1.WAP to calculate the compound interest.

```c
#include<stdio.h>
#include<math.h>
int main()
{
    float cif,r,t,pa,ci; /*pa=principal
amount,r=rate,t=time,cif=compound intrest future,ci=compund
intrest*/
    printf("enter the rate\n");
    scanf("%f",&r);
    printf("enter the time\n");
    scanf("%f",&t);
    printf("enter the principalamount\n");
    scanf("%f",&pa);
    cif=pa*(pow((1+r/100),t));
    ci=cif+pa;
    printf("the compound intrest future is %f\n",cif);
    printf("the compound intrest is %f\n",ci);
    return 0;
}
```

2.WAP to calculate Area , perimeter, diameter of circle.

```c
#include<stdio.h>
void main()
{
    int r=3,d=0;
    float pie=3.14,a=0,p=0;
    a=(3.14)*r*r;
    p=2*(3.14)*r;
    d=2*r;
    printf("the area is %f",a);
```

```
    printf("the perimeter is %f",p);
    printf("the diameter is %d",d);
}
```

3. WAP to calculate Total Salary of a employee HRA is 20% of his basic salary and DA is 40% of his basic salary .

```
#include<stdio.h>
void main()
{
    int bs,hra,da,tot_sal;
    printf("enter the basic salary");
    scanf("%d",&bs);
    da=0.40*bs;
    hra=0.20*bs;
    tot_sal=bs+da+hra;
    printf("the total salary=%d",tot_sal);
}
```

4.WAP to calculate highest and lowest marks of three students by using ternary operator .

```
void main()
{
    int ravi=300,shurbhi=245,rahul=350;
    ((ravi<shurbhi)&&(ravi<rahul))?
    printf("low marks of ravi\n"):
    (shurbhi<rahul)?
    printf("low marks of shurbhi\n"):
```

```
    printf("low marks of rahul\n");
}
```

5. WAP to find distance in meters and centimeter .

```
#include<stdio.h>
void main()
{
    int km,m,cm;
    printf("enter the values");
    scanf("%d",&km);
    m=km*1000;
    cm=m*100;
    printf("distance in meters is %d",m);
    printf("distance in centimeter is %d",cm);
}
```

6.WAP to candidates who is eligible to admission using decision making structure .

```
#include<stdio.h>
void main()
{
    int m,p,c,tot_num;
    printf("enter the marks of maths\n");
    scanf("%d",&m);
    printf("enter the marks of physics\n");
    scanf("%d",&p);
    printf("enter the marks of chemistry\n");
    scanf("%d",&c);
    tot_num=(m+p+c);
```

```
    if(m>=65)
    if(p>=55)
    if(c>=50)
    if(tot_num>=180)
    printf("the candidate is eligibal for admission\n");
    else
    printf("candidate is not eligibal for admission\n");
    else
    printf("candidate is not eligibal for admission\n");
    else
    printf("candidate is not eligibal for admission\n");
    else
    printf("candidate is not eligibal for admission\n");
}
```

7.WAP to print a person's age if is greater than 60 then print senior citizen , greater equal to 80 then print heart patient and greater equal 75 then print diabties patient.

```
#include<stdio.h>
void main()
{
    int age=60;
    if(age>60)
    {
        printf("senior citizen");
    }
    else if(age>=80)
    {
        printf("heart patient");
    }
    else if(age>=75)
```

```
    {
    printf("diabties patient");
    }
    else
    {
        printf ("medile age");
    }
}
```

8. Write a C program to accept a coordinate point in XY coordinate system and determine in which quadrant the coordinate point lies.

```
#include<stdio.h>
void main()
{
    int a,b;
    printf("enter the values");
    scanf("%d\n%d",&a,&b);
    if((a>0)&&(b>0))
    {
        printf("first quadrant");
    }
    else if((a>0)&&(b<0))
    {
        printf("second quadrant");
    }
    else if((a<0)&&(b>0))
    {
        printf("third quadrant");
    }
    else
    {
        printf("third quadrant");
    }
}
```

9.WAP to find factorial of n=3.

```c
#include<stdio.h>
void main()
{
    int i,f=1,n=3;
    for(i=1;i<=n;i++)
    f=f*i;
    printf("factorial is %d",f);
}
```

10.WAP to the sum of five digit number .

```c
#include<stdio.h>
void main()
{
    int n,a , sum=0;
    printf("enter the values");
    scanf("%d",&n);
    a=n/10000;
    sum=a+sum;
    a=n%10;
```

```
    sum=sum+a;
    printf("the sum of five digit number is %d",sum);
}
```

