## 1. Write a program to find the Nth term of the Fibonnaci series.

```c
#include<stdio.h>
int main()
{
    int n,a=0,b=1,c=0;
    printf("Enter the term\n");
    scanf("%d",&n);
    for(int i=2; i<=n; i++)
      {
        c=a+b;
         a=b;
         b=c;
      }
    printf("%dth fibnacci number  is %d ",n,b);
    return 0;
}
```

## 2. Write a program to print first N terms of Fibonacci series.

```c
#include<stdio.h>
int main()
{
    int num,fib1=1,fib2=1,fib3=0,count;
    printf("Enter a number\n");
    scanf("%d",&num);
    printf("First %d Fibnacci numbers are...\n",num);
    printf("%d\n",fib1);
    printf("%d\n",fib2);
     count = 2;
    while(count<num)
```

```c
    {
        fib3=fib1+fib2;

        count++;

        printf("%d\n",fib3);

        fib1=fib2;

        fib2=fib3;

    }return 0;

}
```

**3. Write a program to check whether a given number is there in the Fibonacci series or not.**

```c
#include<stdio.h>

int main()

{
    int num,fib1=1,fib2=1,fib3=0,count;

    printf("Enter a number\n");

    scanf("%d",&num);

    count = 2;

    while(count<num)

    {
        fib3=fib1+fib2;

        count++;

        fib1=fib2;

        fib2=fib3;

    } if(num==fib3)

        {
            printf("Yes number is in fibnacci series\n");

        }else

            printf("Sorry number is not in fibnacci series\n");


    return 0;
```

}

## 4. Write a program to calculate HCF of two numbers.

```c
#include<stdio.h>

int main()

{

    int x,y,i;

    printf("Enter two numbers\n");

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

    for(i=1; i<= x*y; i++)

        if((i%x==0)&&(i%y==0))

    {

        printf("HCF of %d & %d is: %d",x,y,(x*y/i));

        break;

    }

        return 0;

}
```

## 5. Write a program to check whether two given numbers are co-prime numbers or not.

```c
#include<stdio.h>

int main()

{

    int x,y,i,hcf;

    printf("Enter two numbers\n");

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

    for(i=1; i<= x*y; i++)

        if((i%x==0)&&(i%y==0))

    {

        hcf = x*y/i;

        printf("Because HCF is: %d\n",hcf);

        break;
```

```c
    }
    if(hcf==1)
        printf("So, Number is co-prime\n");
    else
        printf("So, Number is not co-prime");
        return 0;
}
```

**6. Write a program to print all Prime numbers under 100.**

```c
#include<stdio.h>
int main()
{
    int i,n,flag;
    for(i=1;i<=100;i++)
    {   flag=0;
        for( n = 2;n<=i/2; n++)
        {
            if( i%n==0)
            {
                flag++;
                break;
            }
        }if(flag==0 && i!=1)
        {
            printf(" %d\n",i);
        } }return 0;
}
```

**7. Write a program to print all Prime numbers between two given numbers.**

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

```c
{
    int i,n,flag,x,y;
    printf("Enter two numbers\n");
    scanf("%d %d",&x,&y);
    for(i=x;i<=y;i++)
    {   flag=0;
        for( n = 2;n<=i/2; n++)
        {
            if( i%n==0)
            {
                flag++;
                break;
            }
        }if(flag==0)
        {
            printf(" %d\n",i);
        } }return 0;
}
```

**8. Write a program to find next Prime number of a given number .**

```c
#include<stdio.h>
void main()
{
    int n,i,j;
    printf("Enter the number : ");
    scanf("%d",&n);
    for(i=n+1;;i++)
    {
        for(j=2;j<i;j++)
        {
```

```
        if(i%j==0)

            break;

    }

    if(j==i)

    {

        printf("The next prime number is :%d",i);

        break;

    }

}return 0;

}
```

## 9. Write a program to check whether a given number is an Armstrong number or not .

```
#include<stdio.h>

int main()

{

int n,r,sum=0,temp;

printf("enter the number = ");

scanf("%d",&n);

temp = n;

while(n>0)

{

r = n%10;

sum = sum+(r*r*r);

n = n/10;

}

if(temp==sum)

  printf("armstrong  number ");

else

  printf("not armstrong number");

return 0;
```

}

**10. Write a program to print all Armstrong numbers under 1000 .**