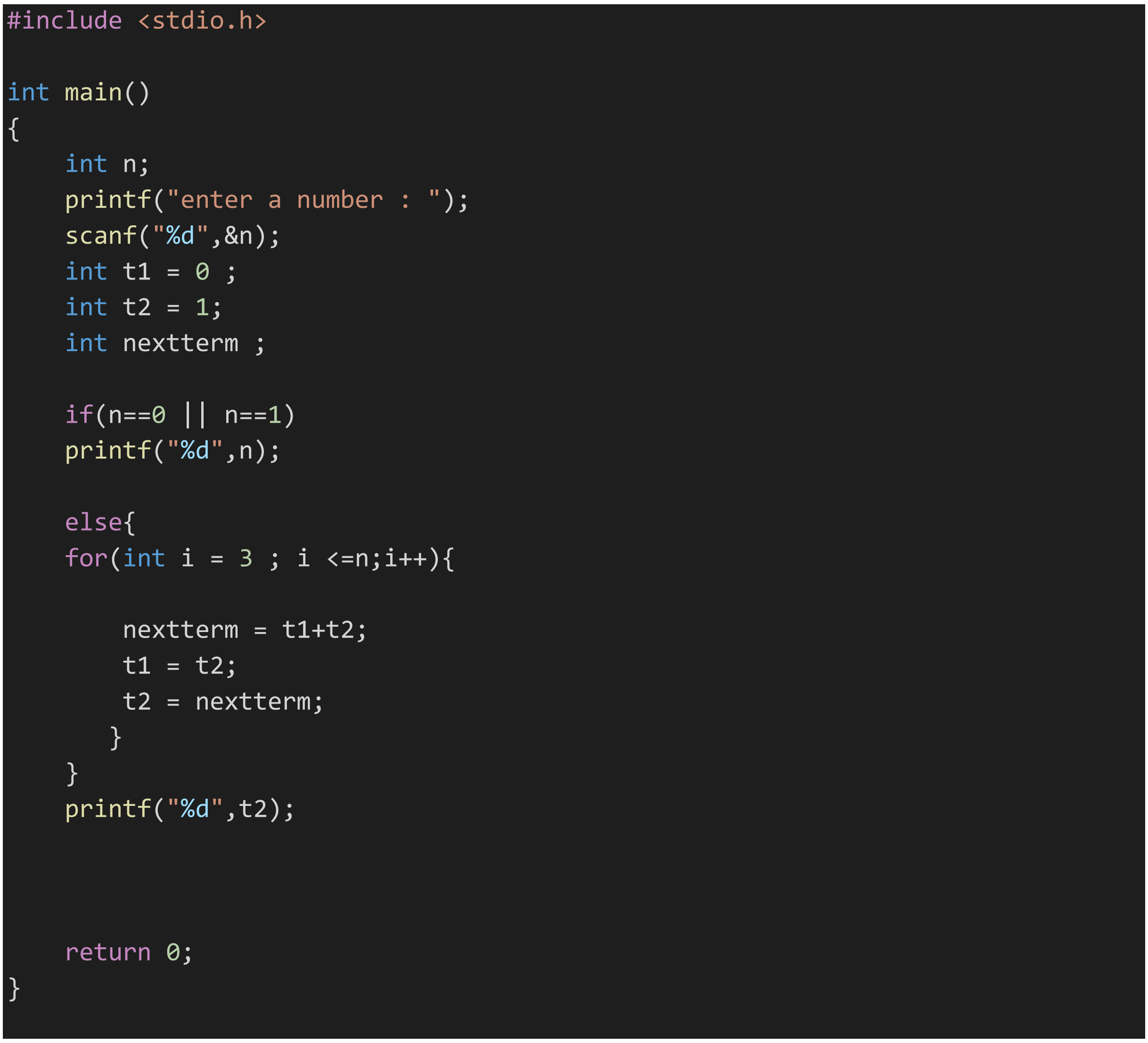
ASSIGNMENT – 7

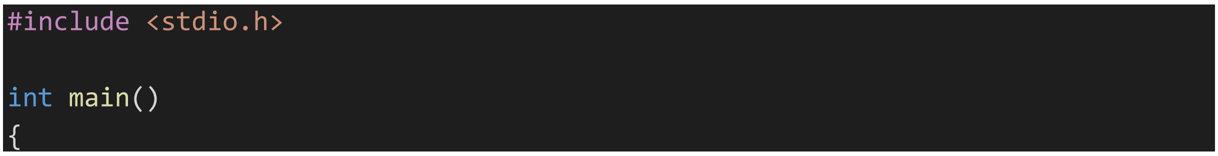
Iterative Control Statements (Part - 2)

