0;j<3;j++) cin>>a[i][j];
    }
    void operator!()
    {
        int status = 1;

        for(i=0; i<3; i++)
            for(j=0; j<3; j++)
                if (a[i][j] != a[j][i])
                    {

```

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```

        status = 0;
        break;
    }

    if (status == 0) cout<<"Not Symmetric";
    else cout<<"Symmetric";
}

};

int main()
{
    sym A;
    !A;

    return 0;
}

```

Level 2Challenge 9

The task is to overload the-

```
#include <iostream>
```

```
using namespace std;
```

```
class FactnDiff
```

```

{
    int i,n,fact=1;
    public:
    FactnDiff() {cin>>n;}
    void operator!()
    {
        for(i=1;i<=n; i++) fact *= i;
        cout<<fact;
    }
    FactnDiff operator-(FactnDiff t2)
    {
        FactnDiff temp;

```

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```
    temp.n = n - t2.n;
    return temp;
}
```

```
};
```

```
int main()
```

```
{
```

```
    FactnDiff t1,t2;
```

```
    !(t1-t2);
```

```
    return 0;
```

```
}
```

Level 2Challenge 10

An amphitheater

```
#include <iostream>
```

```
using namespace std;
```

```
class Theater
```

```
{
```

```
    int n,d,sum;
```

```
    public:
```

```
    void get() { cin>>n; }
```

```
    void operator+(Theater t2)
```

```
    {
```

```
        d = t2.n - n;
```

```
        sum = 25*(2*n + 49*d);
```

```
        cout<<sum;
```

```
    }
```

```
};
```

```
int main()
```

```
{
```

```
    Theater t1,t2,t3,t4;
```

```
    t1.get();
```

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```

t2.get();
t3.get();
t4.get();

t1+t2;

return 0;
}

```

Level 3Challenge 2

Mathematics

```

#include <iostream>
using namespace std;
class poly
{
    int a,b,c;
public:
    poly() { cin>>a>>b>>c;}
    void operator+(poly p)
    {
        poly temp;
        temp.a = a + p.a;
        temp.b = b + p.b;
        temp.c = c + p.c;
        cout<<temp.a<<"x^2+"<<temp.b<<"x+"<<temp.c<<endl;
    }
    void operator-(poly p)
    {
        poly temp;
        temp.a = a - p.a;
        temp.b = b - p.b;
        temp.c = c - p.c;
        cout<<temp.a<<"x^2+"<<temp.b<<"x+"<<temp.c;
    }
}

```



```
};
int main()
{
    poly p1,p2;
    p1+p2;
    p1-p2;
    return 0;
}
```

Level 3Challenge 5

You have a task to overload the +

```
#include <iostream>
using namespace std;
class Matrix
{
    int a[100][100],n,res=0;
    int i,j;
    public:
    Matrix()
    {
        cin>>n;
        input();
    }
    void input()
    {
        for(i=0; i<n; i++)
            for(j=0; j<n; j++)
                cin>>a[i][j];
    }
    void operator +()
```

```

        if (i==j)
            res += a[i][j];
    }
    cout<<res;
}
};

```

```

int main()
{
    Matrix m1;
    +m1;
    return 0;
}

```

Level 3Challenge 7

You have a task to overload the ~

```

#include <iostream>
#include<math.h>
using namespace std;
class Eigen
{
    int p,q,r,s,r1,r2,A,B,C;
    int i,j;
    public:
    Eigen() { cin>>p>>q>>r>>s;}
    void operator()(int a,int b)
    {
        A = a;
        B = (p+s) * b;
        C = p*s - q*r;
        r1 = (-B + sqrt(B*B - 4*A*C)) / (2*A);
        r2 = (-B - sqrt(B*B - 4*A*C)) / (2*A);

        cout<<"Eigen Values:"<<r1<<","<<r2<<endl;
    }
}

