Flow Control & Operators

LEVEL 1

1. **Rohit has 'A' chocolates & Mohit**

```
#include <stdio.h>
int main()
{ int a,b,k;
scanf("%d %d %d",&a,&b,&k);
if(a-k>=0)
printf("%d %d",a-k,b);
else if(a-k<=0)
printf("%d %d",0,b+(a-k));
        return 0;
}
```

2. **Agathiyan is the Chief In charge**

```
#include <stdio.h>
#include <math.h>
int main()
{ int N;
int count;
scanf("%d",&N);
count=(N==0)?1:(log10(N)+1);
if(count==5)
printf("High Earning");
else if(count==2)
printf("Very Low Earning");
else if(count==3)
printf("Low Earning");
else if(count==4)
printf("Sufficient Earning");
else
printf("Insufficient Earning");
        return 0;}
```

3. **Vishal is fighting with a monster**

```
#include <stdio.h>
int main()
{ int a,b,c;
   scanf ("%d %d",&a, &b);
   if(a%b!=0)
   c=(a/b)+1;
   else if(a%b==0)
   c=a/b;
```

```
   printf("%d",c);
        return 0;
}
```

4. Arulmozhivarman is working in

```
#include <stdio.h>
int main()
{ char ID;
scanf("%c",&ID);
if(ID=='B'||ID=='b')
printf("BattleShip");
if(ID=='C'||ID=='c')
printf("Cruiser");
if(ID=='D'||ID=='d')
printf("Destroyer");
else if(ID=='F'||ID=='f')
printf("Frigate");
        return 0;
}
```

5. In primary mathematics classes

```
#include <stdio.h>
#include <stdlib.h>
int main()
{int cp,sp,amt;
scanf("%d %d",&cp,&sp);
amt=abs(cp-sp);
if(cp>sp)
printf("Loss:%d",amt);
else if(sp>cp)
printf("Profit:%d",amt);
else
printf("No Profit No Loss");
        return 0;
}
```

6. Fazil frequently uses Hexadecimal notation

```
#include <stdio.h>
int main()
{ char X,Y;
scanf("%c %c",&X,&Y);
if(X>Y)
printf(">");
if(X<Y)
printf("<");
if(X==Y)
printf("=");
```

```
        return 0;
}
```

7. Johit has two rectangles

```
#include <stdio.h>
int main()
{int a,b,c,d;
scanf("%d %d %d %d",&a,&b,&c,&d);
if((a*b)>(c*d))
printf("%d",a*b);
else
printf("%d",c*d);
return 0;}
```

8. Pari is an architect

```
#include <stdio.h>
int main()
{int l,b,area,peri;
scanf("%d %d",&l,&b);
area=l*b;
peri=2*(l+b);
if(area>peri)
printf("Area\n%d",area);
else if(peri>area)
printf("Peri\n%d",peri);
else
printf("Eq\n%d",area);
        return 0;
}
```

9. Caleb & Irfan are purchasing

```
#include <stdio.h>
int main()
{ int apple1,apple2,apple3;
scanf("%d %d %d",&apple1,&apple2,&apple3);
if(apple2>apple1&&apple3>apple2)
printf("Fit into Budget");
else
printf("Dosen't fit into Budget");

        return 0;
}
```

10. Vikram has just started

```
#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;
}
```

LEVEL 2

1. **You are playing a Billiards-like game**

```
#include <stdio.h>
int main()
{int n,k,x,y;
//int count=0;
scanf("%d %d %d %d",&n,&k,&x,&y);
if(x>y)
{
   if(k%4==1)
   printf("%d %d\n",n,y+(n-x));
   else if(k%4==2)
   printf("%d %d\n",y+(n-x),n);
   else if(k%4==3)
   printf("%d %d\n",0,(x-y));
   else if(k%4==0)
   printf("%d %d\n",(x-y),0);
}
else if(y>x)
{
   if(k%4==1)
   printf("%d %d\n",x+(n-y),n);
   else if(k%4==2)
   printf("%d %d\n",n,x=(n-y));
   else if(k%4==3)
   printf("%d %d\n",y-x,0);
   else if(k%4==0)
   printf("%d %d\n",0,y-x);
}
else
printf("%d %d\n",n,n);
        return 0;
}
```