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

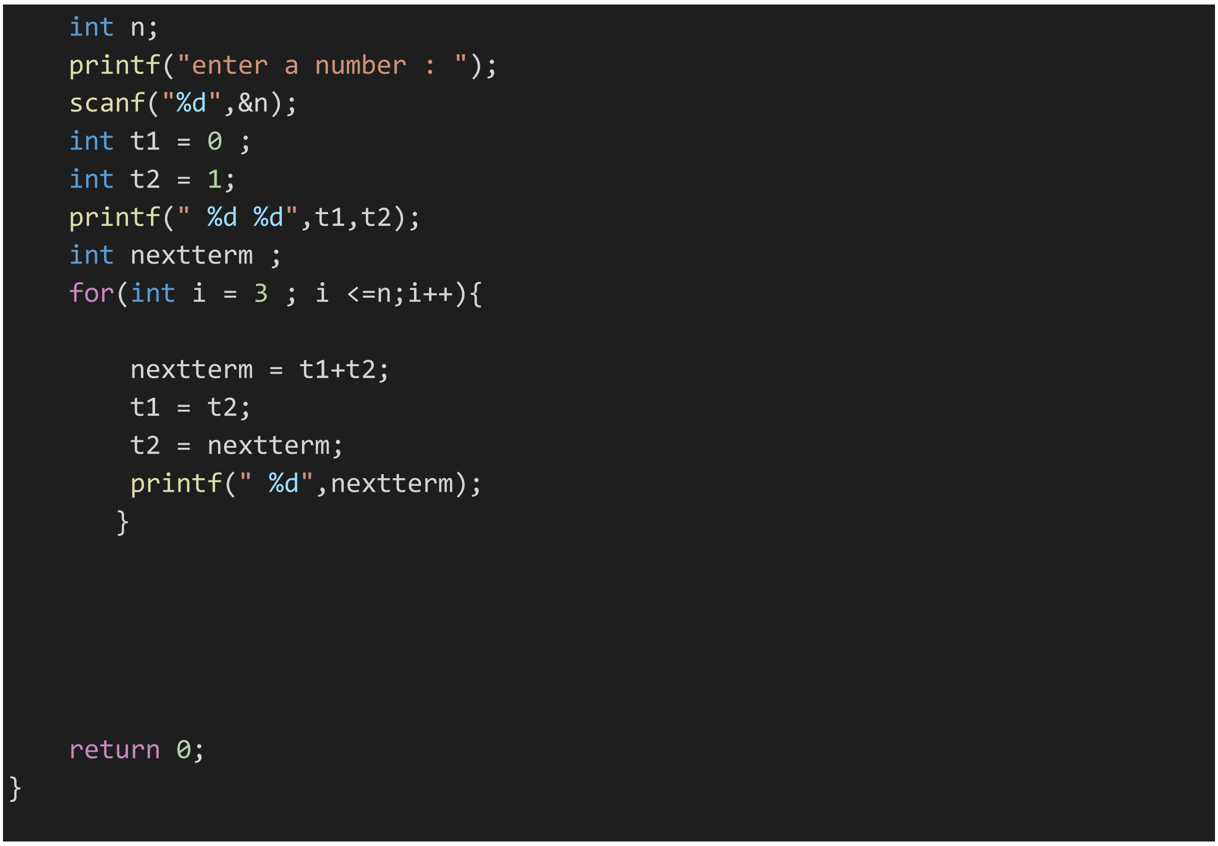


```c
#include <stdio.h>

int main()
{
    int n;
    printf("enter a number : ");
    scanf("%d",&n);
    int t1 = 0 ;
    int t2 = 1;
    int nextterm ;

    if(n==0 || n==1)
    printf("%d",n);

    else{
    for(int i = 3 ; i <=n;i++){

        nextterm = t1+t2;
        t1 = t2;
        t2 = nextterm;
       }
    }
    printf("%d",t2);



    return 0;
}
```

