1.

```c
#include<stdio.h>
 int main(){
        int x;
        printf("Enter a number:\n");
        scanf("%d",&x);
        if(x>0)
                printf("Positive");
        else
                printf("Non-positive");
                return 0;
 }
```

```
Enter a number:
4
Positive
--------------------------------
Process exited after 6.136 seconds with return value 0
Press any key to continue . . .
```

2.

```c
 #include<stdio.h>
 int main(){
        int x;
        printf("Enter a number:\n");
        scanf("%d",&x);
        printf(x%5==0?"Number is divisible by 5":"Number is not divisible by 5");
```

```
        return 0;

}
```

3.

```
#include<stdio.h>

int main(){

        int x;

        printf("Enter a number:\n");

        scanf("%d",&x);

        printf(x%2==0?"even":"odd");

                return 0;

}
```

4.

```
#include<stdio.h>

int main(){

        int x;
```

```c
        printf("Enter a number:\n");

        scanf("%d",&x);

        if(x&1)

                printf("odd");

        else

            printf("even");

                return 0;

}
```

```
Enter a number:
56
even
--------------------------------
Process exited after 2.475 seconds with return value 0
Press any key to continue . . .
```

5.

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

        int x;

        printf("Enter a number:\n");

        scanf("%d",&x);

        if(x>99&&x<999)

        printf("Three digit number");

        else

        printf("Not a three digit number");

        return 0;

}
```

```
C:\Users\MADHAV\Desktop\new.exe

Enter a number:
56
Not a three digit number
--------------------------------
Process exited after 2.422 seconds with return value 0
Press any key to continue . . .
```

6.

```c
#include<stdio.h>

int main(){

        int x,y;

        printf("Enter two number:\n");

        scanf("%d %d",&x,&y);

        if(x>y)

        printf("Greater is %d",x);

        else if(x<y)

        printf("Greater is %d",y);

        else

        printf("%d and %d are equal",x,y);

        return 0;

    }
```

```
C:\Users\MADHAV\Desktop\new.exe

Enter two number:
56
23
Greater is 56
--------------------------------
Process exited after 4.524 seconds with return value 0
Press any key to continue . . . _
```

7.

```c
#include<stdio.h>
#include<math.h>
    int main(){
        int a,b,c,D;
        float x,y;
        printf("Enter coefficient of quadratic equation:\n");
        scanf("%d %d %d", &a, &b, &c);
        D=b*b-4*a*c;
        if(D==0){
            printf("Roots are equal");
            x=-b/(2.0*a);
            printf("Root is %.2f",x);
        }
        if(D>0){
            printf("Roots are real and distinct");
            x=(-b+sqrt(D))/(2*a);
            y=(-b-sqrt(D))/(2*a);
            printf("\n Roots are:%.2f %.2f",x,y);
        }
        if(D<0)
        printf("Roots are imaginary");
        return 0;
    }
```

```
C:\Users\MADHAV\Desktop\new.exe

Enter coefficient of quadratic equation:
1        -6       9
Roots are equalRoot is 3.00
---------------------------------
Process exited after 8.235 seconds with return value 0
Press any key to continue . . . ▁
```

8.

#include<stdio.h>

int main(){

int year;

printf("Enter a year:\n");

scanf("%d",&year);

if(year%400==0||year%4==0&&year%100!=0)

printf("Year is leap year");

else

printf("Year is not a leap year");

return 0;

}

```
C:\Users\MADHAV\Desktop\new.exe

Enter a year:
2022
Year is not a leap year
---------------------------------
Process exited after 4.26 seconds with return value 0
Press any key to continue . . .
```

9.

#include<stdio.h>

int main(){

```c
        int a,b,c,k;
        printf("Enter a 3 digits:\n");
        scanf("%d %d %d",&a,&b,&c);
        if(a>b&&a>c)
        k=a;
        else if(b>a&&b>c)
        k=b;
        else
        k=c;
        printf("greater is %d",k);
    }
```

C:\Users\MADHAV\Desktop\new.exe

```
Enter a 3 digits:
4
5
6
greater is 6
--------------------------------
Process exited after 5.502 seconds with return value 12
Press any key to continue . . .
```

10.

