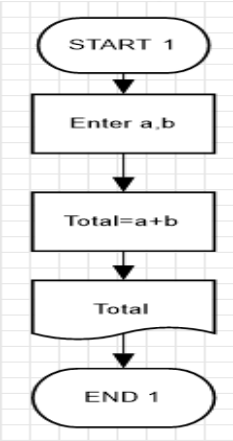
**Question**

Draw a flowchart and write c code to add two numbers entered by user.

**a-)Flowchart;**



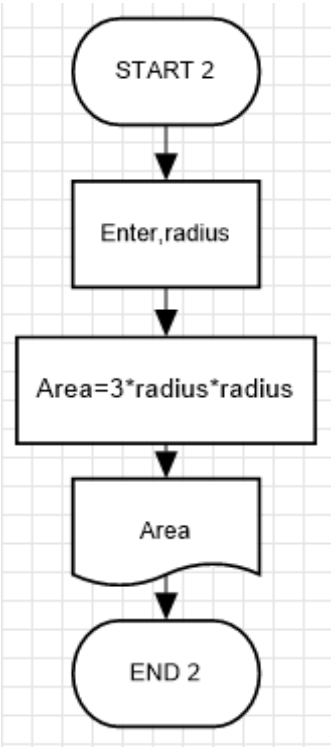

**b-)C code;**

```
#include<stdio.h>
int main()
{
	int a;
	int b;

	printf("a:");
	scanf("%d" ,&a);

	printf("b:");
	scanf("%d" ,&b);

	int total;

	total=a+b;

	printf("total: %d" ,total);

	return 0;
}
```

**Question**

Calculate the area of a circle with given radius.

**a-)Flowchart;**



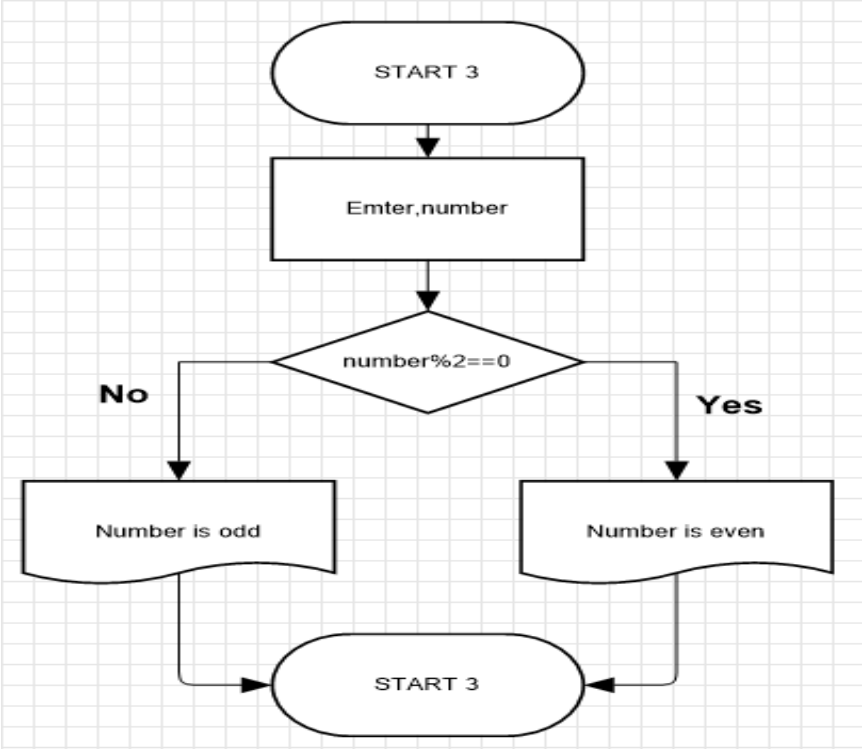

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int radius,area;

	printf("radius:");
	scanf("%d" ,&radius);

	area=3*radius*radius;

	printf("area of circle : %d" ,area);

	return 0;
}
```

**Question**

Determine and Output Whether Number N is Even or Odd.

**a-)Flowchart;**



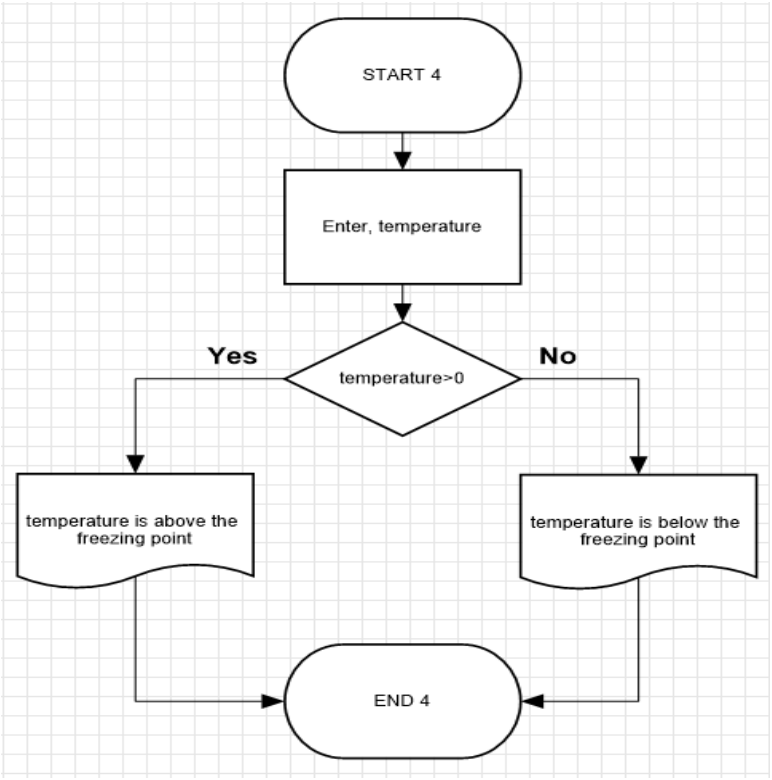

**b-)C code**

```
#include<stdio.h>

int main()
{
	int number;

	printf("enter a number:");
	scanf("%d" ,&number);

	if(number%2==0)
		printf("number is even");

	else
		printf("number is odd");

	return 0;
}
```

**Question**

Determine Whether a Temperature is Below or Above the Freezing Point.

**a-)Flowchart;**

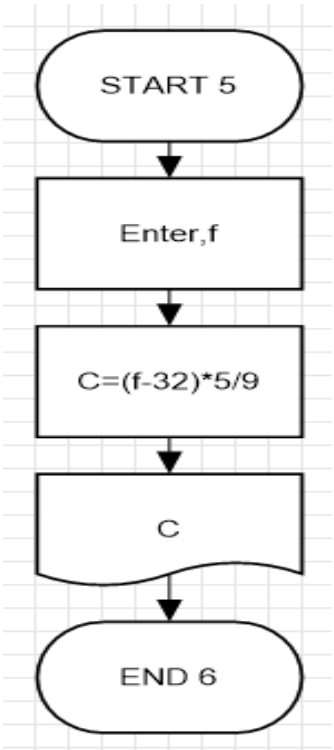



**b-)C code;**

```
#include<stdio.h>

int main()
{
	int temperature;

	printf("temperature :");
	scanf("%d" ,&temperature);

	if(temperature>0)

		printf("temperature is above the freezing point");

	else
		printf("temperature is below the freezing point");

	return 0;
}
```

**Question**
Convert Temperature from Fahrenheit (°F) to Celsius (°C).

**a-)Flowchart;**



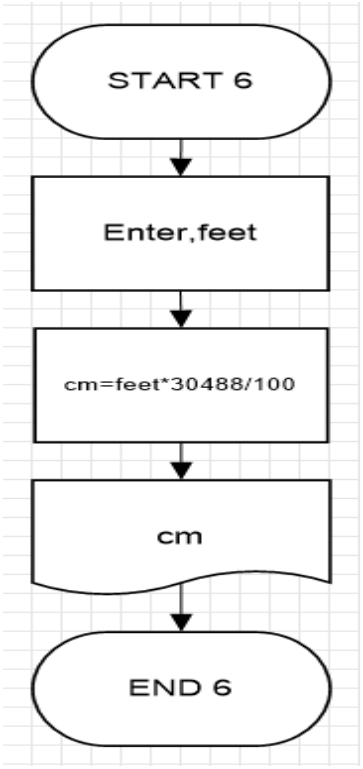

**b-)C code;**

```
#include<stdio.h>

int main()
{

int f,c;

        printf("Enter Fahrenheit :");
        scanf("%d" ,&f);

        c=(f-32)*5/9;

        printf("celcius : %d" ,c);

        return 0;

}
```

**Question**

Write an algorithm and draw a flowchart to convert the length in feet to centimeter.

**a-)Flowchart;**



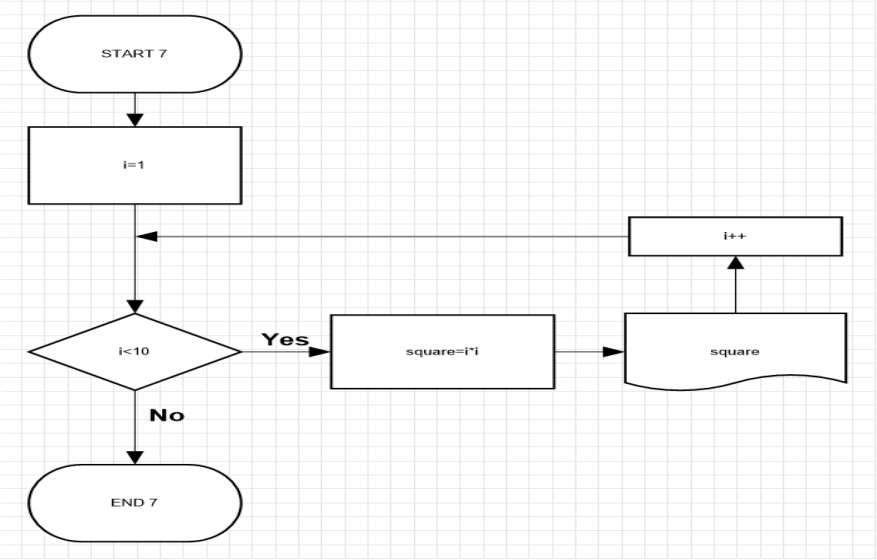

**b-)C code;**

```
#include<stdio.h>
int main()
{
        float feet,cm;
        printf("Enter the length in feet:");
        scanf("%f" ,&feet);

        cm=feet*30.488;

        printf("it is %f centimeter" ,cm);

        return 0;
}
```

**Question**

Draw a flowchart and write C code to print the square of all numbers from 1 to10.

**a-)Flowchart;**



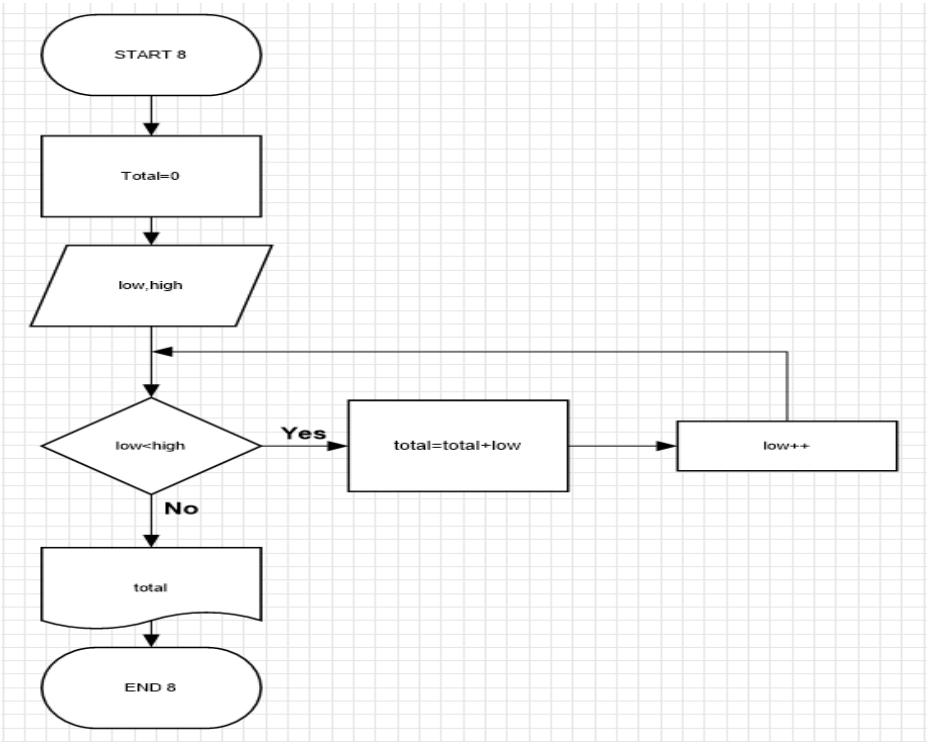

**b-)C code;**