Que 2 : Write a program to print first N terms of Fibonacci series

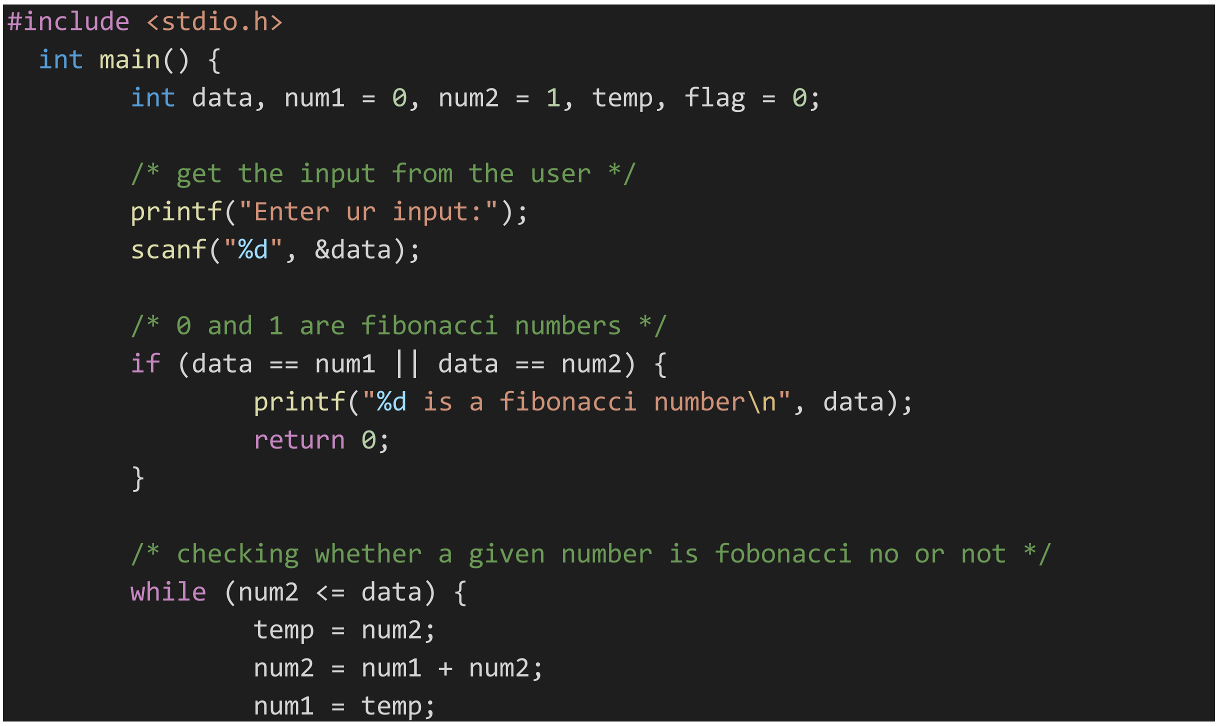


```c
#include <stdio.h>

int main()
{
```

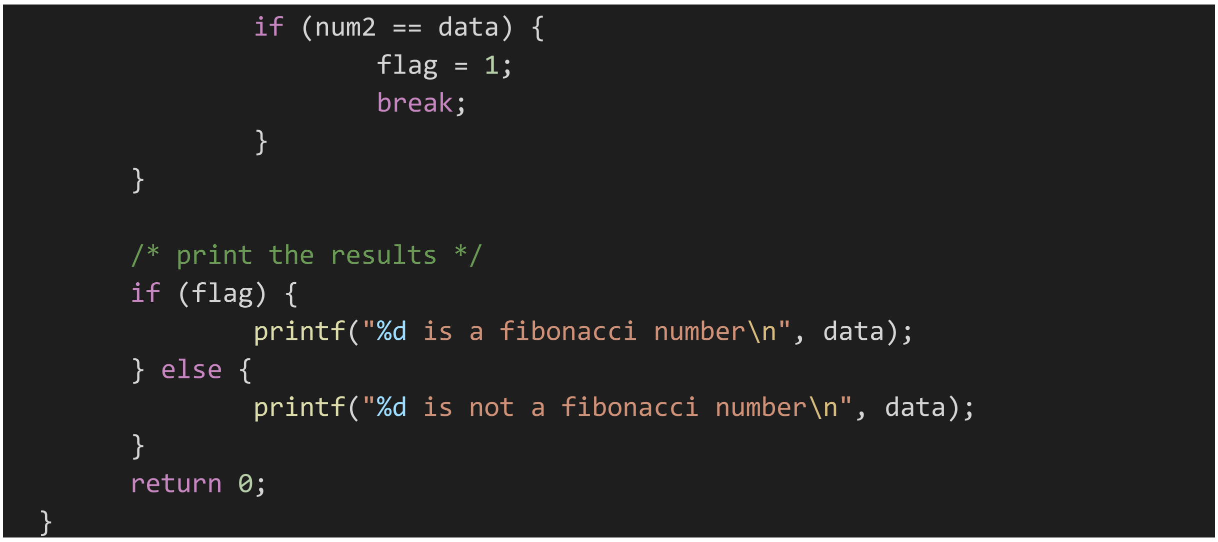


```
    int n;
    printf("enter a number : ");
    scanf("%d",&n);
    int t1 = 0 ;
    int t2 = 1;
    printf(" %d %d",t1,t2);
    int nextterm ;
    for(int i = 3 ; i <=n;i++){

        nextterm = t1+t2;
        t1 = t2;
        t2 = nextterm;
        printf(" %d",nextterm);
       }




    return 0;
}
```