```c
    #include<stdio.h>
    int main(){
        float cp,sp,x;
        printf("Enter a cost price and selling price:\n");
        scanf("%f %f",&cp,&sp);
        if(cp<sp){
```

```
                x=(sp-cp)/cp*100;

                printf("profit is %.2f%%",x);

        }

                else if(cp>sp){

                x=(cp-sp)/cp*100;

                printf("loss is %.2f%%",x);

        }

                else

                printf("No profit no loss");

                return 0;

        }
```

```
Enter a cost price and selling price:
100
120
profit is 20.00%
--------------------------------
Process exited after 4.633 seconds with return value 0
Press any key to continue . . .
```

11.

```
#include<stdio.h>

    int main(){

            float m1,m2,m3,m4,m5;

            printf("Enter the five subjects marks:\n");

            scanf("%f %f %f %f %f",&m1,&m2,&m3,&m4,&m5);

            if(m1>33 && m2>33 && m3>33 && m4>33 && m5>33)
```
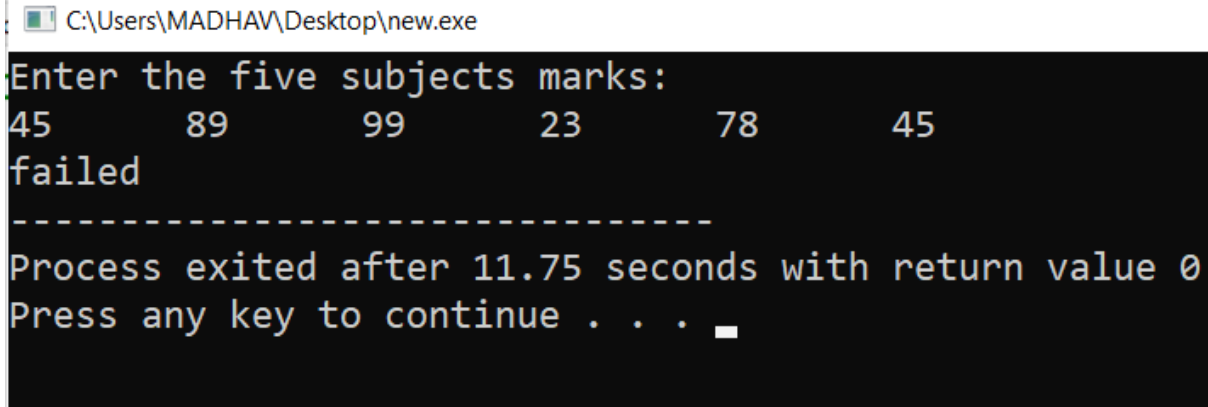
```c
        printf("passed");

    else

        printf("failed");

    return 0;

}
```

```
C:\Users\MADHAV\Desktop\new.exe

Enter the five subjects marks:
45        89        99        23        78        45
failed
---------------------------------
Process exited after 11.75 seconds with return value 0
Press any key to continue . . .
```

12.

```c
#include<stdio.h>

    int main(){

        char x;

        printf("Enter a Alphabet:\n");

        scanf("%c",&x);

        if(x>='A'&&x<='Z')

        printf("Uppercase");

        else

        printf("Lowercase");

        return 0;

    }
```

```
Enter a Alphabet:
Q
Uppercase
---------------------------------
Process exited after 4.749 seconds with return value 0
Press any key to continue . . .
```

13.