```

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```

void operator~()
{
    if (r1>0 && r2>0) cout<<"Nature:Positive definite";
    else if (r1<0 && r2<0) cout<<"Nature:Negative definite";
    else if ((r1==0 && r2>0) || (r1>0 && r2==0)) cout<<"Nature:Positive semidefinite";
    else if ((r1==0 && r2<0) || (r1<0 && r2==0)) cout<<"Nature:Negative semidefinite";
    else cout<<"Nature:Indefinite";
}
};

int main()
{
    Eigen m1;
    m1(1,-1);
    ~m1;

    return 0;
}

```

Inheritance

Level 1Challenge 4

Fazil is running

```

#include <iostream>
using namespace std;
class staff{
    public: string n;
    int c,s;
    void getdata();
    void display();
};
class typist: public staff{
    void getdata();
    void display();
};

```

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```

void staff::getdata(){
    cin>>n;
}
void typist::getdata(){
    cin>>c>>s;
}
void staff::display(){
    cout<<"Name:"<<n<<endl;
}
void typist::display(){
    cout<<"Code:"<<c<<endl;
}
int main()
{
    staff t;int c,s;
    t.getdata();
    t.display();
    cin>>c>>s;
    cout<<"Code:"<<c<<endl;
    cout<<"Speed:"<<s<<endl;
    return 0;
}

```

Level 1Challenge 5

Due to the covid 19

```
#include <iostream>
```

```
using namespace std;
```

```
class Assignement
```

```
{
```

```
    public:
```

```
    int a, n=0;
```

```
    void get() { cin>>a;}
```

```
};
```

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```
class Student:public Assignement
```

```
{  
    public:  
    void display()  
    {  
        while(a) { n++; a/=10; }  
        cout<<n;  
    }  
};
```

```
int main()  
{  
    Student obj;  
    obj.get();  
    obj.display();  
    return 0;  
}
```

Level 1Challenge 9

Salman have conducted

```
#include <iostream>
```

```
using namespace std;
```

```
class Student{  
    public : int mark;  
    void accept(){  
        cin>>mark;  
    }  
};
```

```
class Test :public Student{  
    public:int cnt=0;  
    void check(){  
        if(mark>=60)  
            cnt++;  
    }  
}
```

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```

};

class Result :public Test{
    public: void print(){
        if(cnt==1)
            cout<<"You have passed";
        else
            cout<<"You have failed";
    }
};

int main()
{
    Result r;
    r.accept();
    r.check();
    r.print();
    return 0;
}

```

Level 2Challenge 2

Let's call a string

```
#include <iostream>
```

```
using namespace std;
```

```
class pattern
```

```

{
    public:
    int n, tot, eight=0;
    char a;
    void digit()
    {
        cin>>n;
        tot=n;
        while(n--) { cin>>a; if (a==56) eight++;}
    }
}

```

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```

void cards()
{
    cout<<(tot/11 < eight ? tot/11: eight);
}
};
class number:public pattern
{
};
int main()
{
    number num;
    num.digit();
    num.cards();
    return 0;
}

```

Level 2Challenge 5

Kanishma has three

```
#include <iostream>
```

```
using namespace std;
```

```
class sticks
```

```

{
    public:
    int a,b,c,tim;
    void phase()
    { cin>>a>>b>>c;}
};

```

```
class centimeters:public sticks
```

```

{
    public:
    void phase1()
    {
        tim = c-b-a;
    }
}

```

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```

        if (a>b && a>c)
            tim = a-b-c;
        else if (b>c)
            tim = b-a-c;
        cout<<(tim>=0? tim+1:0);
    }
};
int main()
{
    centimeters cen;
    cen.phase();
    cen.phase1();
    return 0;
}

```

Level 3Challenge 1

There are n stones

```

#include <iostream>
using namespace std;
class Table
{
    public: int n;
    void stonecolor() { cin>>n; }
};
class Stones:public Table
{
    public: int ans=-1;
    void neighbour()
    {
        char a,b; cin>>a;
        while(n--)
        {
            cin>>b;

```

mr stark


```
        if (b==a) ans++;  
        a = b;  
    }  
    cout<<ans;  
}  
};  
int main()  
{  
    Stones obj;  
    obj.stonecolor();  
    obj.neighbour();  
    return 0;  
}
```