11.WAP to find fabonacci series of any n number.

```
#include<stdio.h>
void main()
{
    int n,t1=0,t2=1,next_term;
    printf("enter the number=");
    scanf("%d",&n);
    printf("FIBONACCI SERIES:%d,%d,",t1,t2);
    next_term=t1+t2;
    while(next_term<=n)
    {
        printf("%d,",next_term);
    t1=t2;
    t2=next_term;
    next_term=t1+t2;
    }
}
```

12. While purchasing items or discount of 10% is after if the quantity purchase is more than 100 if quantity price are entered through the keyboard write the program to calculate the total expenses.

```
#include<stdio.h>
void main()
```

```
{
    int qty,dis=0;
    float price,tot_exp;
    printf("enter the value of qty&rate");
    scanf("%d,%f",&qty,&price);
    if(qty>100)
    {
        dis=10;
        tot_exp=(price*qty)-(price*qty*dis)/100;
        printf("the total expences is%f",tot_exp);
        }
        else
        {
            tot_exp=qty*price;
            printf("the total expences is
%f",tot_exp);
        }
}
```

13. The current year of year of joining the enter through the keyboard is number of years for which employee has served the organization each greater than three year then bonus of 2500 is given and if the year of service.calculate the bonus .

```
#include<stdio.h>
void main()
{
    int yc,yoj,yos,bonus=0;
    printf("enter the yc&yoj");
    scanf("%d %d",&yc,&yoj);
    yos=(yc-yoj);
    if(yos>3)
```

```
    {
        bonus=2500;
        printf("the value of bonus is %d",bonus);
    }
    else
    {
        printf("no bonus");
    }
}
```

14.WAP to calculate Total Salary of a employee whose basic salary is less than 1500 ,HRA is 10% of his basic salary and DA is 90% of his basic salary .

```
#include<stdio.h>
void main()
{
    int tot_sal,bs,hra,da;
    printf("enter the basic salary");
    scanf("%d",&bs);
    if(bs<1500)
    {
        hra=0.10*bs;
        da=0.90*bs;
    }
    else{
        hra=500;
        da=0.98*bs;
    }
```

```
    tot_sal=hra+da+bs;
    printf("the total salary is %d",tot_sal);
}
```

15.WAP to calculate hcf and lcm of two numbers enter through the keyboard.

```
#include<stdio.h>
void main()
{
    int n1,n2,lcm,hcf,i;
    printf("enter the n1");
    scanf("%d",&n1);
    printf("enter the n2");
    scanf("%d",&n2);
    for(i=1;i<=n1;i++)
    {
        if(n1%i==0 && n2%i==0)
        {
            hcf=i;
        }
    }
    lcm=(n1*n2)/hcf;
    printf("hcf:%d lcm:%d",hcf,lcm);
}
```

16. Write a program to find weather and Internet year is leap or not.

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

```c
void main()
{
    int year;
    printf("enter the year\n");
    scanf("%d",&year);
    if(year%400==0)
    {
        printf("%d year is leap" ,year);
    }
    else if(year%100==0)
    {
        printf("%d year is leap",year);

    }
    else if(year%4==0)
    {
        printf("%d year is leap",year);
    }
    else
    {
        printf("%d year is not leap",year);
    }
}
```

17. Write a C program to input the cost price, selling price and maintenance price of the product and then calculate profit or loss along with the profit/ loss percentage.

```c
#include<stdio.h>
void main()
{
    int cp,sp,mp,profit,loss,d;
    float pp,lp;
```

```
    printf("enter the cp\n");
    scanf("%d",&cp);
    printf("enter the sp\n");
    scanf("%d",&sp);
    printf("enter the mp\n");
    scanf("%d",&mp);
    d=cp+mp;
    if(profit>0)
    {
    profit=sp-d;
    pp=(profit*100)/d;
    printf("%d\n%f%%",profit,pp);
    }
    else
    {
    loss=d-sp;
    lp=(loss*100)/d;
    printf("%d\n%f%%",loss,lp);
    }
}
```

18. Write a program to find enter number is pelindrome or not .

```
#include<stdio.h>
void main()
{
    int n,r,sum=0,temp;
    printf("enter the number=");
    scanf("%d",&n);
    temp=n;
    while(n>0)
    {
        r=n%10;
        sum=sum*10+r;
```

```
        n=n/10;
    }
    if(temp==sum)
    {
    printf("it is a pelindrome");
    }
    else
    {
        printf("not a pelindrome");
    }
}
```