```c
#include<stdio.h>

int  main(){

        int x;

        printf("Enter a number:\n");

        scanf("%d",&x);

        if(x%3==0&&x%2==0)

        printf("Divisible by 3&2");

        else

        printf("Not divisible by 3&2");

        return 0;

    }
```

```
Enter a number:
45
Not divisible by 3&2
---------------------------------
Process exited after 3.207 seconds with return value 0
Press any key to continue . . .
```

14.

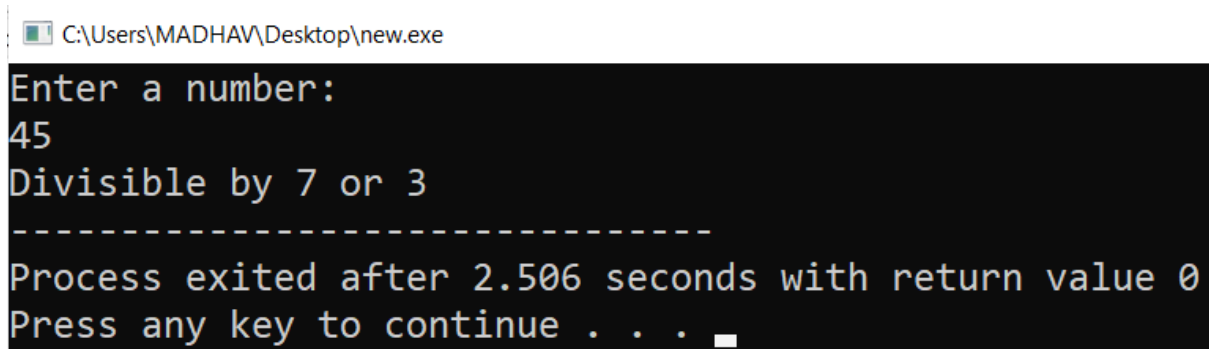```c
#include<stdio.h>

int main(){
```

```c
    int x;

    printf("Enter a number:\n");

    scanf("%d",&x);

    if(x%7==0||x%3==0)

    printf("Divisible by 7 or 3");

    else

    printf("Not divisible by 7 or 3");

    return 0;

}
```

C:\Users\MADHAV\Desktop\new.exe

```
Enter a number:
45
Divisible by 7 or 3
---------------------------------
Process exited after 2.506 seconds with return value 0
Press any key to continue . . .
```

15.

```c
#include<stdio.h>

int  main(){

    int x;

    printf("Enter a number:\n");

    scanf("%d",&x);

    if(x>0)

    printf("Positive");

    else if(x<0)

    printf("Negative");

    else
```

```c
        printf("Zero");

        return 0;

    }
```

```
Enter a number:
45
Positive
--------------------------------
Process exited after 2.615 seconds with return value 0
Press any key to continue . . .
```

16.

```c
#include<stdio.h>

    int main(){

        char x;

        printf("Enter a character:\n");

        scanf("%c",&x);

        if(x>='A'&&x<='Z')

        printf("Uppercase");

        else if(x>='a'&&x<='z')

        printf("Lowercase");

        else if(x>='0'&&x<='9')

        printf("Digit");

        else

        printf("Special character");

        return 0;

    }
```

```
Enter a character:
"
Special character
---------------------------------
Process exited after 1.151 seconds with return value 0
Press any key to continue . . .
```

17.

```c
#include<stdio.h>
int main(){
        int l1,l2,l3;
        printf("Enter the length of the sides of a triangle:\n");
        scanf("%d %d %d",&l1,&l2,&l3);
        if (l1+l2>l3)
                printf("Triangle is valid");
        else
                printf("Triangle is not valid");
        return 0;
    }
```

```
Enter the length of the sides of a triangle:
4       8       9
Triangle is valid
---------------------------------
Process exited after 11.29 seconds with return value 0
Press any key to continue . . .
```

18.

```c
#include<stdio.h>
```

```c
int main(){

        int m;

        printf("Enter the month number:\n");

        scanf("%d",&m);

        if(m==1 || m==3 || m==5 || m==7 || m==8 || m==10 || m==12)

        printf("31 days in that month");

        else if(m==2)

        printf("28/29 days in that month");

        else

        printf("30 days in that month");

        return 0;

    }
```



```
C:\Users\MADHAV\Desktop\new.exe

Enter the month number:
2
28/29 days in that month
------------------------------
Process exited after 5.095 seconds with return value 0
Press any key to continue . . .
```