```
#include<stdio.h>

int main()
{
printf("Square of all numbers from one to ten : \n");
int i=1,square;

while(i<10){


square=i*i;
printf("%d\n" ,square);
i++;
}
return 0;
}
```

**Question**

Draw a flowchart and C code to print the SUM of numbers from LOW to HIGH. Test with LOW=3 and HIGH=9.

**a-)Flowchart;**



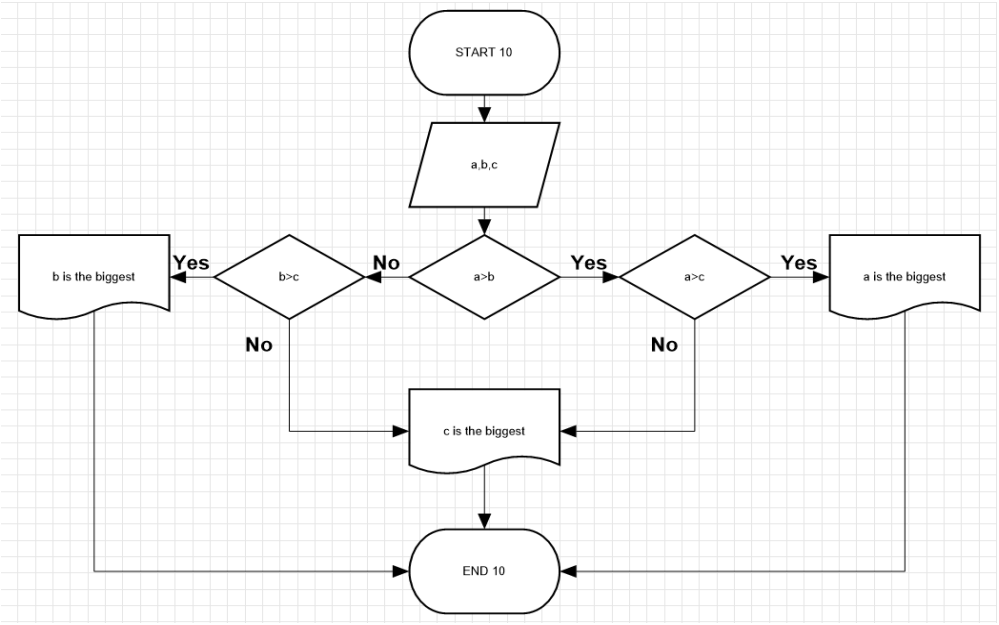

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int low,high,total=0;

	printf("Enter low number:");
	scanf("%d" ,&low);

	printf("Enter high number:");
	scanf("%d" ,&high);

	while(low<high){
		total=total+low;
		low++;
	}
	printf("total:%d" ,total);
}
```

**Question**

Draw a flowchart and write C code to find the largest of three numbers A, B, and C.

## a-)Flowchart;



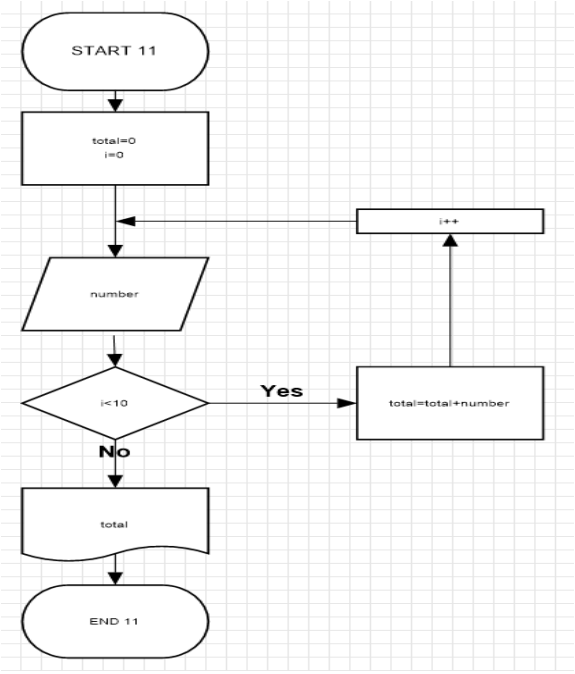

## b-)C code;

```
#include <stdio.h>
int main()
{
	int a,b,c;

	printf("Enter first number:");
	scanf("%d" ,&a);

	printf("Enter second number:");
	scanf("%d" ,&b);

	printf("Enter third number :");
	scanf("%d" ,&c);

	if(a>b)
		{

		if(a>c){

		printf("%d is the biggest" ,a);
}
		else{

		printf("%d is the biggest" ,c);

	}
}
	else {

		if(b>c){

		printf("%d is the biggest" ,b);
	}
		else{
		printf("%d is the biggest" ,c);
}
}
return 0;
}
```

**Question**

Draw a flowchart and write C code for a program that reads 10 numbers from the user and prints out their sum, and their product.

**a-)Flowchart;**



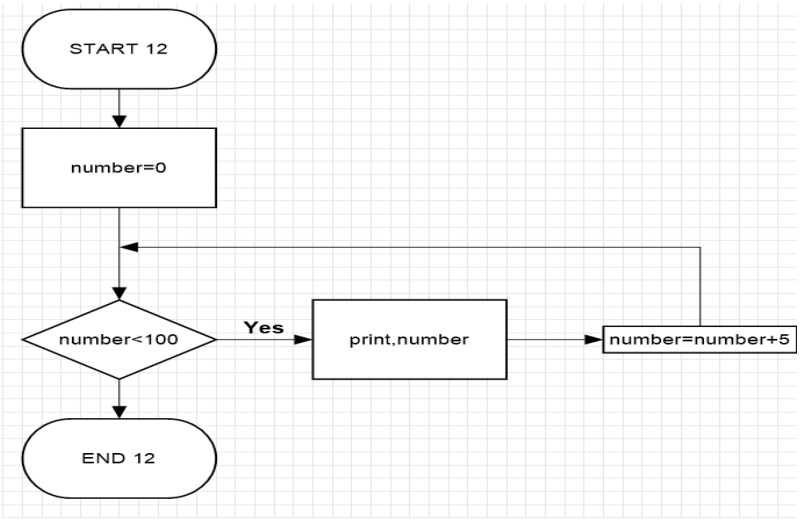

**b-)C code;**

```
#include<stdio.h>

int main()
{
        printf("Enter ten number: \n");
        int i=1,a,total=0;

        while(i <= 10){

        scanf("%d" ,&a);

        printf("Number which entered: %d\n" ,a);

        total=total+a;
        i++;

         }
        printf("Sum of numbers: %d" ,total);

return 0;
}
```

**Question**

Draw a flowchart and C code to count and print all numbers from LOW to HIGH by steps of STEP. Test with LOW=0 and HIGH=100 and STEP=5.

**a-)Flowchart;**



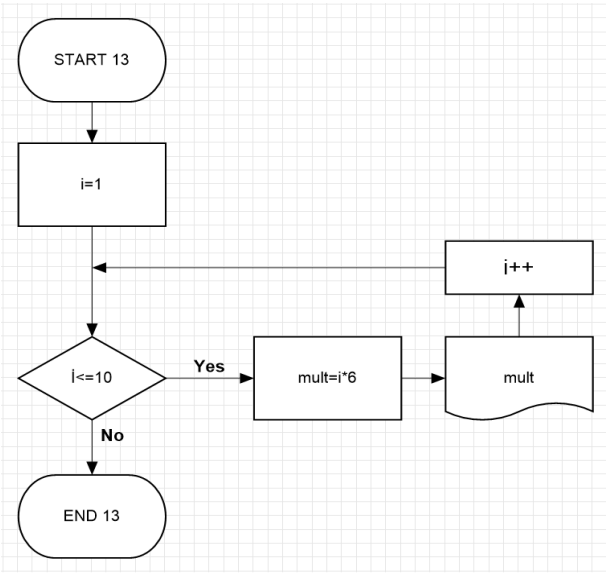

**b-)C code;**

```
#include<stdio.h>

int main()
{
        int i=0;

        while(i<100)
        {
        printf("%d\n" ,i);
        i=i+5;
        }
return 0;
}
```

**Question**

Draw a flowchart and write C code to print the multiplication table for 6's.

**a-)Flowchart;**



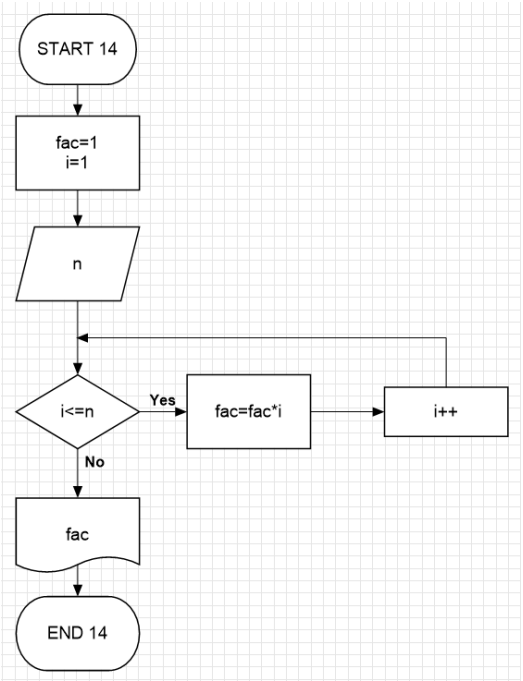

**b-)C code;**

```
#include<stdio.h>,

int main()
{

        int i=1,mult;

        while(i<=10)
        {
        mult=6*i;
        printf("multiplication :%d\n" ,mult);
        i++;

        }
return 0;
}
```

**Question**

14. Draw a flowchart for computing factorial N (N!).

**a-)Flowchart;**



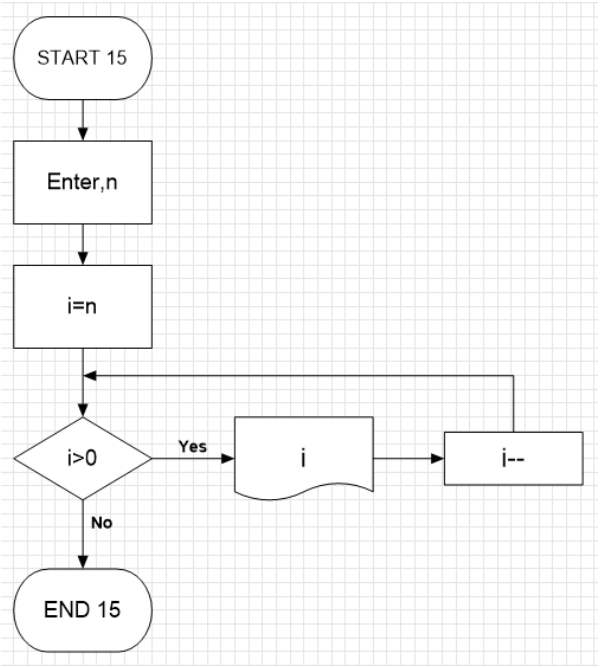

**b-)C code;**

```
#include<stdio.h>
int main(){

        int i=1,fac=1,n;

        printf("Emter a number:");
        scanf("%d" ,&n);

        while(i<=n){


        fac=fac*i;
        i++;
}
        printf("factoriel of number: %d" ,fac);

return 0;
}
```

**Question**

Draw a flow chart and write C code to print all natural numbers in reverse (from n to 1).