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

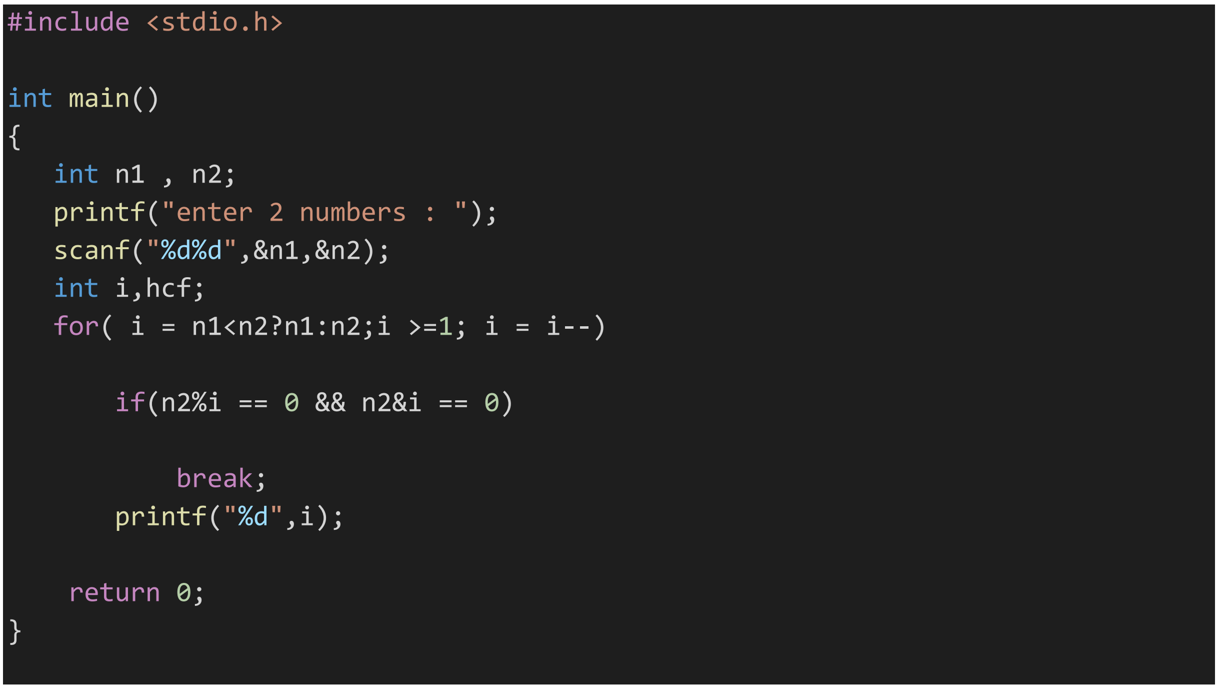


```
#include <stdio.h>
  int main() {
        int data, num1 = 0, num2 = 1, temp, flag = 0;

        /* get the input from the user */
        printf("Enter ur input:");
        scanf("%d", &data);

        /* 0 and 1 are fibonacci numbers */
        if (data == num1 || data == num2) {
                printf("%d is a fibonacci number\n", data);
                return 0;
        }

        /* checking whether a given number is fobonacci no or not */
        while (num2 <= data) {
                temp = num2;
                num2 = num1 + num2;
                num1 = temp;
```



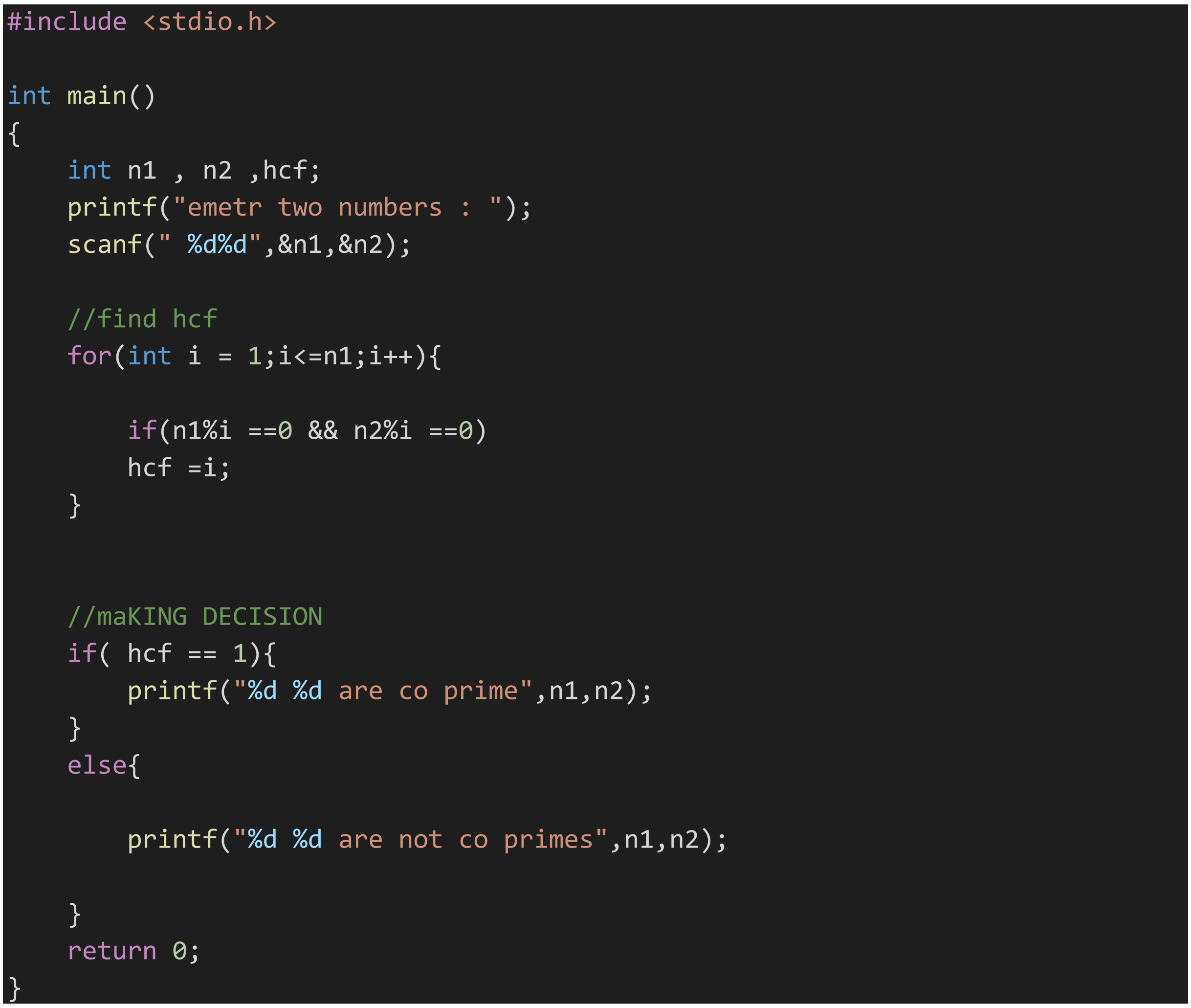
```
                if (num2 == data) {
                        flag = 1;
                        break;
                }
        }

        /* print the results */
        if (flag) {
                printf("%d is a fibonacci number\n", data);
        } else {
                printf("%d is not a fibonacci number\n", data);
        }
        return 0;
  }
```

