

01)

a)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=1;x<=10;x++){
        printf("%d\n",x);
    }
    return 0;
}
```

b)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=10;x>=1;x--){
        printf("%d\n",x);
    }
    return 0;
}
```

c)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=1;x<10;x+=2){
        printf("%d\n",x);
    }
    return 0;
}
```

d)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=1;x<=52;x+=3){
        printf("%d\n",x);
    }
    return 0;
}
```

e)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=2;x<=33;x=2*x-1){
        printf("%d\n",x);
    }
    return 0;
}
```

f)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=3;x<50;x+=2){
        printf("%d\n",x);
    }

    return 0;
}
```

g)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=2;x<50;x+=2){
        printf("%d\n",x);
    }

    return 0;
}
```

h)

```
#include <stdio.h>
int main()
{
    int x;
    for(x=3;x<50;x+=3){
        printf("%d\n",x);
    }

    return 0;
}
```

i)

```
#include <stdio.h>
int main()
{
    int x,sum=0;
    for(x=1;x<=10;x++){
        sum=sum+x;
    }
    printf("Summation is:%d\n",sum);

    return 0;
}
```

j)

```
#include <stdio.h>
int main()
{
    int x,mul=1;
    for(x=1;x<=10;x++){
        mul=mul*x;
    }
    printf("Multiplication is:%d\n",mul);

    return 0;
}
```

k)

```
#include <stdio.h>
int main()
{
    int x,count=0;
    for(x=1;x<=50;x++){
        if(x%2==0){
            count=count+1;
        }
    }
    printf("number of even number is:%d\n",count);

    return 0;
}
```

l)

```
#include <stdio.h>
int main()
{
    int x,count=0;
    for(x=1;x<=50;x++){
        if(x%2==1){
            count=count+1;
        }
    }
    printf("number of even number is:%d\n",count);

    return 0;
}
```

m)

```
#include <stdio.h>
int main()
{
    int x,sum=0;
    for(x=2;x<=30;x++){
        if(x%2==0){
            sum=sum+x;
        }
    }
    printf("Sum is:%d\n",sum);
    return 0;
}
```

n)

```
#include <stdio.h>
int main()
{
    int x,product=1;
    for(x=1;x<=15;x++){
        if(x%2==1){
            product=product*x;
        }
    }
    printf("product is:%d\n",product);
    return 0;
}
```

02)

```
#include<stdio.h>
int main()
{
    int n,i,c=0;

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

    for(i=1;i<=n;i++){
        if(n%i==0){
            c++;
        }
    }
    if(c==2){
        printf("This is a prime number\n");
    }
    else{
        printf("This is a not prime number\n");
    }

    return 0;
}
```

03)

```
#include<stdio.h>
int main()
{
    int n,i,c=0;

    printf("Enter your number:");
    scanf("%d",&n);
    if(n>0){
        for(i=1;i<=n;i++){
            if(n%i==0){
                printf("%d\n",i);
            }
        }
    }
    return 0;
}
```

04)

```
#include<stdio.h>
int main()
{
    int x=0,y=1,z;
    int n;
    printf("Enter number:");
    scanf("%d",&n);

    printf("%d\t%d\t",x,y);
    for (int i=2;i<=n;i++){
        z=x+y;
        printf("%d\t",z);
        x=y;
        y=z;
    }

    return 0;
}
```

05)

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

    q=n;

    while(q!=0){
        y=q%10;
        x= x*10 +y;
        q=q/10;
    }

    if(x==n){
        printf("This is a Palindrome number\n");
    }
    else{
        printf("This is not a Palindrome number\n");
    }
    return 0;
}
```

06)

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

    for(i=1;i<=n;i++){
        x=i*i;
        sum= sum+(1/x);
    }
    printf("Sum of the loop is:%f\n",sum);
    return 0;
}
```

07)

```
#include<stdio.h>
int main()
{
    int i,n;
    for(i=1;i<=10;i++){
        n=i*(i+1)/2;
        printf("%d\n",n);
    }
    return 0;
}
```

08) a)

```
#include<stdio.h>
int main()
{
    int x,y;
    for(x=6;x>=1;x--){
        for(y=1;y<=x;y++){
            printf("*");
        }
        printf("\n");
    }
    for(x=2;x<=6;x++){
        for(y=1;y<=x;y++){
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```

b)

```
#include <stdio.h>
int main(){
    int x, i, j, k, l;
    for(x=1; x<=3; x++){
        for(i=1; i<=3; i++){
            for(j=i; j<3; j++){
                printf(" ");
            }
            for(k=1; k<=i; k++){
                printf("X");
            }
            for(l=1; l<i; l++){
                printf("X");
            }
            printf("\n");
        }
    }
    return 0; }
```

c)

```
#include <stdio.h>
int main(){
    int x, y, z;
    for(x=1;x<=5;x++) {
        for(y=1;y<=x;y++) {
            printf("%d",y);
        }
        for(z=4;z>=x;z--) {
            printf("*",z);
        }
        printf("\n");
    }
    return 0;
}
```

d)

```
#include <stdio.h>
int main(){
int x, y, z;
for(x=1;x<=6;x++) {
    for(y=1;y<x;y++) {
        printf(" ",y);

    }
    for(z=6;z>=x;z--) {
        printf("*",z);

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

e)

```
#include <stdio.h>
int main(){
int a, b, c, d;
for(a=1;a<=5;a++) {
    for(b=1;b<=a;b++) {
        printf("%d",b);
    }
    printf("\n");
}
for(c=5;c>=1;c--) {
    for(d=1;d<c;d++) {
        printf("%d",d);
    }
    printf("\n");
}
return 0;
}
```