**a-)Flowchart;**



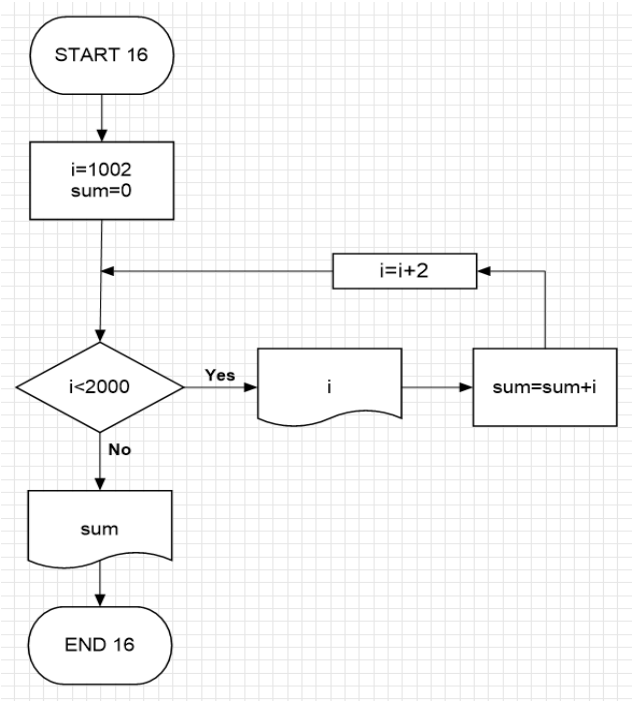

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int n,i;
	printf("Enter a number :");
	scanf("%d" ,&n);

	i=n;

	while(i>0){
		printf("%d\n" ,i);
		i--;
	}
return 0;
}
```

**Question**

Design an algorithm which generates even numbers between 1000 and 2000 and then prints them in the standard output. It should also print total sum.

**a-)Flowchart;**



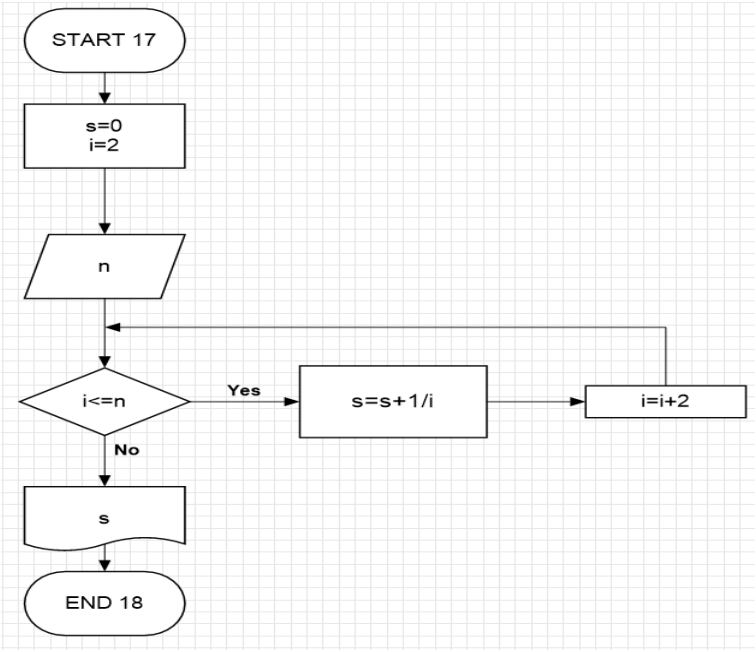

**b-)C code;**

```
#include<stdio.h>

int main()
{
	printf("Even numbers between 1000 and 2000; \n");
	int i=1002,sum=0;

	while(i<2000)
	{
	printf("%d\n" ,i);
	sum=sum+i;
	i=i+2;
	}
	printf("Sum of numbers : %d" ,sum);

	return 0;
}
```

**Question**

Design an algorithm with a natural number, n, as its input which calculates the following formula and writes the result in the standard output: S = ½ + ¼ + … +1/n.

**a-)Flowchart;**



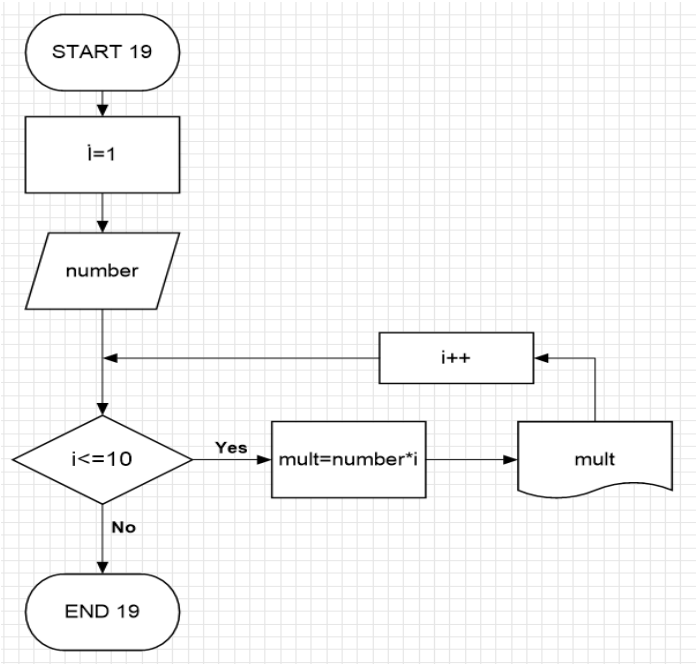

**b-)C code;**

```
#include<stdio.h>

int main()
{
	float s=0,n,i=2;

	printf("Enter a number:");
	scanf("%f" ,&n);


	while(i<=n){
		s=s+1/i;
		i=i+2;
	}
	printf("s: %f" ,s);

return 0;
}
```

**Question**

Draw a flow chart and write C code to print multiplication table of any number.

**a-)Flowchart;**



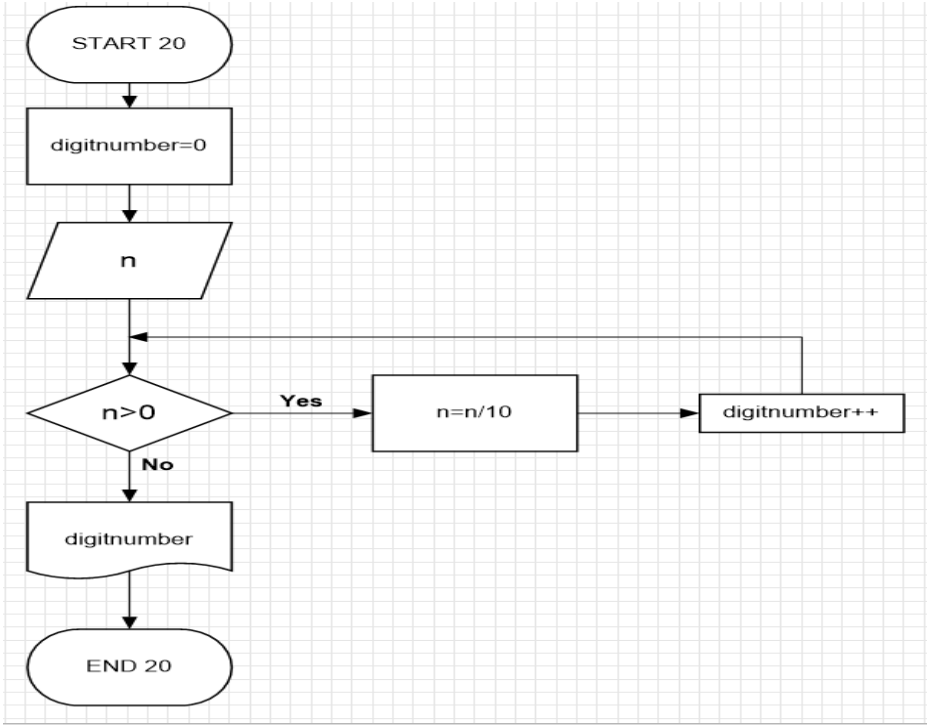

**b-)C code;**

```
#include<stdio.h>

int main ()
{
	int number,i=1,mult;

	printf("Enter a number :");
	scanf("%d" ,&number);

	while(i<=10){

	mult=i*number;
	printf("multiplication : %d\n" ,mult);
	 i++;
	}
	return 0;

}
```

**Question**

Draw a flow chart and write C code to count number of digits in a number.

**a-)Flowchart;**

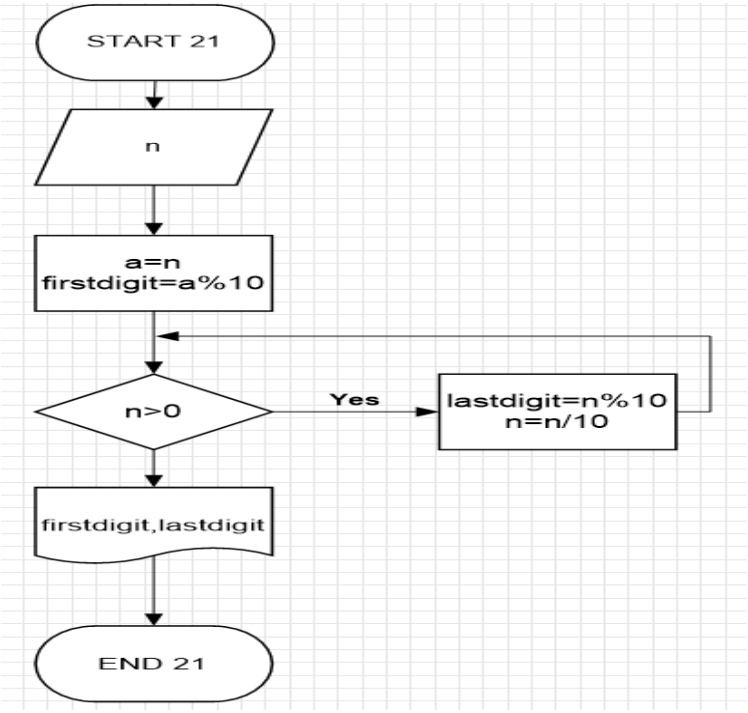



**b-)C code;**

```
#include<stdio.h>

int main()
{
        int n,i=0;
        printf("Enter a number:");
        scanf("%d" ,&n);

        while(n>0){
        n=n/10;
        i++;
        }
        printf("number of digits:%d" ,i);

return 0;
}
```

**Question**
Draw a flow chart and write C code to find first and last digit of a number.

**a-)Flowchart;**



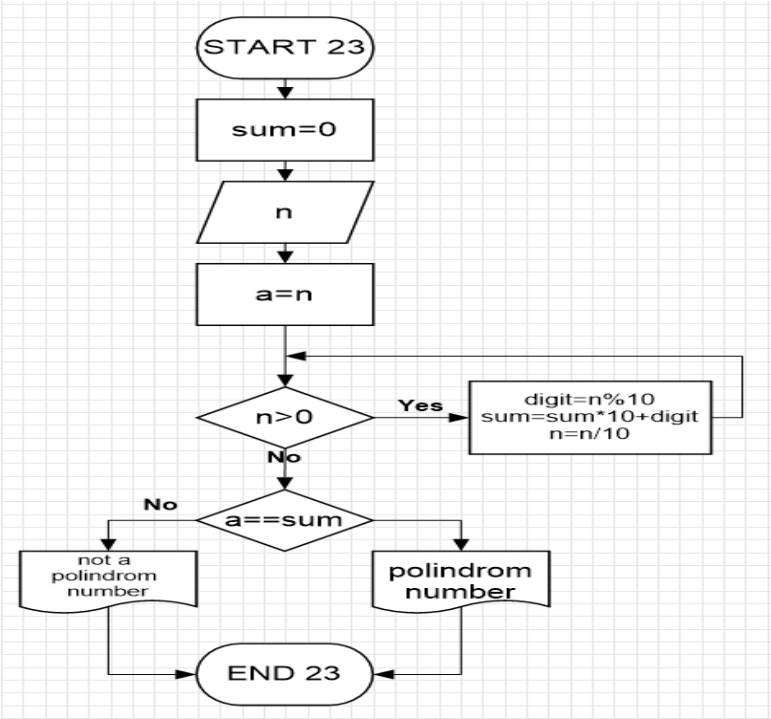

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int n,a,firstdigit,lastdigit;

	printf("Enter a number :");
	scanf("%d" ,&n);

	a=n;
	firstdigit=a%10;
	printf("first digit :%d\n" ,firstdigit);

	while(n>0)
	{
		lastdigit=n%10;
		n=n/10;
	}
	printf("last digit :%d\n" ,lastdigit);

	return 0;
}
```

**Question**

Draw a flow chart and write C code to check whether a number is palindrome or not.