Que : 4 Write a program to calculate HCF of two numbers



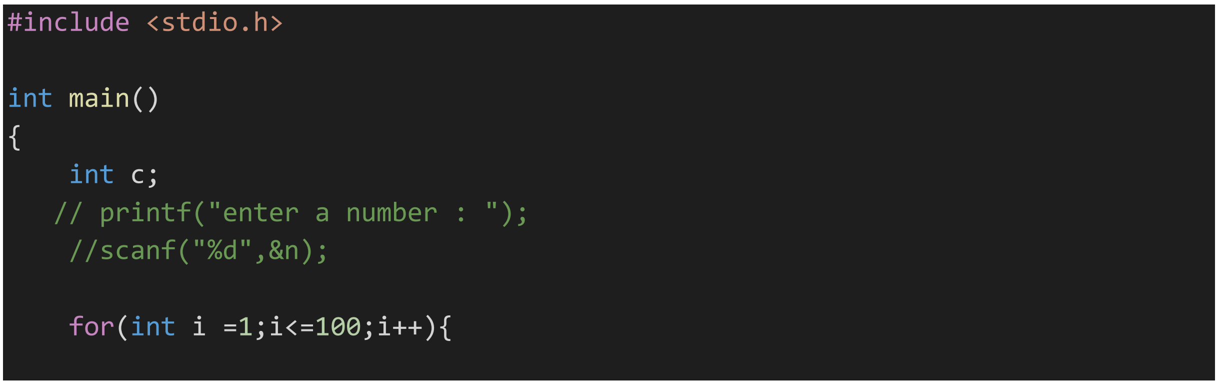
```
#include <stdio.h>

int main()
{
   int n1 , n2;
   printf("enter 2 numbers : ");
   scanf("%d%d",&n1,&n2);
   int i,hcf;
   for( i = n1<n2?n1:n2;i >=1; i = i--)

       if(n2%i == 0 && n2&i == 0)

           break;
       printf("%d",i);

    return 0;
}
```