2. **Roy wants to change his**

```
#include <stdio.h>
int main()
{int l,w,h;
scanf("%d %d %d",&l,&w,&h);
if(w<l||h<l)
printf("UPLOAD ANOTHER");
else if(w>l||h>l)
printf("CROP IT");
else
printf("ACCEPTED");
        return 0;
}
```

3. Atifa would like to withdraw

```
#include <stdio.h>
int main()
{int amtreq; float iniamt;
scanf("%d %f",&amtreq,&iniamt);
if(amtreq%5==0&&amtreq<iniamt)
printf("Current Balance : %0.2f\nInitial Balance : %0.2f",iniamt-amtreq-0.5,iniamt);
else
printf("Invalid Withdrawal Request\nInitial Balance : %0.2f",iniamt);
        return 0;
}
```

4. Rashi's classroom contains

```
#include <stdio.h>
int main()
{int n,m;
scanf("%d %d",&n,&m);
if(n%2!=0&&m%2!=0)
printf("NO");
else
printf("YES");
        return 0;
}
```

5. "I am not in danger, Girish"

```
#include <stdio.h>
#include <math.h>
int main()
{
int x,y,count=1;
scanf("%d %d",&x,&y);
if(y<0&&y%2!=0)
count=2;
else if(y%2==0)
count=2;
printf("%d",count);
(y%2!=0)?y++:y--;
        return 0;}
```

6. Jakson has been working

```
#include <stdio.h>
#include <math.h>
int main()
{double n,v1,v2;
double e,s;
scanf("%lf %lf %lf",&n,&v1,&v2);
e=(n*2)/v2;
```

```
s=(n*sqrt(2))/v1;
if(e<=s)
printf("Elevator");
else
printf("Stairs");
        return 0;
}
```

7. Shree & Harry was living in

```
#include <stdio.h>
int main()
{ float number1,number2,approx;
scanf("%f %f",&number1,&number2);
approx=number2-number1;
if(approx<=0.5&&approx>=-0.5)
printf("Approximate Number");
else
printf("Not an Approximate Number");
        return 0;
}
```

8. Yesterday, Loki found K empty

```
#include <stdio.h>
int main()
{int n,k;
scanf("%d %d",&n,&k);
if(n%k==0)
printf("YES");
else
printf("NO");
        return 0;
}
```

9. Caleb & Salima

```
#include <stdio.h>
int main()
{int n1,n2,n3;
scanf("%d %d",&n1,&n2);
if(n1>n2)
n3=n1-n2;
else
n3=n1+n2;
printf("%d",n3);
        return 0;
}
```

10. For her next karate

```
#include <stdio.h>
int main()
{int s,w1,w2,w3;
scanf("%d %d %d %d",&s,&w1,&w2,&w3);
if((w1+w2+w3)<s)
printf("1\n");
else if((w1+w2+w3)==s)
printf("1\n");
else
printf("%d\n",((w1+w2+w3)/s)+1);
        return 0;
}
```

LEVEL 3

1. Tina & Fazil are bored

```
#include <stdio.h>
int main()
{
int x,y,k;
scanf("%d %d %d",&x,&y,&k);
if((x+y-k)%2==0)
printf("Tina");
else
printf("Fazil");
        return 0;
}
```

2. You are given two points

```
#include <stdio.h>
#include <math.h>
int main()
{
   long long int px,py,pz,qx,qy,qz,dx,dy,dz,cx,cy,cz,r;

scanf("%lld%lld%lld%lld%lld%lld%lld%lld%lld%lld%lld%lld%lld",&px,&py,&pz,&qx,&qy,&qz,&dx,&d
y,&dz,&cx,&cy,&cz,&r);
   double a,b,c,l1,l2,l3,A,B,C,E,F,G;
   a=cx-px;
   b=cy-py;
   c=cz-pz;
   l1=qx-px;
   l2=qy-py;
   l3=qz-pz;
   A=pow(b,2)+pow(c,2)-pow(r,2);
   B=pow(a,2)+pow(c,2)-pow(r,2);
   C=pow(b,2)+pow(a,2)-pow(r,2);
   E=dx*dx*A + dy*dy*B + dz*dz*C - 2*b*c*dy*dz-2*a*c*dx*dz - 2*a*b*dx*dy;
   F=2*(l1*dx*A + l2*dy*B + l3*dz*C - b*c*l2*dz - a*c*l1*dz - b*c*l3*dy - a*b*l1*dy - a*c*l3*dx -
a*b*l2*dx);
   G=l1*l1*A + l2*l2*B + l3*l3*C - 2*(b*c*l2*l3 + a*c*l1*l3 + a*b*l1*l2);
   double qw=sqrt(F*F-4*E*G);
   double ans;
   if(E)
   ans=(qw-F)/(2*E);
   else
   ans=(-1*G)/F;
   printf("%.10lf\n",ans);
   return 0;
}
```