**a-)Flowchart;**



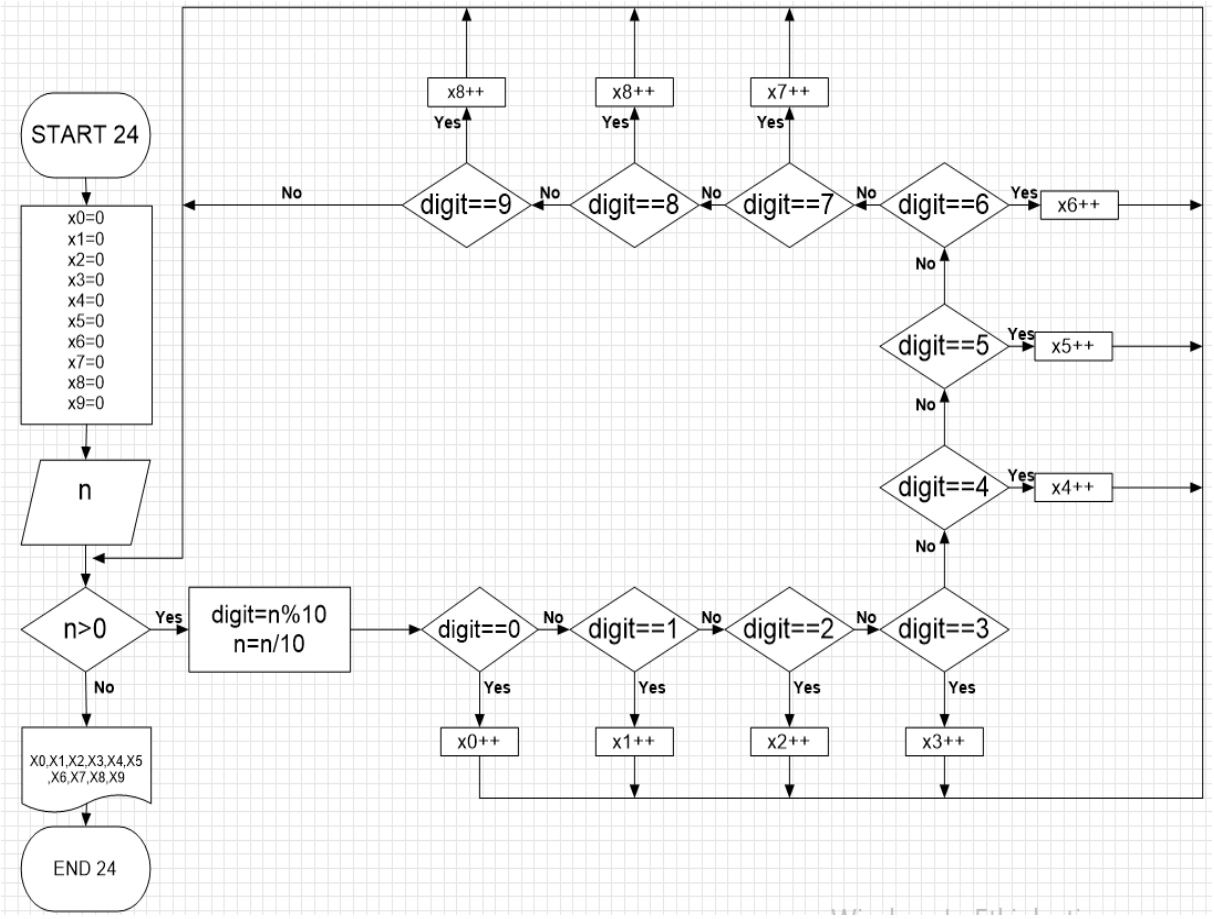

**b-)C code;**

```
#include<stdio.h>

int main(){
        int n,a,digit,sum=0;

        printf("Enter a number :");
        scanf("%d" ,&n);
        a=n;

        while(n>0)
        {

        digit=n%10;
        sum=sum*10+digit;
        n=n/10;
}
        if(a==sum){
                printf("%d is a polindrom number" ,a );
        }
        else
        {
                printf("%d is not a polindrom number" ,a);
        }
        return 0;
}
```

**Question**

Draw a flow chart and write C code to find frequency of each digit in a given integer.

**a-)Flowchart;**



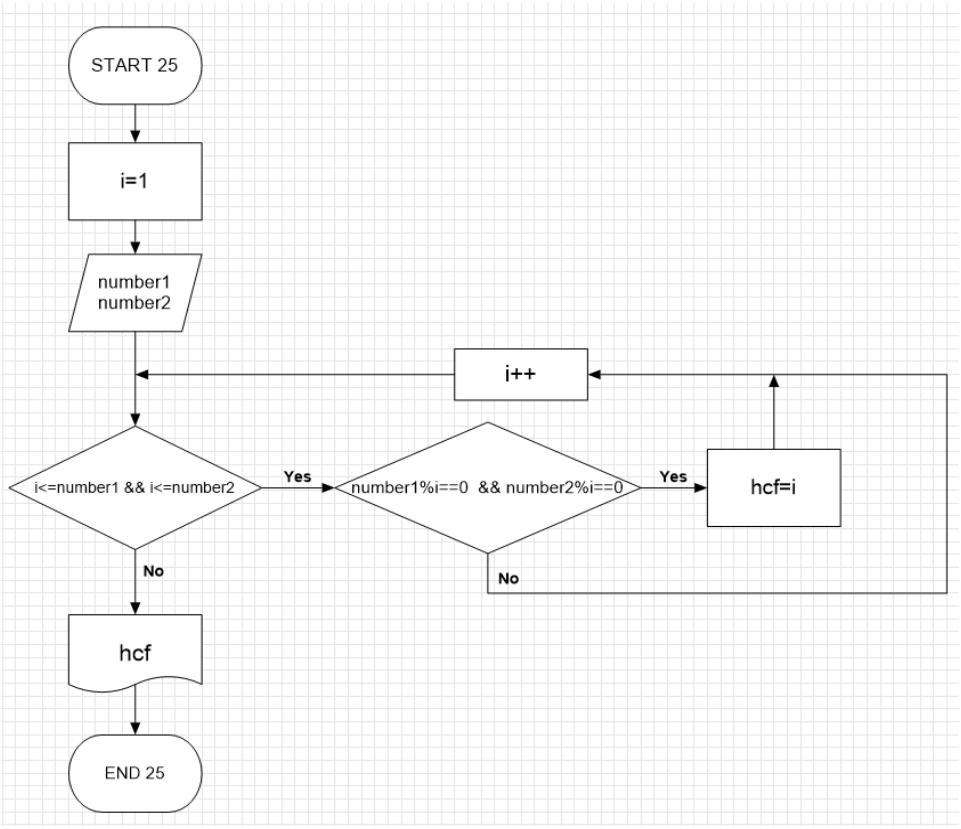
**b-)C code;**

```
#include<stdio.h>

int main(){
	int n,digit;
	int x0=0,x1=0,x2=0,x3=0,x4=0,x5=0,x6=0,x7=0,x8=0,x9=0;
	printf("Enter a Number:");
	scanf("%d",&n);

	while(n>0){
		digit=n%10;

		if(digit==0)
		x0++;
		else if(digit==1)
		x1++;
		else if(digit==2)
		x2++;
		else if(digit==3)
		x3++;
		else if(digit==4)
		x4++;
		else if(digit==5)
		x5++;
		else if(digit==6)
		x6++;
		else if(digit==7)
		x7++;
		else if(digit==8)
		x8++;
		else if(digit==9)
		x9++;

		n=n/10;

}
	printf("number of zeros: %d\n" ,x0);
	printf("number of ones: %d\n" ,x1);
	printf("number of twos: %d\n" ,x2);
	printf("number of threes: %d\n" ,x3);
	printf("number of fours: %d\n" ,x4);
	printf("number of fives: %d\n" ,x5);
	printf("number of sixes: %d\n" ,x6);
	printf("number of sevens: %d\n" ,x7);
	printf("number of eights: %d\n" ,x8);
	printf("number of nines: %d\n" ,x9);

return 0;}
```

**Question**

Draw a flow chart and write C code to find HCF (Highest Common Factor) of two numbers.

**a-)Flowchart;**



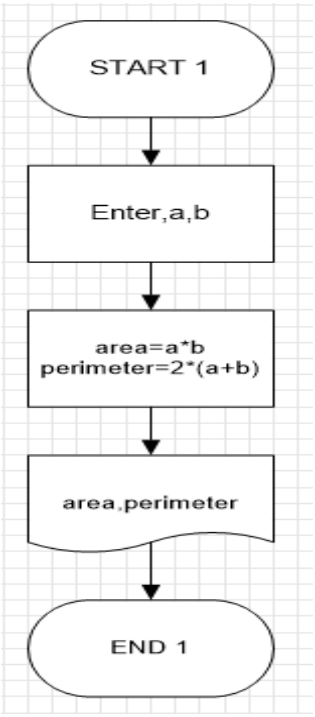

**b-)C code;**

```
#include<stdio.h>
int main(){

        int number1,number2,i=1,HCF;

        printf("Enter first number :");
        scanf("%d" ,&number1);

        printf("Enter second number :");
        scanf("%d" ,&number2);

        while(i<=number1 && i<=number2)
        {
                if(number1%i==0  && number2%i==0)
                        HCF=i;
                i++;
        }
        printf("%d is the HCF" ,HCF);
return 0;
}
```

**Question**

Draw a flowchart and write C code that will read the two sides of a rectangle and calculate its area and perimeter.

**a-)Flowchart;**



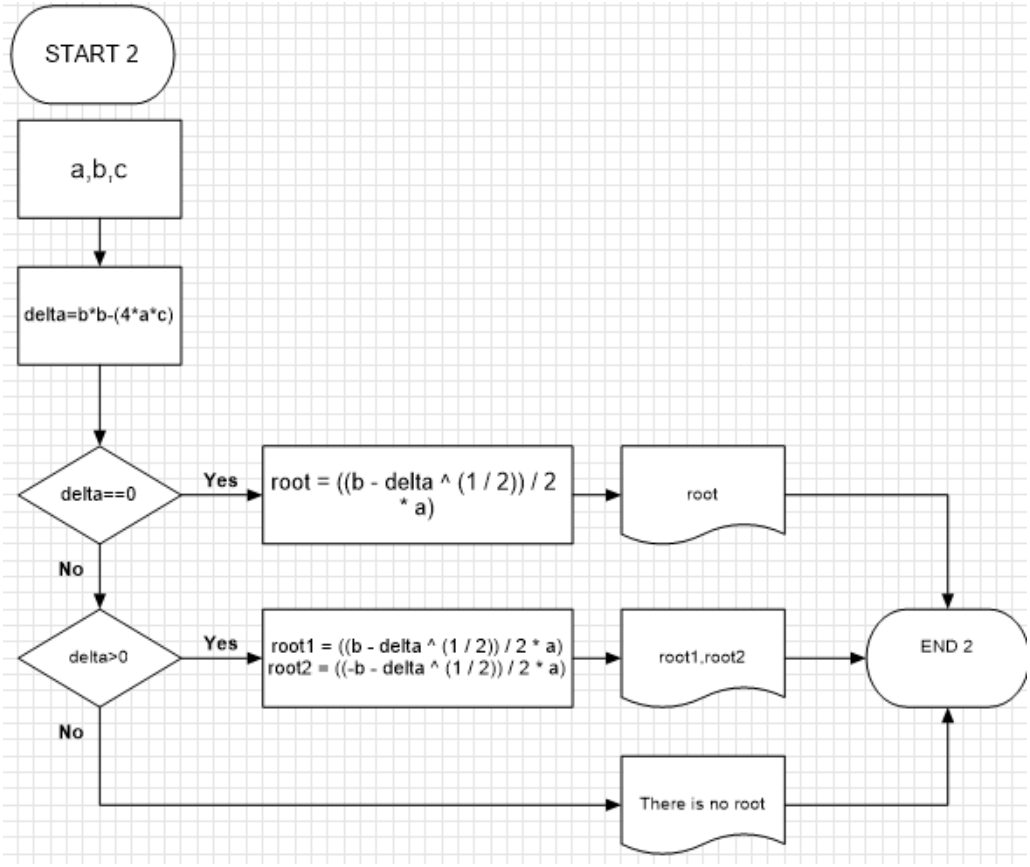

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int a,b,area,perimeter;