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

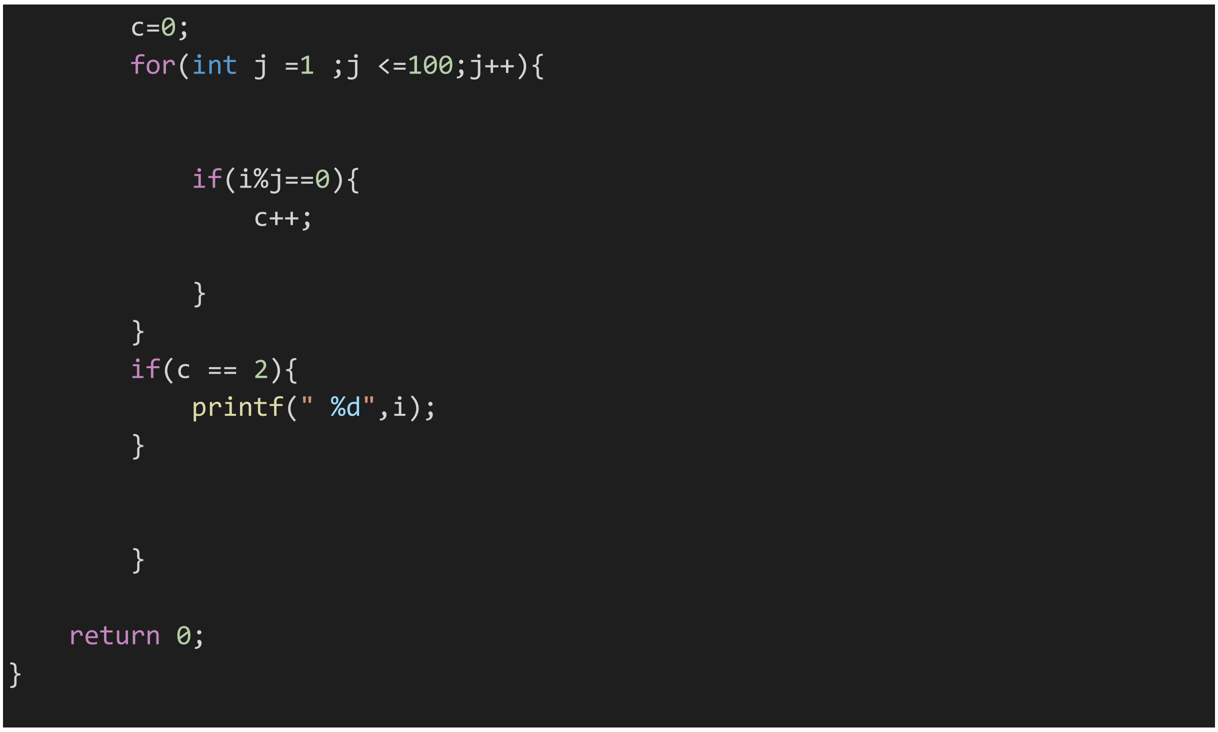


```c
#include <stdio.h>

int main()
{
    int n1 , n2 ,hcf;
    printf("emetr two numbers : ");
    scanf(" %d%d",&n1,&n2);

    //find hcf
    for(int i = 1;i<=n1;i++){

        if(n1%i ==0 && n2%i ==0)
        hcf =i;
    }


    //maKING DECISION
    if( hcf == 1){
        printf("%d %d are co prime",n1,n2);
    }
    else{

        printf("%d %d are not co primes",n1,n2);

    }
    return 0;
}
```

Que 6- Write a program to print all Prime numbers under 100

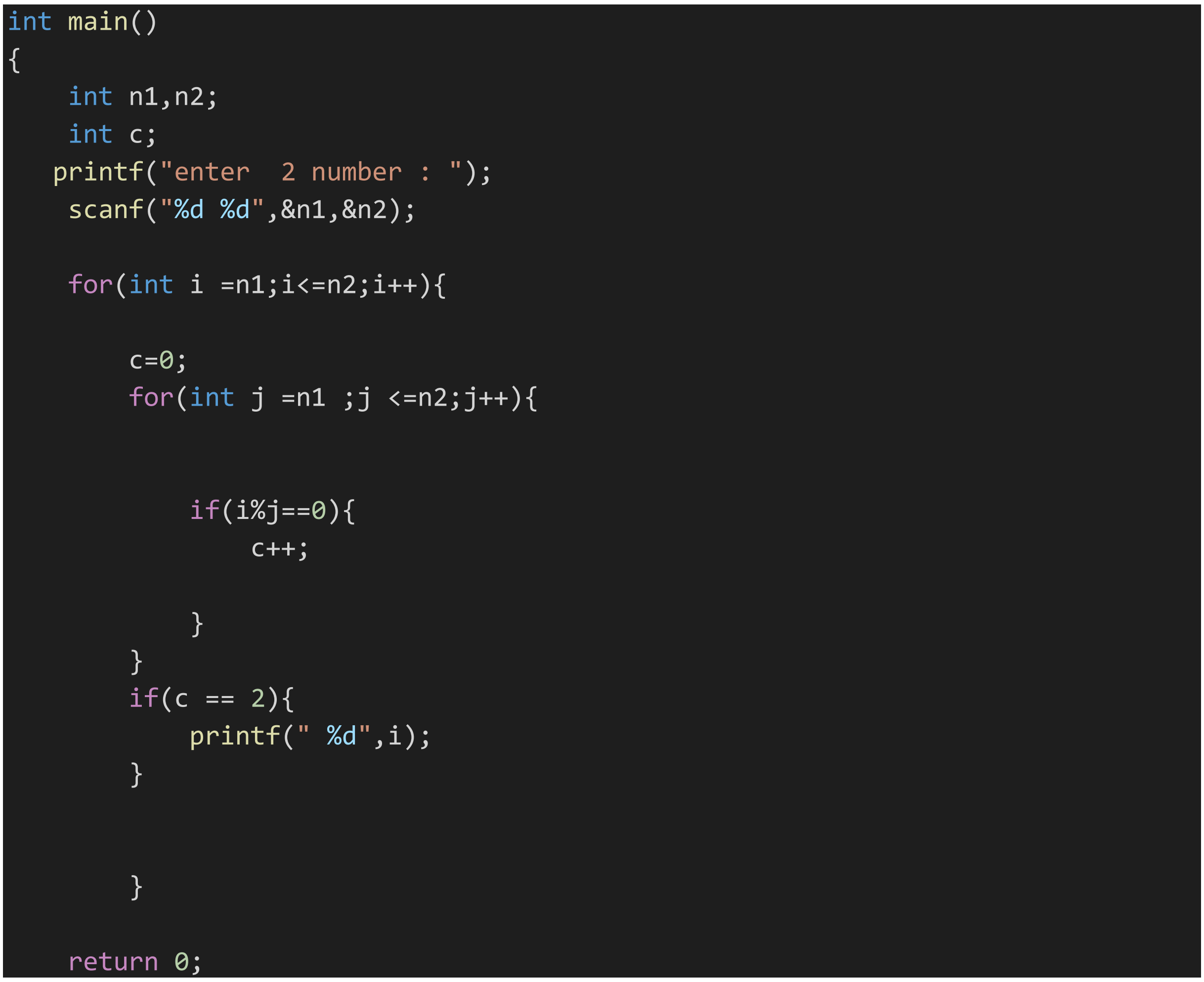


```c
#include <stdio.h>

int main()
{
    int c;
   // printf("enter a number : ");
    //scanf("%d",&n);

    for(int i =1;i<=100;i++){
```



```
        c=0;
        for(int j =1 ;j <=100;j++){


            if(i%j==0){
                c++;

            }
        }
        if(c == 2){
            printf(" %d",i);
        }


        }

    return 0;
}
```

