***C programming:***

**1.Write a C programming to find the factorial of the given number:**

#include<stdio.h>

int main()

{

int fact=1,i,n;

printf("Enter the number= ",&n);

scanf("%d",&n);

if(n<0)

{

printf("Invalid input");

}

else if(n>0)

{

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

{

fact=fact\*i;

}

printf("the fact of %d= %d",n,fact);

}

else

{

printf("Invalid input");

}

return 0;

}

**2. Write a C programming to find the fibonacci series.**

#include<stdio.h>

int main()

{

int n,c=0,a=0,b=1;

printf("Enter the value of n= ");

scanf("%d",&n);

c=a+b;

printf("The fibonacci series:%d %d ",a,b);

while(c<=n)

{

printf("%d ",c);

a=b;

b=c;

c=a+b;

}

return 0;

}

**3. Write a C programming to show hollow square and square.**

#include<stdio.h>

int main()

{

int i,j,k,n;

printf("Enter the number of rows= ");

scanf("%d",&n);

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

{

for(j=0;j<=n;j++)

{

if(i==0||i==n||j==0||j==n)

{

printf("\*");

}

else

{

printf(" ");

}

}

printf("\n");

}

return 0;

}

**4. Write a C programming to verify the given input.**

#include<stdio.h>

#include<string.h>

int main()

{

char n1[10],n2[10];

char ch;

printf("\nenter the name=");

scanf("%s",n1);

printf("\nRe-enter the name=");

scanf("%s",n2);

ch=strcmp(n1,n2);

if(ch==0)

{

printf("The username is valid");

}

else

{

printf("the username is inavlid");

}

return 0;

}

**5. Write a C programing to find the given year is leap year or not with date.**

#include<stdio.h>

int main()

{

int dd,mm,yy;

printf("Enter the date = ");

scanf("%d %d %d",&dd,&mm,&yy);

if((dd>0)&&(mm>0))

{

if((dd<32)&&(mm<13))

{

if(yy%100==0)

{

if(yy%400==0)

{

printf("\nIt is a leap year");

}

else

{

printf("\n%d/%d/%d is not a leap year",dd,mm,yy);

}

}

}

else if(yy%4==0)

{

printf("\nIt is a leap year");

}

else

{

("\n%d/%d/%d is not a leap year",dd,mm,yy);

}

}

else

{

printf("\nInvalid input");

}

return 0;

}

**6. Write a C programming to find the mean, median and mode.**

#include<stdio.h>

int main()

{

int dd,mm,yy;

printf("Enter the date = ");

scanf("%d %d %d",&dd,&mm,&yy);

if((dd>0)&&(mm>0))

{

if((dd<32)&&(mm<13))

{

if(yy%100==0)

{

if(yy%400==0)

{

printf("\nIt is a leap year");

}

else

{

printf("\n%d/%d/%d is not a leap year",dd,mm,yy);

}

}

}

else if(yy%4==0)

{

printf("\nIt is a leap year");

}

else

{

("\n%d/%d/%d is not a leap year",dd,mm,yy);

}

}

else

{

printf("\nInvalid input");

}

return 0;

}

**7. Write a C programming to show pascal triangle.**

#include<stdio.h>

int main()

{

int n,i,j,k,c=1;

printf("Enter the value of n= ");

scanf("%d",&n);

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

{

for(j=1;j<=n-i;j++)

{

printf(" ");

}

for(k=0;k<=i;k++)

{

if(i==0||k==0)

c=1;

else

c=(c\*(i-k+1))/k;

printf(" %d",c);

}

printf("\n");

}

return 0;

}

**8. Write a C programming to print the given inerted number triangle pattern.**

#include <stdio.h>

int main()

{

int i,j,n;

printf("Enter the value of n= ");

scanf("%d",&n);

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

{

for(j=i;j>=1;j--)

{

printf("%d",j);

}

printf("\n");

}

return 0;

}

**9. Write a C programming to find the given number is perfect number or not**.

#include<stdio.h>

int main()

{

int i,n,sum=0;

printf("Enter the value of n= ");

scanf("%d",&n);

if(n>0)

{

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

{

if(n%i==0)

{

sum=sum+i;

}

}

if(sum==n)

{

printf("It is a perfect number");

}

else

{

printf("It is not a perfect number");

}

}

else if(n<0)

{

printf("Invalid input");

}

else

{

printf("Invalid input");

}

return 0;

}

**10. Write a C programming to display tax calculation.**

#include<stdio.h>

int main()

{

char gen;

float tax = 0, income;

printf("Enter your income \n");

scanf ("%f", &income);

printf("Enter the gender= ");

scanf("%c",&gen);

if(income >0)

{

switch(gen)

{

case('F'):

{

if(income<150000)

{

printf("There is no tax= ");

}

else if (income >= 150001 && income <= 300000)

{

tax = tax +( 0.05 \* (income));

}

else if (income >= 300001 && income <= 500000)

{

tax = tax +( 0.15 \* (income));

}

else if (income >= 500001)

{

tax = tax + (0.25 \* (income));

}

printf ("your net income tax to be paid by end of this month is%f \n",tax);

}

break;

case ('M'):

{

printf("Enter your income \n");

scanf ("%f", &income);

if(income<150000)

{

printf("There is no tax= ");

}

else if (income >= 150001 && income <= 300000)

{

tax = tax + (0.10 \* (income));

}

else if (income >= 300001 && income <= 500000)

{

tax = tax + (0.20 \* (income));

}

else if (income >= 500001)

{

tax = tax + (0.30 \* (income));

}

printf ("your net income tax to be paid by end of this month is %f \n", tax);

}

break;

default:

{

printf("Invalid input");

}

}

}

else

{

printf("Invalid input");

}

return 0;

}