	printf("Enter sides of a rectangle; \n");
	scanf("%d" ,&a);
	scanf("%d" ,&b);

	area=a*b;
	perimeter=2*(a+b);

	printf("Area of rectangle : %d\n" ,area);
	printf("Perimeter of rectangle: %d\n" ,perimeter);

	return 0;
}
```

**Question**

Draw a flowchart to find all the roots of a quadratic equation ax2+bx+c=0.

**a-)Flowchart;**

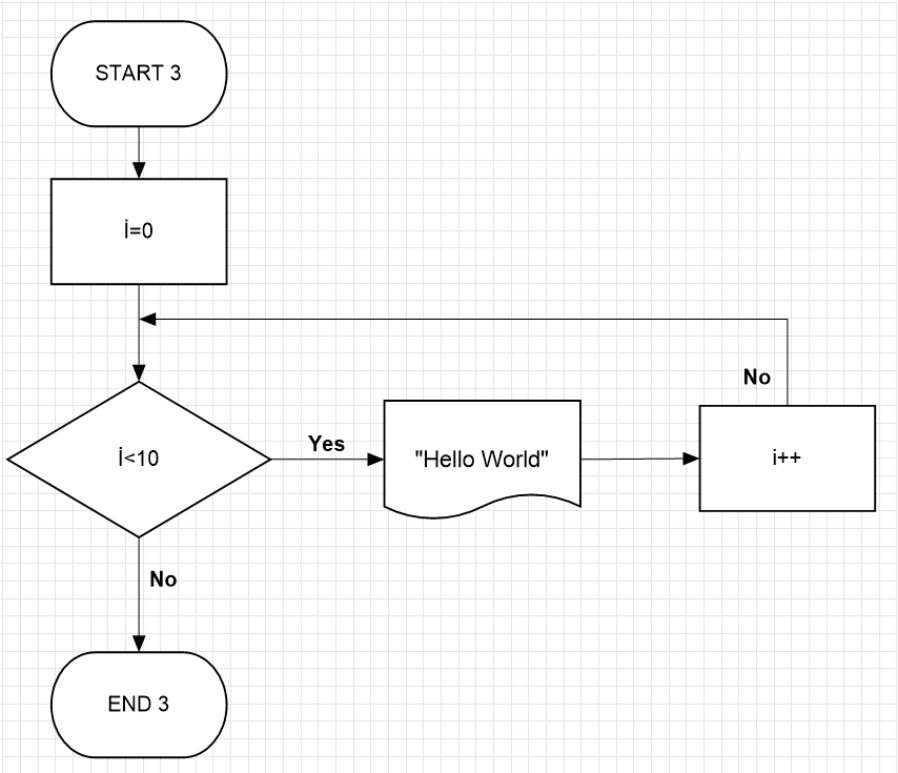



**b-)C code;**

```
#include<stdio.h>
 int main()
{
        int a,b,c,delta,root,root1,root2;
        scanf("%d %d %d" ,&a ,&b ,&c);
        delta=b*b-(4*a*c);
        if(delta==0){

                root = ((b - delta ^ (1 / 2)) / 2 * a);
                printf("root is = %d" ,root);}
        else if(delta>0){
                root1 = ((b - delta ^ (1 / 2)) / 2 * a);
                root2 = ((-b - delta ^ (1 / 2)) / 2 * a);
                printf("root1= %d root2= %d" ,root1,root2);
         }
        else
        printf("There is no root");
return 0;
}
```

**Question**
Print Hello World 10 times.

**a-)Flowchart;**



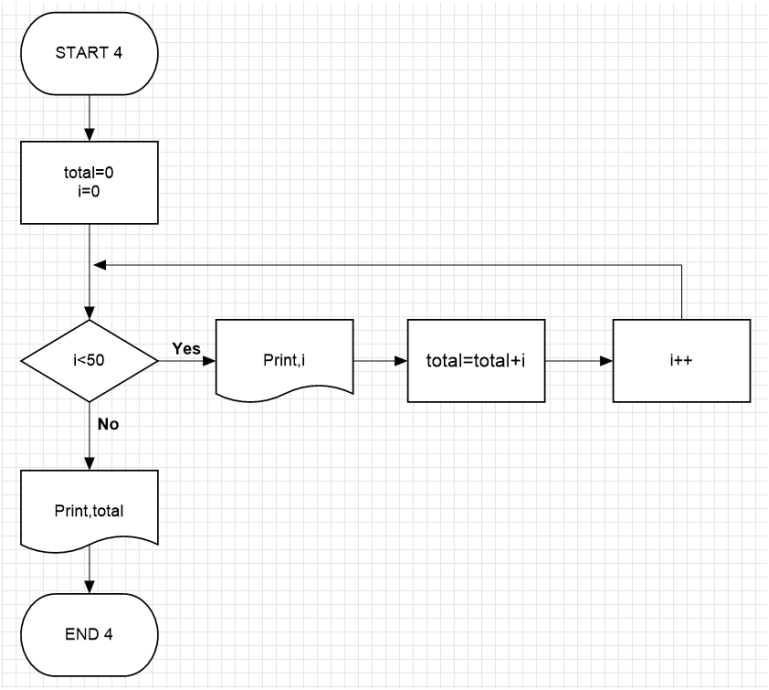

**b-)C code;**

```
#include<stdio.h>

int main(){

        int i=0;

        for(i=0; i<10; i++){

        printf("Hello World\n");
}
return 0;
}
```

**Question**

Draw a flowchart and write C code to find the sum of the first 50 natural numbers.

**a-)Flowchart;**



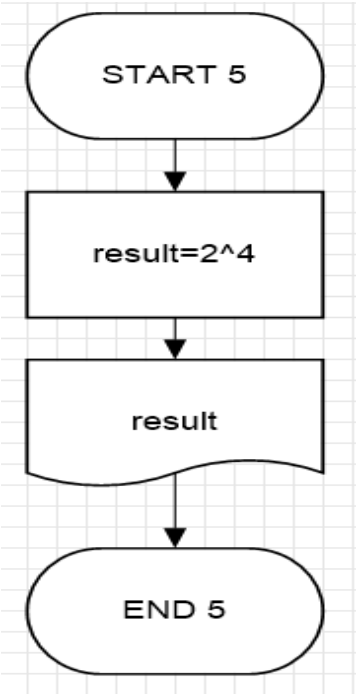

**b-)C code;**

```
#include<stdio.h>

int main()
{
	int i,total=0;

	printf("ilk elli dogal sayi;\n");

	for(i=0; i<50; i++){
		printf("%d\n" ,i);
		total=total+i;
}
	printf("toplam :%d\n" ,total);

return 0;
}
```

**Question**

Draw a flowchart and write C code to calculate 24.

**a-)Flowchart;**



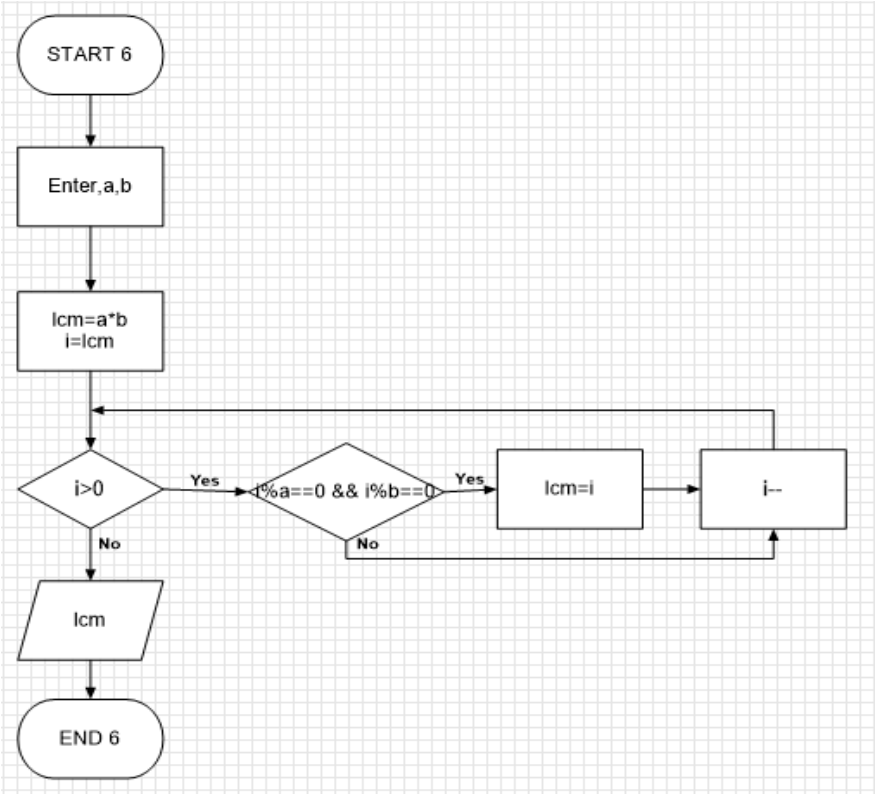

**b-)C code;**

```
#include<stdio.h>

int main()
{
        int result;
        result=2*2*2*2;
        printf("result: %d",result);

return 0;
}
```

**Question**

Draw a flow chart and write C code to find LCM of two numbers.

**a-)Flowchart;**



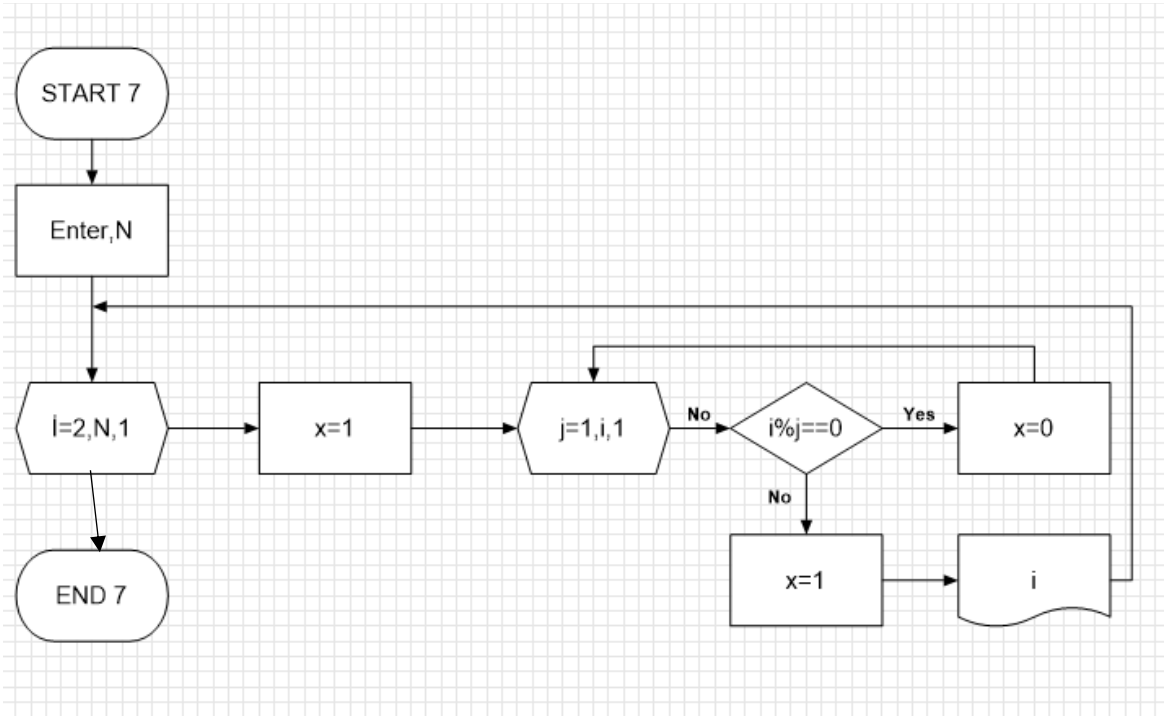

**b-)C code;**

```
#include<stdio.h>
int main(){
        int a,b,lcm,i;

        printf("Enter first number:");
        scanf("%d" ,&a);

        printf("Enter second number:");
        scanf("%d" ,&b);

        lcm=a*b;

        for(i=lcm; i>0; i--){

                if(i%a==0 && i%b==0)
                        lcm=i;
        }
        printf("lcm : %d" ,lcm);