Que : 7 Write a program to print all Prime numbers between two given numbers



```
int main()
{
    int n1,n2;
    int c;
   printf("enter  2 number : ");
    scanf("%d %d",&n1,&n2);

    for(int i =n1;i<=n2;i++){

        c=0;
        for(int j =n1 ;j <=n2;j++){


            if(i%j==0){
                c++;

            }
        }
        if(c == 2){
            printf(" %d",i);
        }


        }

    return 0;
}
```

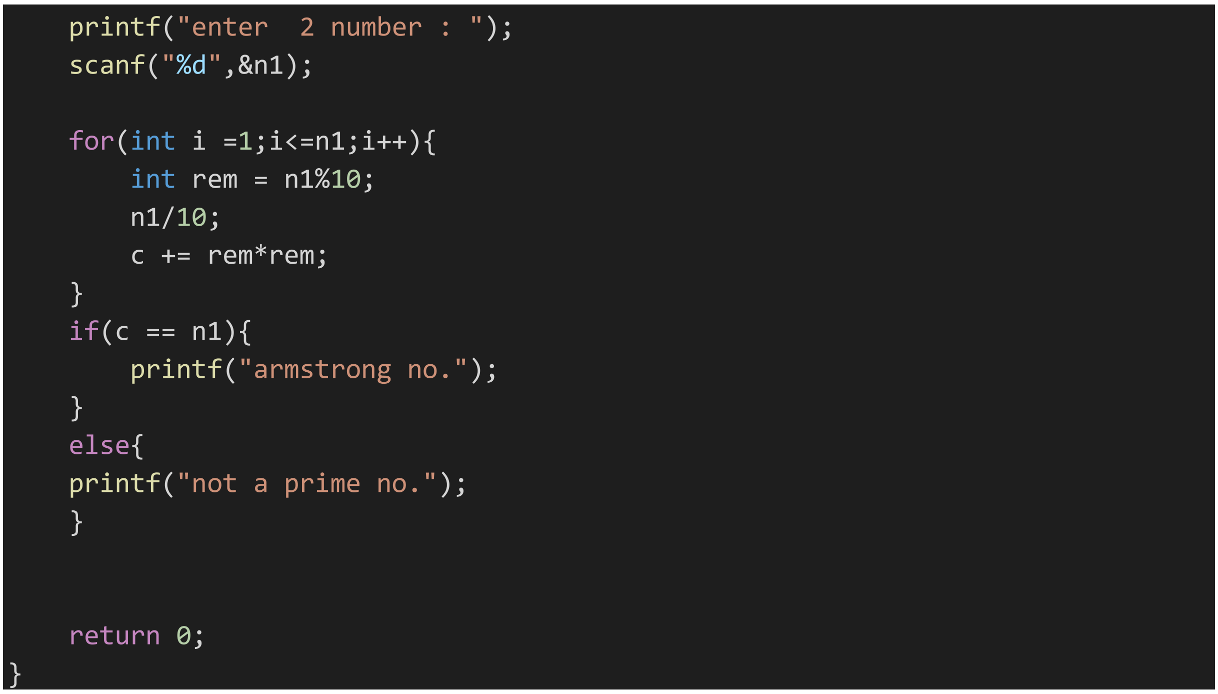
Que 8 Write a program to find next Prime number of a given number

```
#include <stdio.h>

int main()
{
   int n ;
   printf("enter a number : ");
   scanf("%d",&n);

   int count =0;
   for(int i =n;i>0;i++){
       count =0 ;
       for(int j=1;j<=i;j++){

           if(i%j == 0){
               count++;
           }

           }
            if(count==2){
               printf("%d",i);
               break;
       }
   }

    return 0;
}
```

