

**Assignment -3**  
Python Programming

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

**Question-1:**

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

**Solution:**

```
num=int(input ("Enter your value:"))
print(num)
# If given number is greater than 1
if num>1:
    # Iterate from 2 to n / 2
    for i in range(2, int(num/2)+1):
        # If num is divisible by any number between
        # 2 and n / 2, it is not prime
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print (num, "is a prime number")
        break
else:
    print(num, "is not a prime number")
```

**OUTPUT:**

```
Enter your value:98
98
98 is not a prime number
```

```
In [18]: num=int(input ("Enter your value:"))
print(num)
# If given number is greater than 1
if num>1:
    # Iterate from 2 to n / 2
    for i in range(2, int(num/2)+1):
        # If num is divisible by any number between
        # 2 and n / 2, it is not prime
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
        else:
            print (num, "is a prime number")
            break
else:
    print(num, "is not a prime number")
```

```
Enter your value:98
98
98 is not a prime number
```

## Question-2:

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

### Solution:

# Python program to print odd Numbers

```
m=int(input("Enter the m value:"))
n=int(input("Enter the n value:"))
```

```
for num in range(m,n+1):
    while(num%2!=0):
        print(num)
        break
```

### OUTPUT:

```
Enter the m value:10
Enter the n value:22
11
13
15
17
19
21
```

```
In [20]: m=int(input("Enter the m value:"))
n=int(input("Enter the n value:"))

for num in range(m,n+1):
    while(num%2!=0):
        print(num) |
        break
```

```
Enter the m value:10
Enter the n value:22
11
13
15
17
19
21
```

### Question-3:

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

### Solution:

# Python program to display all the prime numbers within an interval

```
lower = int(input("Please Enter minimum value:"))
upper = int(input("Please Enter maximum value:"))
print("Prime numbers between", lower, "and", upper, "are:")
for num in range(lower, upper + 1):
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                break
        else:
            print(num)
```

### OUTPUT:

```
Please Enter minimum value:23
Please Enter maximum value:30
Prime numbers between 23 and 30 are:
23
29
```

```
In [22]: lower = int(input("Please Enter minimum value:"))
upper = int(input("Please Enter maximum value:"))
print("Prime numbers between", lower, "and", upper, "are:")
for num in range(lower, upper + 1):
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                break
        else:
            print(num)
```

```
Please Enter minimum value:23
Please Enter maximum value:30
Prime numbers between 23 and 30 are:
23
29
```

#### Question-4:

Write a python program to generate Fibonacci series.

#### Solution:

# Program to display the Fibonacci sequence up to n-th term

```
nterms = int(input("How many terms? "))
```

```
n1, n2 = 0, 1
```

```
count = 0
```

```
if nterms <= 0:
```

```
    print("Please enter a positive integer")
```

```
elif nterms == 1:
```

```
    print("Fibonacci sequence upto", nterms, ":")
```

```
    print(n1)
```

```
else:
```

```
    print("Fibonacci sequence:")
```

```
    while count < nterms:
```

```
        print(n1)
```

```
        nth = n1 + n2
```

```
        n1 = n2
```

```
        n2 = nth
```

```
        count += 1
```

#### OUTPUT:

```
How many terms? 10
```

```
Fibonacci sequence:
```

```
0
```

```
1
```

```
1
```

```
2
```

```
3
```

```
5
```

```
8
```

13  
21  
34

```
In [27]: nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
    print("Please enter a positive integer")
elif nterms == 1:
    print("Fibonacci sequence upto",nterms,":")
    print(n1)
else:
    print("Fibonacci sequence:")
    while count < nterms:
        print(n1)
        nth = n1 + n2
        n1 = n2
        n2 = nth
        count += 1
```

```
How many terms? 10
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
```