}
```

**Question**

Draw a flow chart and write C code to print all Prime numbers between 1 to n.

**a-)Flowchart;**



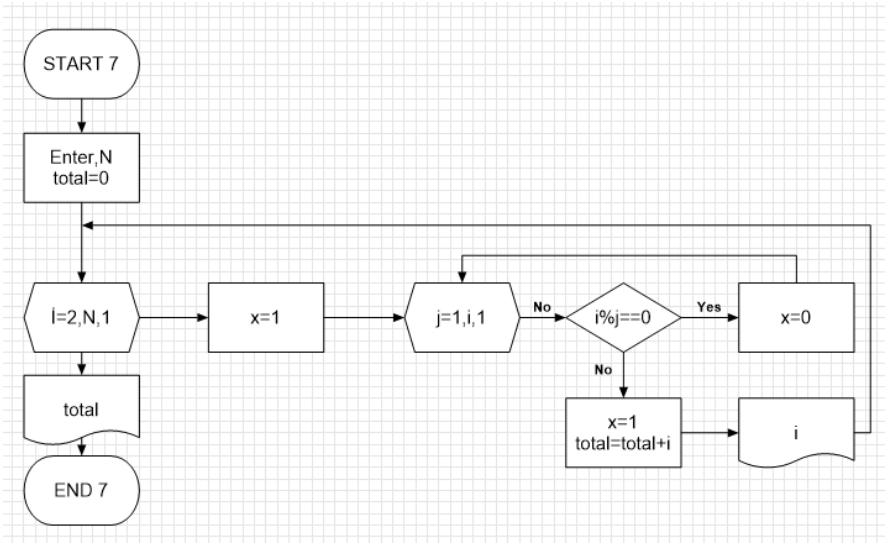

**b-)C code;**

```
#include <stdio.h>
int main(){
 int i=2, j=2, x=0, N;

        printf("Enter a number : ");
        scanf("%d", &N);

         for(i=2; i<N; i++){
                x=1;
                for (j=2; j<i; j++){

                 if (i%j==0){
                x=0;
                 }
                 }
                if (x==1) {

        printf("%d\n",i);
         }
         }

return 0;
}
```

**Question**

Draw a flow chart and write C code to find sum of all prime numbers between 1 to n.

**a-)Flowchart;**



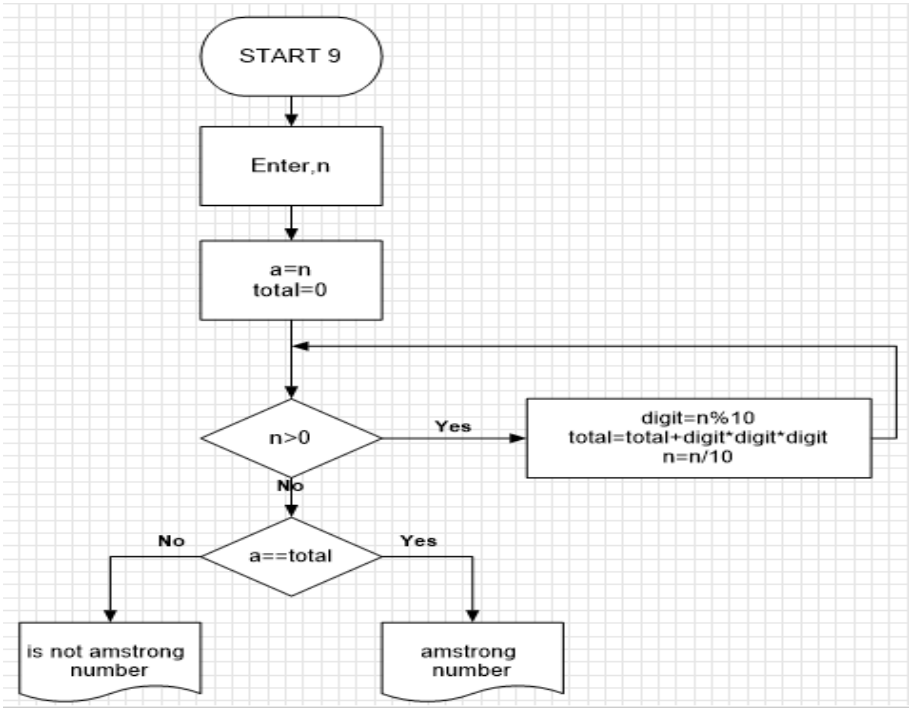

**b-)C code;**

```
#include <stdio.h>
int main(){

int i=2, j=2, x=0, N, total=0;

        printf("Enter a number : ");
        scanf("%d", &N);

        for(i=2; i<N; i++){
        x=1;
                for (j=2; j<i; j++){

        if (i%j==0){
        x=0;
}
}
        if (x==1) {
        printf("%d\n",i);
        total = total + i;
}
}

 printf("sum of prime number 1 to n  = %d\n",N, total);
return 0; }
```

**Question**

Draw a flow chart to check whether a number is Armstrong number or not.

**a-)Flowchart;**



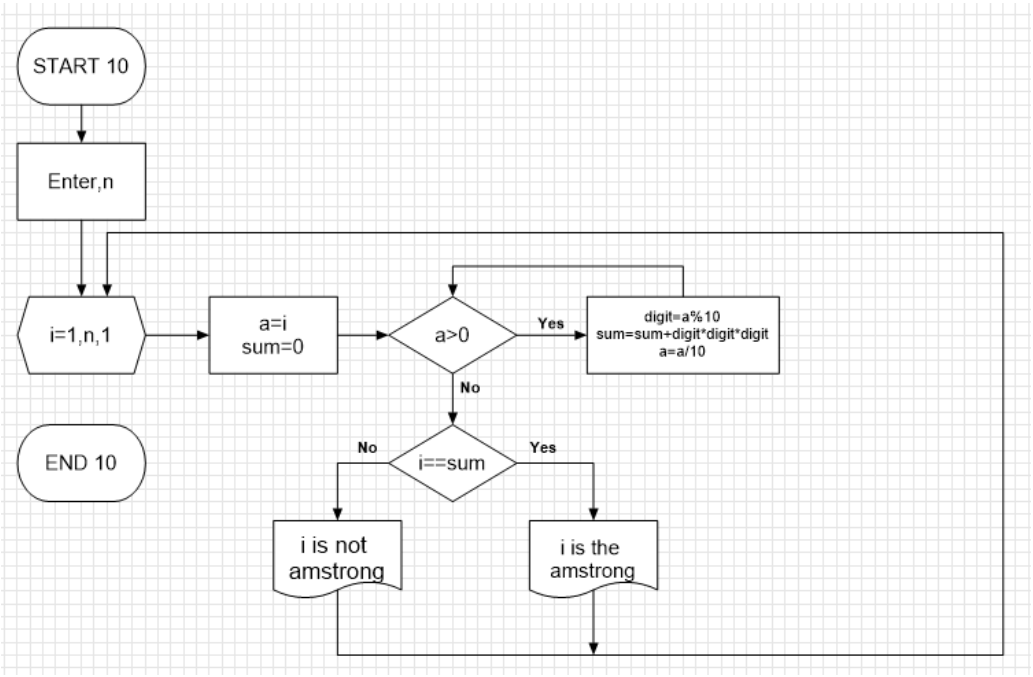

**b-)C code;**

```
#include<stdio.h>
int main(){
int n,a,total=0,digit;
printf("Enter a number :");
scanf("%d" ,&n);
a=n;
while(n>0){
                digit=n%10;
                total=total+digit*digit*digit;
                n=n/10;

}
if(a==total){
                printf("%d is amstrong number" ,a);
}
else{
                printf("%d is not amstrong number" ,a);
}

return 0;
}
```

**Question**

Draw a flow chart and write C code to print all Armstrong numbers between 1 to n.

## a-)Flowchart;



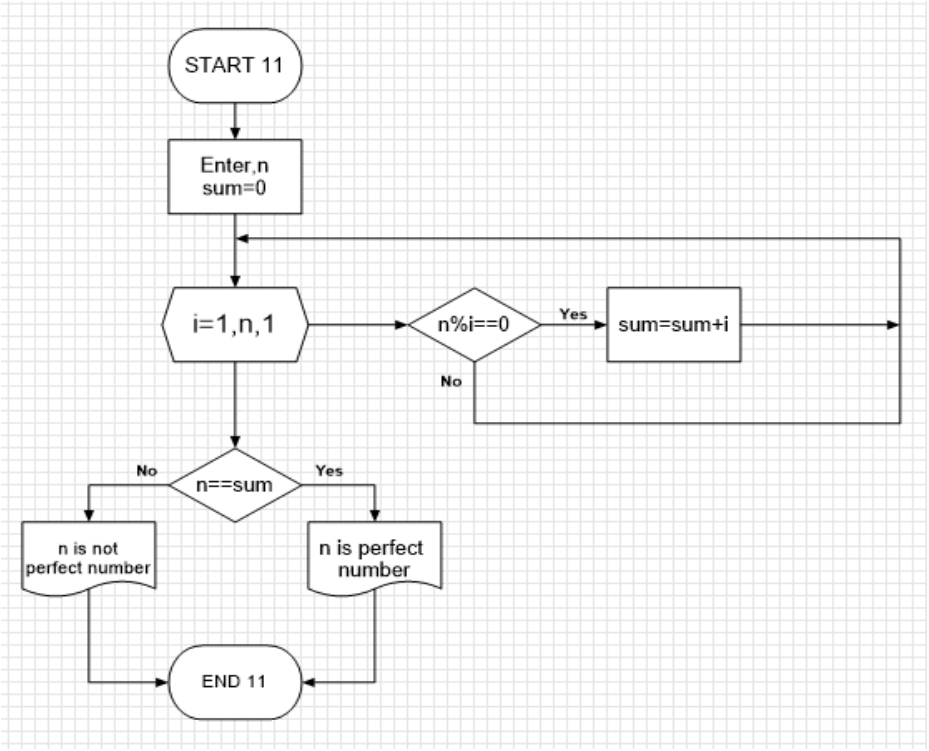

## b-)C code;

```
#include<stdio.h>
int main(){
                int n,i,digit,sum,a;
                printf("Bir sayi giriniz:");
                scanf("%d" ,&n);

                for(i=1; i<n; i++){
                        a=i;
                        sum=0;
                        while(a>0){

                        digit=a%10;
                        sum=sum+digit*digit*digit;
                        a=a/10;
}
                        if(i==sum){
                                printf("%d is amstrong number\n" ,i);
                }
                        else{
                                printf("%d is not amstrong number\n",i);
                }
}

return 0;
}
```

**Question**

Draw a flow chart and C code  to check whether a number is Perfect number or not.

**a-)Flowchart;**



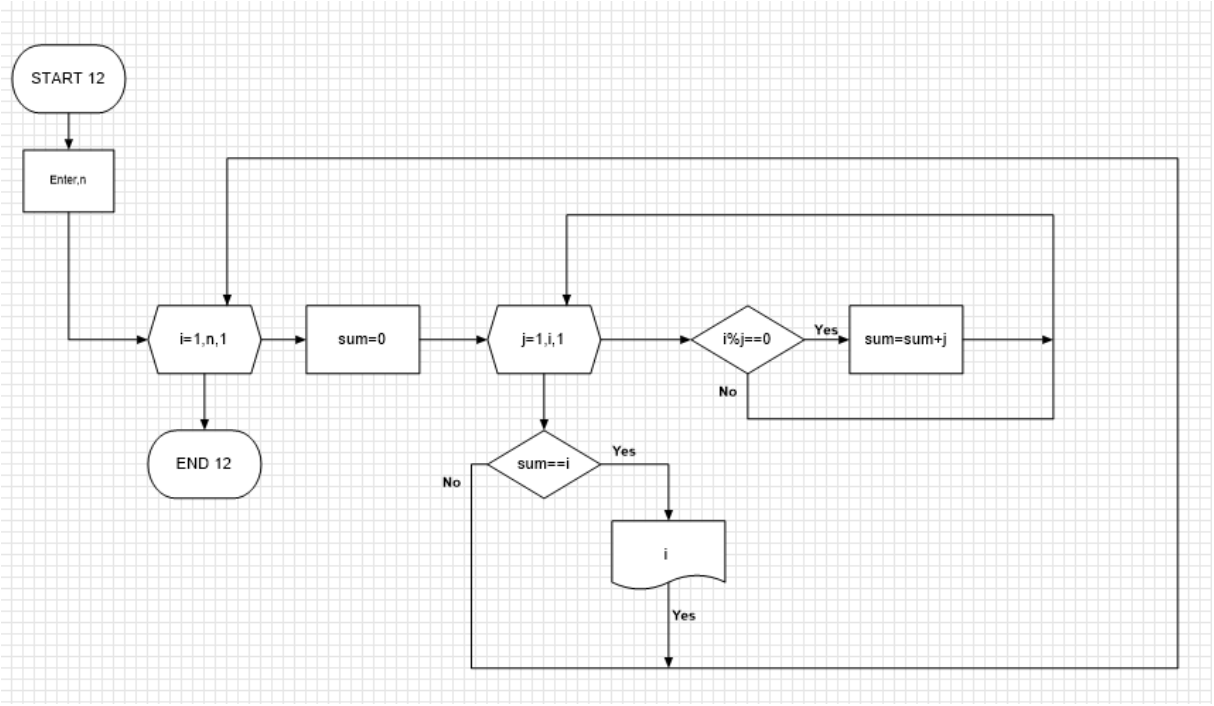

**b-)C code;**