3. Lee is ill

```
#include <stdio.h>
int main()
{ int lengthofbook,numofpages;
scanf("%d %d",&lengthofbook,&numofpages);
if(lengthofbook<=23&&numofpages>500&&numofpages<=1000)
printf("Take Medicine");
else
printf("Don't take Medicine");
        return 0;
}
```

4. Simon loves to listen

```
#include <stdio.h>
int main()
{int L,D;
scanf("%d %d",&L,&D);
if((2*D)%L==0)
printf("%d",2*D/L);
else
printf("%d",((2*D)/L)+1);

        return 0;
}
```

5. Nancy is an graduate

```
#include <stdio.h>
int main()
{int travelmode;
scanf("%d",&travelmode);
switch(travelmode)
{
   case 1 :
   printf("Car is booked");
   break;
   case 2 :
   printf("Bus is booked");
   break;
   case 3 :
   printf("Flight is booked");
   break;
   default :
   printf("Invalid Request");
   break;
}
        return 0;
}
```

6. Today is Darsh's birthday

```
#include <stdio.h>
int main()
{int favorite_number,first_number,difference;
scanf("%d %d %d",&first_number,&favorite_number,&difference);
if((favorite_number-first_number)%difference==0)
printf("YES");
else
printf("NO");
        return 0;
}
```

7. There are S sine functions

```
#include <stdio.h>
#include<math.h>
int main()
{ long long int s,c,k,nop,i;
scanf("%lld %lld %lld",&s,&c,&k);
if(s-k+1>0)
nop=pow(2,s-k+1)+1;
if(k==1&&c!=0)
for(i=s;i<c+1;i++)
{
   if(i!=0)
   nop+=pow(2,i);
}
else
if(s-k+1>0 && s-k<c)
nop+=pow(2,s-k+1);
printf("%lld\n",nop);
        return 0;}
```

8. Nowdays many people

```
#include <stdio.h>
int main()
{ int workage;
scanf("%d",&workage);
if(workage<18)
printf("You are Minor\nContinue Your Studies");
else if(workage>=18 && workage<=60)
printf("You are Eligible\nYou can Apply for Job");
else
printf("You are too Old\nPls Collect your Pension");
        return 0;
}
```

9. Pongal gifts are a tradition

```
#include <stdio.h>
int fair(int a1,int a2, int c1, int c2)
{
   if((a1>a2&&c1>c2)||(a1<a2&&c1<c2)||(a1==a2&&c1==c2))
   return 1;
   else
   return 0;
}

int main()
{
int a1,a2,a3,c1,c2,c3;
scanf("%d %d %d %d %d %d",&a1,&a2,&a3,&c1,&c2,&c3);
if(fair(a1,a2,c1,c2)&&fair(a1,a3,c1,c3)&&fair(a3,a2,c3,c1))
printf("FAIR");
else if(3<1)
printf("wow");
else
printf("NOT FAIR");
        return 0;
}
```

10. Arulmozhivarman the famous skill

```
#include <stdio.h>
int main()
{ char operator;
double n1, n2;
scanf("%c %lf %lf",&operator,&n1,&n2);
switch(operator)
{
   case '+':
   printf("%0.1lf",n1+n2);
   break;
   case '-':
   printf("%0.1lf",n1-n2);
   break;
   case '*':
   printf("%0.1lf",n1*n2);
   break;
   case '/':
   printf("%0.1lf",n1/n2);
   break;
}
        return 0;
}
```