Que : 9 Write a program to check whether a given number is an Armstrong number

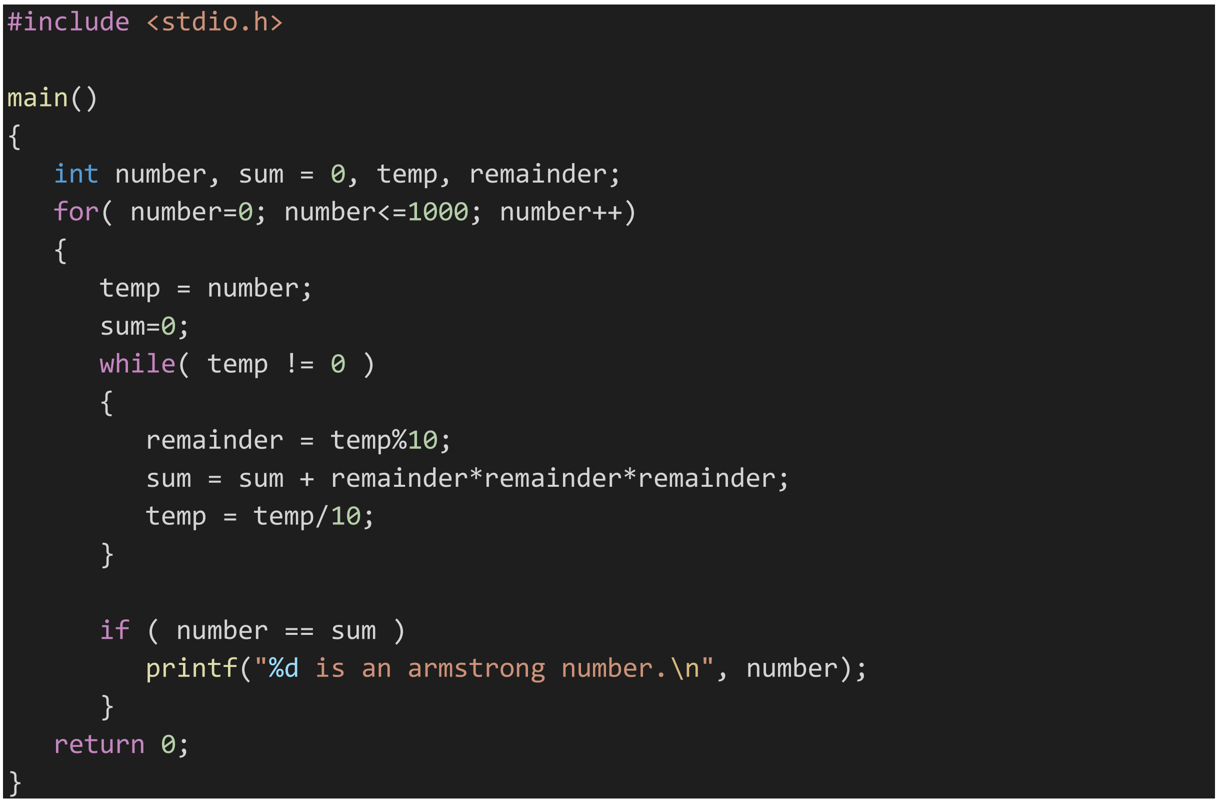
or not

```
#include <stdio.h>

int main()
{
    int n1;
    int c = 0 ;
```



```
    printf("enter  2 number : ");
    scanf("%d",&n1);

    for(int i =1;i<=n1;i++){
        int rem = n1%10;
        n1/10;
        c += rem*rem;
    }
    if(c == n1){
        printf("armstrong no.");
    }
    else{
    printf("not a prime no.");
    }


    return 0;
}
```

Que :10 Write a program to print all Armstrong numbers under 1000



```
#include <stdio.h>

main()
{
   int number, sum = 0, temp, remainder;
   for( number=0; number<=1000; number++)
   {
      temp = number;
      sum=0;
      while( temp != 0 )
      {
         remainder = temp%10;
         sum = sum + remainder*remainder*remainder;
         temp = temp/10;
      }

      if ( number == sum )
         printf("%d is an armstrong number.\n", number);
      }
   return 0;
}
```