```
#include<stdio.h>
int main()
{
                int sum=0,i,n;
                printf("Enter a number :");
                scanf("%d" ,&n);

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

                        if(n%i==0)
                        sum=sum+i;

                }
                if(n==sum){
                        printf("%d is perfect number" ,n);
                }
                else{
                        printf("%d is not perfect number" ,n);
                }
return 0;
}
```

**Question**

Draw a flow and C code chart to print all Perfect numbers between 1 to n.

**a-)Flowchart;**

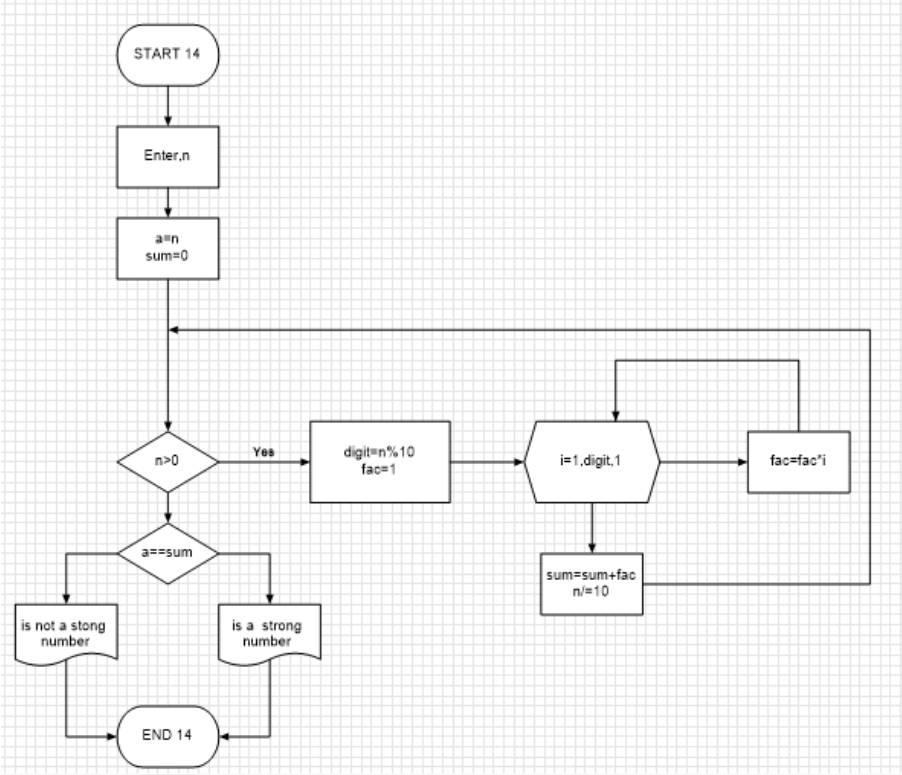



**b-)C code;**

```
#include<stdio.h>
int main(){
	int sum,n,i,j;
	printf("enter a number:");
	scanf("%d", &n);

	for(i=1; i<=n; i++){
		sum=0;

		for(j=1; j<i; j++){

			if(i%j==0){
				sum=sum+j;
				}
			}
			if(sum==i){
			printf("Prime number 1 to n :%d\n", i);
		}
	}
	return 0;
}
```

**Question**

## a-)Flowchart;



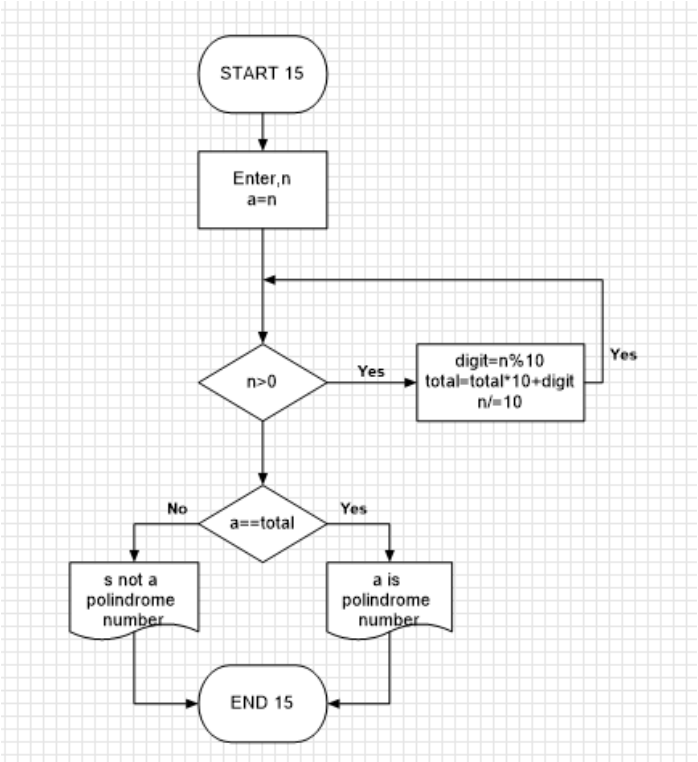

## b-)C code;

```
#include<stdio.h>
int main() {

	int n,a,fac,sum,digit,i;

	printf("enter number :");
	scanf("%d" ,&n);

	a=n;
	sum=0;

	while(n>0){
		digit=n%10;
		fac=1;
		for(i=1; i<=digit; i++){
			fac=fac*i;
		}

		sum=sum+fac;
		n/=10;
	}
	if(a==sum){
		printf("%d is a  strong number ", a);
	}
	else{
		printf("%d is not a stong number", a);
	}
	return 0;
}
```

**Question**

Draw a flow chart and write C code to check Whether a Number is Palindrome or No.

## a-)Flowchart;



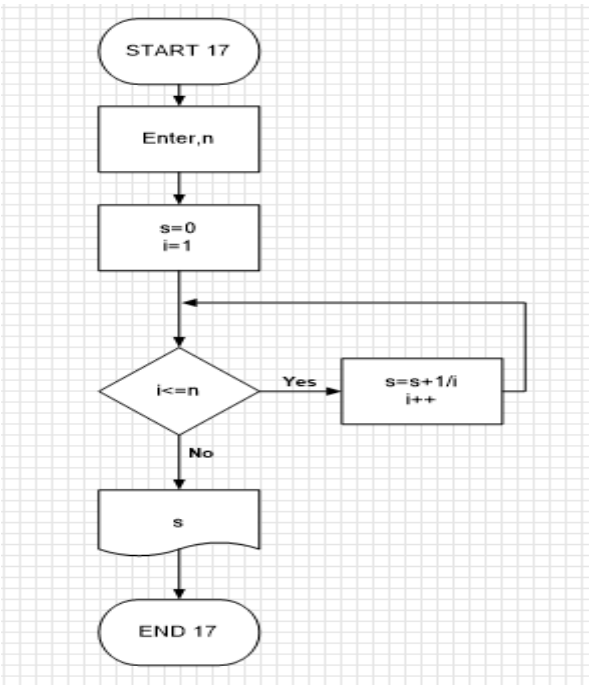

## b-)C code;

```
#include <stdio.h>

int main() {
        int n,a,total=0,digit ;
        printf("enter a number: ");
        scanf("%d", & n);
        a=n;
        while(n>0){
            digit=n%10;
            total=total*10+digit;
            n/=10;
        }
        if(a==total){
            printf("%d is a polindrome number", total);
        }
        else{
            printf("%d is not a polindrome number ", a);
        }
        return 0;
}
```

**Question**

Draw a flow chart and write C code to display the n terms of harmonic series and their sum. (1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n terms)

## a-)Flowchart;




## b-)C code;

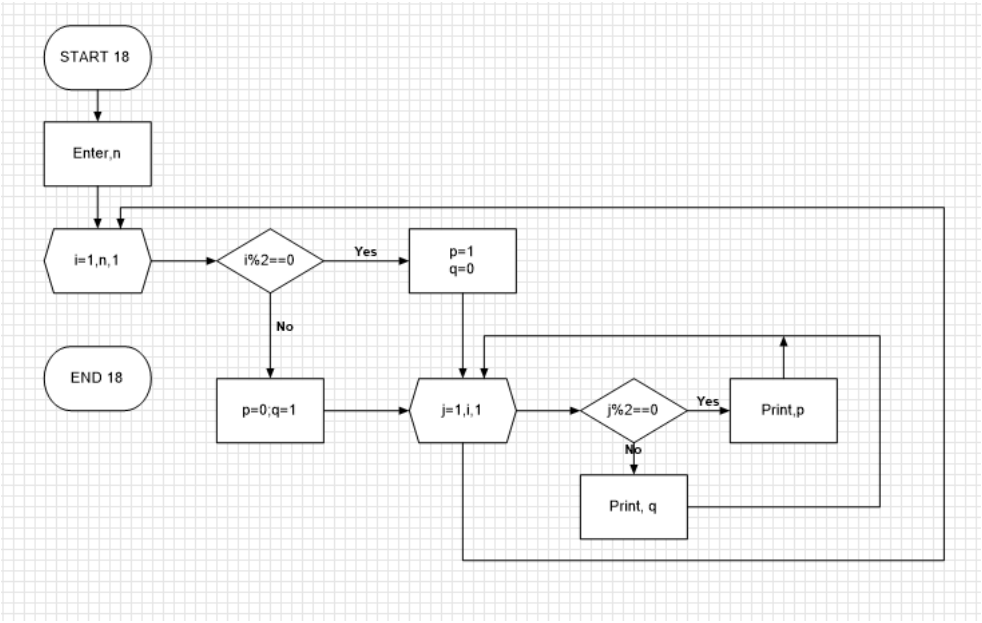
```
#include<stdio.h>

int main()
{
float n;
printf("Enter a number: ");
scanf("%f" ,&n);

float s=0.0,i=1.0;

while(i<=n){

                s=s+1/i;
                i++;
}
printf("S = %f" ,s );

return 0;
}
```

**Question**

Draw a flow chart and write C code to print the Floyd's Triangle.

1
01
101
0101
10101

## a-)Flowchart;



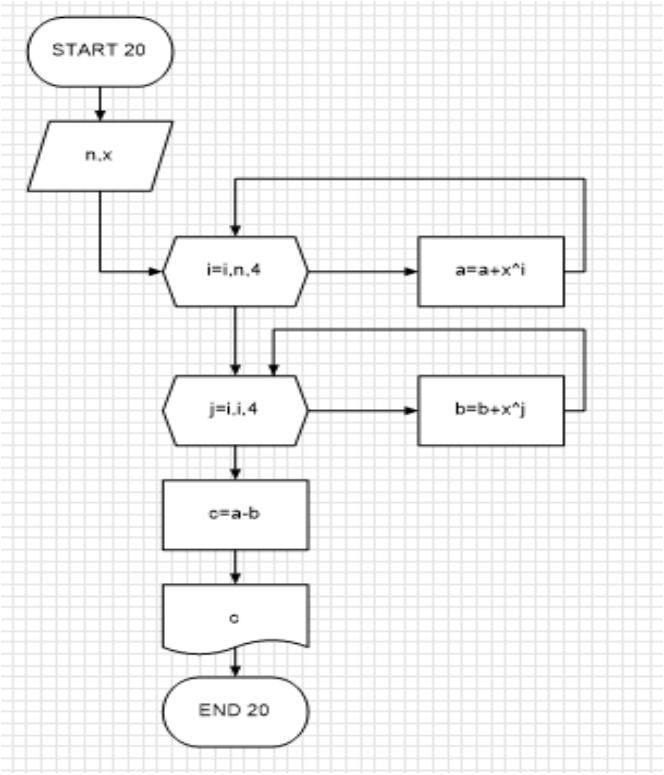

## b-)C code;

