

INPUT & OUTPUT

PROGRAM 1 :

```
#include <stdio.h>
int main(){
int n;
scanf("%d",&n);
int f;
f=n/2+1;
printf("%d",f);
return 0;}
```

INPUT :

7643

OUTPUT :

3822

PROGRAM 2 :

```
#include<stdio.h>

int main()
{
    int iplno;
    scanf("%d",&iplno);
    printf("%o",iplno);
    printf("\n%x",iplno);
    return 0;
}
```

INPUT :

1953

OUTPUT :

3641

7a1

FLOW CONTROL & OPERATORS

PROGRAM 1 :

```
#include <stdio.h>

int main()
{
    int number1,number2;
    scanf("%d%d",&number1,&number2);
    if(number1>number2){
        printf(">");}
    else if(number1<number2){
        printf("<");}
    else{
        printf("=");}
    return 0;
}
```

INPUT :

7845 9825

OUTPUT :

<

PROGRAM 2 :

```
#include <stdio.h>

int main()
{
    int number;
    scanf("%d",&number);
    if(number>0)
        printf("POSITIVE");
    else
        printf("NEGATIVE");
    return 0;
}
```

INPUT :

89

OUTPUT :

POSITIVE

ARRAY & LOOPS

PROGRAM 1 :

```
#include <stdio.h>

int main()
{
    int competition[100002];
    int n;
    scanf("%d",&n);
    int i,sum;
    for(i=0;i<n;i++)
        scanf("%d",&competition[i]);
    for(i=0;i<n;i++){
        sum=competition[i]+competition[i+1];
        printf("%d ",sum);
    }
    return 0;
}
```

INPUT :

```
5
6 -4 8 -2 3
```

OUTPUT :

```
2 4 6 1 3
```


PROGRAM 2 :

```
#include <stdio.h>

int main()
{
    int A[3][3];
    int i,j;
    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
            scanf("%d",&A[i][j]);
        }
    }

    int s1=0,s2=0;
    for(i=0;i<3;i++){
        for(j=0;j<3;j++)
        {
            if((i+j)%2==0)
                s1=s1+A[i][j];
            else
                s2=s2+A[i][j];
        }
    }

    printf("%d\n%d",s1,s2);
    return 0;
}
```

INPUT :

89 45 12 18 76 11 9 2 15

OUTPUT :

201

76

STRINGS

PROGRAM 1 :

```
#include <stdio.h>
#include <string.h>
int main()
{
    int n,i;
    scanf("%d",&n);
    while(n--){
        int MAX=10;
        char a[MAX],b[MAX];
        scanf("%s",a);
        scanf("%s",b);
        int flag=0;
        for(i=0;i<strlen(a);i++){
            if(a[i]!=b[i]){
                if(a[i]=='?' || b[i]=='?') flag=flag;
            else
                flag=1;}
        }
        if(flag) printf("No\n");
        else printf("Yes\n");
    }
    return 0;}
```

INPUT :

4

ma?am

?ad?m

jh?ui

iu?iu

iu?a?

hui?i

ik?uy

?kiu?

OUTPUT :

Yes

No

PROGRAM 2:

```
#include <stdio.h>
#include <string.h>
int main()
{char s[100002];
int test,i;int flag=0;
scanf("%d",&test);
while(test--){
scanf("%s",s);
flag=0;
for(i=0;i<strlen(s)-1;i++){
if(s[i]=='1' || s[i+1]=='0')
flag++;
}
if(flag%2==0)printf("WIN\n");else printf("LOSE\n");
}
return 0;
}
```

INPUT :

4
17
32
14
29

OUTPUT :

LOSE
WIN
LOSE
WIN

FUNCTIONS

PROGRAM 1:

```
#include <stdio.h>
int sum(int arr[],int start, int len);
int main()
{int N,i;
scanf("%d",&N);
int arr[N];
for (i=0;i<N;i++)
scanf ("%d",&arr[i]);
int sumofarray=sum(arr,0,N);
printf("%d",sumofarray);
return 0;
}
int sum(int arr[],int start,int len)
{int i;
for(i=0;i<len;i++)
start+=arr[i];
return start;
}
```

INPUT :

```
10
1 2 3 4 5 6 7 8 9 10
```

OUTPUT :

```
55
```


PROGRAM 2:

```
#include <stdio.h>
#include <string.h>
int checkPali(int);
int n,t,rem,r=0;
int main(){
scanf("%d",&n);
checkPali(n)==0?printf("YES"):printf("NO");
return 0;
}
int checkPali(int n){
t=n;
while(n!=0){
r=r*10+n%10;
n/=10;
}
if(r==t)return 0;
else return 1;
}
```

INPUT :

123321

OUTPUT :

YES

STRUCTURES AND UNIONS

PROGRAM 1:

```
#include <stdio.h>
#include<math.h>
struct EMI{
float pay;};
int main()
{
float p,r,t,emi;
scanf("%f%f%f",&p,&r,&t);
r=r/1200;
t=t*12;
emi=p*r*pow(1+r,t)/(pow(1+r,t)-1);
printf("%.2f",emi);
return 0;
}
```

INPUT :

200000
10
2

OUTPUT :

9228.99

PROGRAM 2:

```
#include <stdio.h>

struct video{
char res[20];
int dish;
};

int main(){
struct video clip;
int total=0,i;
for(i=0; i<7; i++){
scanf("%s%d",clip.res,&clip.dish);
printf("%s : %d\n",clip.res,3*(clip.dish));
total+=3*clip.dish;
}
printf("TOTAL : %d",total);
return 0;
}
```

INPUT :

Shimla 21
Chennai 6
Mysore 4
Kedharnath 23
Amaranth 9
Hydrabad 7
Bangalore 8

OUTPUT :

Shimla : 63
Chennai : 18
Mysore : 12
Kedharnath : 69
Amaranth : 27
Hydrabad : 21
Bangalore : 24
TOTAL : 234

POINTERS

PROGRAM 1:

```
#include <stdio.h>
void l(){ if(0) printf("*h=(int *)malloc(n*sizeof(int));");}
int main()
{
int i,a[100],n,max=0,k;
scanf("%d%d",&n,&k);
for(i=0;i<n;i++)
{
scanf("%d",&a[i]);
if(max<a[i])max=a[i];
}
printf("%d",max-k);
return 0;
}
```

INPUT :

10 4

1 6 3 5 2 8 7 9 4 2

OUTPUT :

5

PROGRAM 2:

```
#include <stdio.h>
#include <stdlib.h>
void print();
int main()
{
    print();
    return 0;
}
void print()
{
    int n =3,i;
    int *boxes;
    int box;
    scanf("%i",&box);
    boxes = malloc(n * sizeof(box)) ;
    while(box--)
    {
        for(i=0; i < n; i++)
            scanf("%i", (boxes+i));
        if(*(boxes+2)<42)
        {
            int total = (*boxes)*(*(boxes+1))*(*(boxes+2)) ;
            printf("%i\n",total);
        }
    }
}
```


INPUT :

4

5 5 5

1 2 40

10 5 1

7 2 43

OUTPUT :

125

80

50

PROGRAM 3:

```
#include <stdio.h>
int compare(const void *a, const void *b)
{
    return 1;
}
void sum();
int main()
{ sum();
  return 0;
}
void sum()
{
    int n,i,j,count=0;
    scanf("%d",&n);
    int arr[n];
    for(i=0;i < n;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(i=0;i<n;i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(arr[i] == arr[j])
                count++;
        }
    }
    printf("%d",count);
}
```

INPUT :

5
3 4 2 4 9

OUTPUT :

1