PYTHON PROGRAMS

Program 1:

Write a python program to test a given number is prime or not.

CODE:

```
def isprime(num):
    for n in range(2,int(num**0.5)+1):
        if num%n==0:
            return False
    return True
num = int(input("Enter a number: "))
print(isprime(num))
```

OUTPUT:

```
C:\19IT063>python prime.py
Enter a number: 23
True

C:\19IT063>python prime.py
Enter a number: 22
False

C:\19IT063>
```

Program 2:

Write a program to generate odd numbers from m to n using while loop.

CODE:

```
def odd(lower,upper):
        while lower <= upper:
                if(lower % 2 != 0):
```

```
                print("{0}".format(lower))

            lower = lower + 1

lower=int(input("Enter the lower limit:"))

upper=int(input("Enter the upper limit:"))

odd(lower,upper)
```

OUTPUT:

```
C:\19IT063>python odd.py
Enter the lower limit:1
Enter the upper limit:23
1
3
5
7
9
11
13
15
17
19
21
23

C:\19IT063>
```

Program 3:

Write a Python program to display prime number series up to given number.

CODE:

```
def isprime(r):
    for a in range(2,r+1):
        k=0
        for i in range(2,a//2+1):
            if(a%i==0):
```

```
                    k=k+1
            if(k<=0):
                print(a)
r=int(input("Enter a number to print prime number series : "))
isprime(r)
```

OUTPUT:

```
C:\19IT063>python primeseries.py
Enter a number to print prime number series : 23
2
3
5
7
11
13
17
19
23

C:\19IT063>
```

Program 4;

Write a Python program to generate Fibonacci series.

CODE:

```
def fibonacci_nums(n):
 if n <= 0:
   return [0]
 sequence = [0, 1]
 while len(sequence) <= n:
   next_value = sequence[len(sequence) - 1] + sequence[len(sequence) - 2]
   sequence.append(next_value)
```

```
  return sequence

num = int(input("Enter a number: "))

print(fibonacci_nums(num))
```

OUTPUT:

```
C:\19IT063>python fibonacci.py
Enter a number: 21
[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181, 6765, 10946]

C:\19IT063>
```