```
#include <stdio.h>

int main()
{
  int i,j,n,p,q;
  printf("Input number of rows : ");
  scanf("%d",&n);
  for(i=1;i<=n;i++)
  {
   if(i%2==0)
   { p=1;q=0;}
   else
   { p=0;q=1;}
    for(j=1;j<=i;j++){

                  if(j%2==0)
                    printf("%d",p);
                  else
                    printf("%d",q);
                 }
   printf("\n");

  }
}
```

**Question**

Draw a flow chart and write C code to find the sum of the series [ x - x^3 + x^5 + .....].

**a-)Flowchart;**



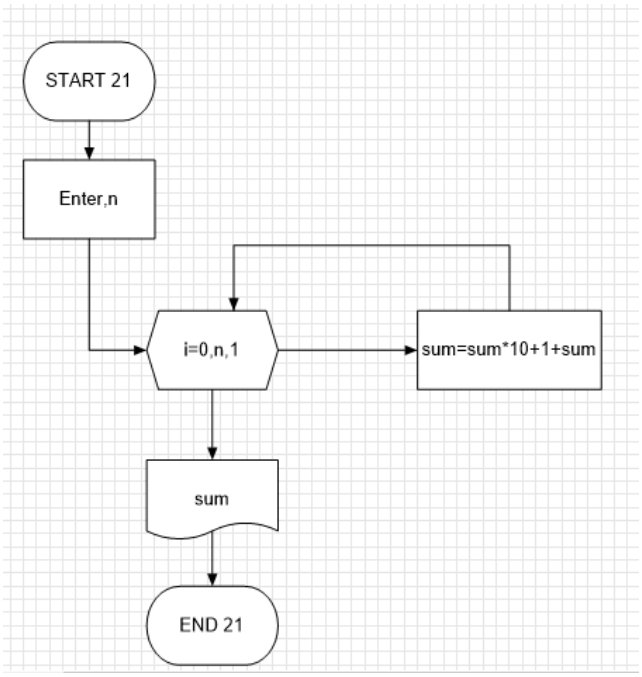

**b-)C code;**

```
#include <stdio.h>
#include<math.h>
int main(){
 int n,x,i,j;

        float a=0,b=0,c;
                printf("x : ");
                 scanf("%d",&x);
                printf("n : ");
                scanf("%d",&n);
        for(i=1; i<=n ; i+=4)
         a+=(pow(x,i));

        for(j=3; j<=n ; j+=4)
        b+=(pow(x,j));

        c = a - b;
        printf("%.2f",c);
 return 0;
}
```

**Question**

Draw a flow chart and write C code to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.

**a-)Flowchart;**



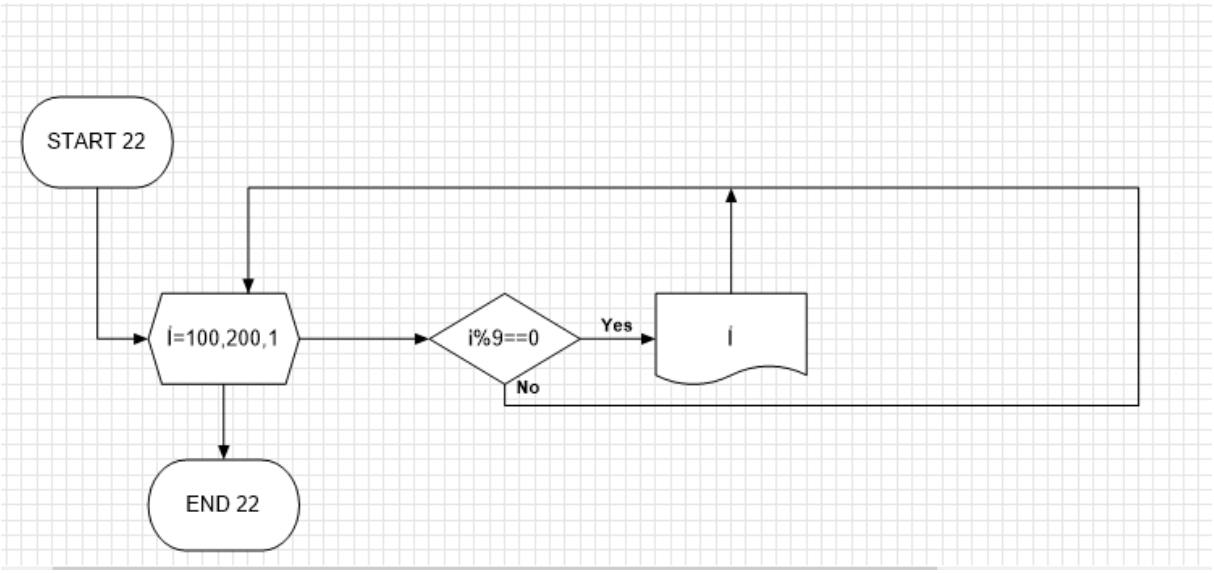

**b-)C code;**

```
#include<stdio.h>
int main(){

        int n,i,sum=0;
        printf("Enter a number: ");
        scanf("%d" ,&n);

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

        sum=sum*10+1+sum;
}
        printf("Sum: %d" ,sum);

return 0;
}
```

**Question**

Draw a flow chart and write C code to find the number and sum of all integer between 100 and 200 which are divisible by 9

**a-)Flowchart;**



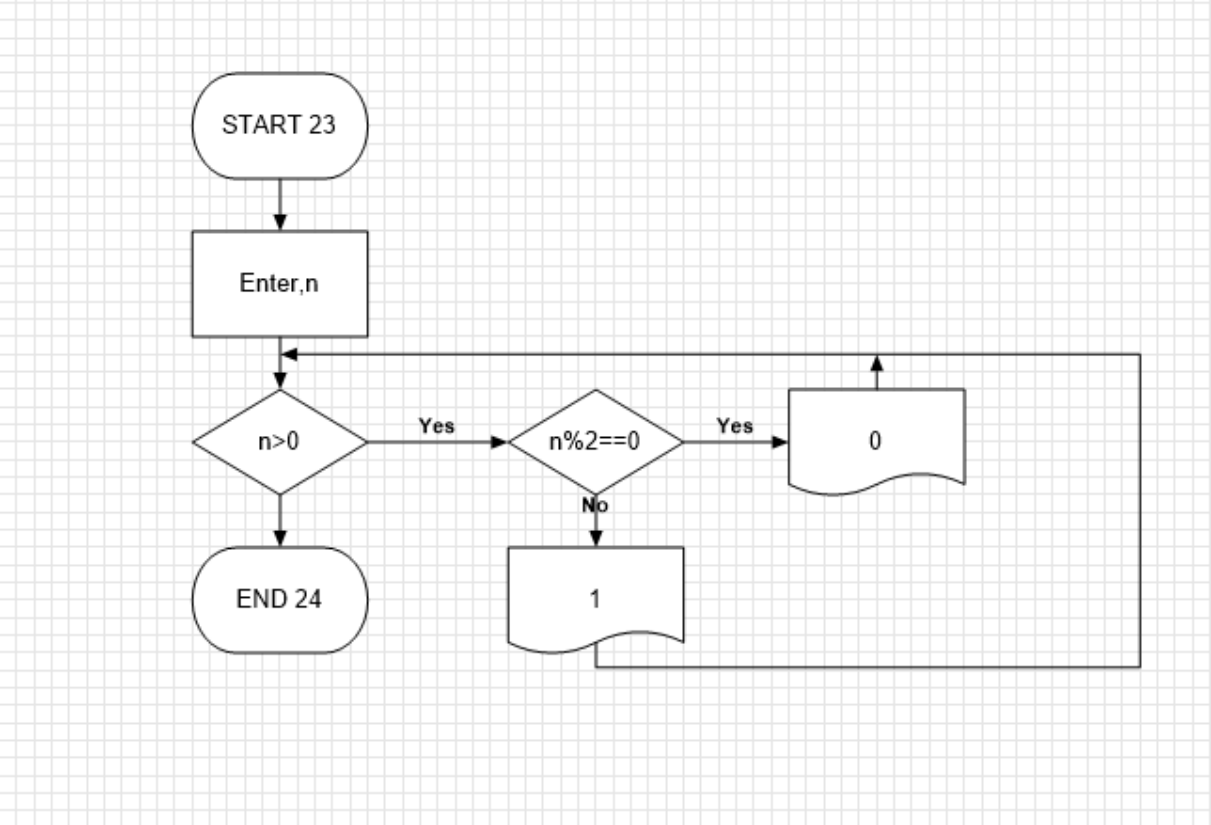

**b-)C code;**

```
#include<stdio.h>

int main()
{
        int i;

for(i=100; i<200; i++){

if(i%9==0)
printf("%d\n" ,i);

}
return 0;
}
```

**Question**

Draw a flow chart and write C code to convert a decimal number into binary without using an array

**a-)Flowchart;**



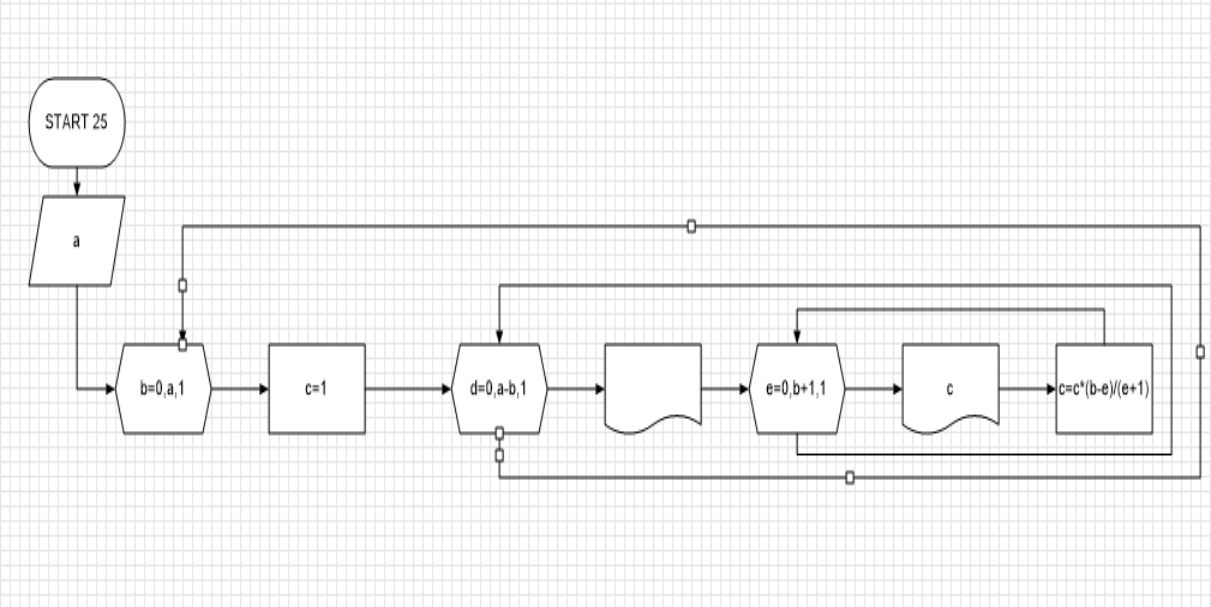

**b-)C code;**

```
#include<stdio.h>

int main(){
int i,n;

printf("Enter a number :");
scanf("%d" ,&n);

printf("Binary format of the number ;\n");

while(n>0){

        if(n%2==0)
        printf("0");
        else
        printf("1");
        n=n/2;
}

return 0;

}
```

**Question**

Draw a flow chart and write C code to print Pascal triangle upto n rows.

**a-)Flowchart;**




**b-)C code;**

```
#include <stdio.h>
#include <stdlib.h>
int main(){
                int a,b,c,d,e;
                printf("Pascal triangle upto n rows :");
                scanf("%d",&a);
for (int b = 0; b < a; b++){
                int c = 1;
                for (int d = 0; d < a - b; d++){
                printf(" ");
}
                for (int e = 0; e <= b; e++){
                printf(" %d ", c);
                c = c * (b - e) / (e + 1);
}
printf("\n");
}
return 0;
}
```