19. Suppose you are a start writing A C program at time T1 at time T2 coding is finished. after compiling code you get an error and it took you T3 to fix the error right the program to find the total times that you spent in executing this program.

```
#include<stdio.h>
void main()
{
    int
hh1=2,hh2=1,hh3=2,mm1=5,mm2=4,mm3=2,ss1=14,ss2=3,ss3=4,th,tm,ts,t
t;
    if(tt>0)
    {
    th=hh1+hh2+hh3;
    tm=mm1+mm2+mm3;
    ts=ss1+ss2+ss3;
    printf("%d:%d:%d",th,tm,ts);
    }
}
```

20. Write a program to make equilateral triangle shaped pyramid.

```c
#include<stdio.h>
void main()
{
    int n,r,s,c;
    printf("enter the number of rows ");
    scanf("%d",&n);
    for(r=1;r<=n;r++)
    {
    for(s=1;s<=n-r;s++)
    printf(" ");
    for(c=1;c<=(2*r-1);c++)
    printf("*");
    printf("\n");
    }
}
```

21. Write a program to make reverse equilateral triangle shaped pyramid

```c
#include<stdio.h>
void main()
{
    int n;
    char ch;
    printf("enter the values n");
    scanf("%d",&n);
    for(int r=1;r<=n;r--)
    {
        for(int s=1;s<=n-r;s++)
        printf(" ");
        for(int c=1;c<=r;c++)
```

```
        printf("*");
        printf("\n");
    }

}
```

22.Write a program to find prime number or not of any number is input to the keyboard.

```
#include<stdio.h>
void main()
{
    int i,c,n;
    printf("enter the values=");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        if(n%i==0)
        {
            c++;
        }
    }
    if(c==2)
    {
    printf("it is a prime number");
    }
    else{
        printf("it is not a prime number");
    }

}
```

23. Write a program to find area and perimeter of rectangle.

```c
#include<stdio.h>
int main()
{
    int l,b,area=0,perimeter=0;
    l=10;
    b=20;
    area=l*b,perimeter=2*(l+b);
    printf("the area of rectangle is =%d",area);
    printf("the perimeter of rectangle is =%d",perimeter);
    return 0;
}
```

24.Write a program to find simple interest.

```c
#include<stdio.h>
void main()
{
    int p,n; /*p=principal , n=time*/
    float si=0,r;
    p=1000;
    n=3;
    r=2.5;
    si=(p*n*r)/100;
    printf("the si=%f",si);
}
```

25. Write a program to find size of data type.

```
#include<stdio.h>
void main()
{
    printf("%1d\n",sizeof(int));
    printf("%1d\n",sizeof(float));
    printf("%1d\n",sizeof(double));
    printf("%1d\n",sizeof(char));
    printf("%1d\n",sizeof(long));
}
```

26. Write a program to make table of any number is input through the keyboard.

```
#include<stdio.h>
void main()
{
    int i=1,n,p;
    printf("enter the value=");
    scanf("%d",&n);
    for(i=1;i<=10;i++)
    {
        p=n*i;
        printf("%d*%d=%d\n",n,i,p);
    }
}
```

27. Write a program to input all side of a triangle and check whether triangle is valid or not.

```c
#include<stdio.h>
void main()
{
int ab,bc,ca,ts,tr,tt;
printf("enter the sides\n");
scanf("%d %d %d",&ab,bc,ca);
ts=ab+bc;
tr=bc+ca;
tt=ca+ab;
if((ts>ca)||(tr>ab)||(tt>bc))
{
    printf("triangle is valid");
}
else
{
    printf("triangle is invalid");
}

}
```

28. Write a program to perform division without using arithmetic operator.

```c
#include<stdio.h>
void main()
{
    int a=128;
    a=(a>>6);
    printf("the value of a:%d",a);
}
```

29. Write a program to perform multiplication without using multiplication arithmetic operator.

```
#include<stdio.h>
void main()
{
    int a=2;
    a=(a<<4)-a;
    printf("the value of a:%d",a);
}
```

30.Write a program to perform multiplication without using multiplication automatic operator.

```
#include<stdio.h>
void main()
{
    int a=2;
    a=(a<<6)+a;
    printf("the value of a:%d",a);
}
```