

## ASSIGNMENT – 1

### 1.Check if prime or not:

#### Program:

```
print("Prime or not")
a = int(input("Enter the number to check if it is a prime : "))
if a > 1:
    for i in range(2, a):
        if (a % i) == 0:
            print(a, " is not a prime number")
            break
    else:
        print(a, " is a prime number")
else:
    print(a, " is neither prime nor composite")
```

#### Output:



The screenshot displays a code editor window titled 'main.py' containing the following Python code:

```
1 print("PRIME OR NOT")
2 a = int(input("Enter the number : "))
3 if a > 1:
4     for i in range(2, a):
5         if (a % i) == 0:
6             print(a, " is not a prime number")
7             break
8     else:
9         print(a, " is a prime number")
10 else:
11     print(a, " is neither prime nor composite")
12
13
14
15
16
17
18
19
20
```

Below the code editor, a terminal window shows the program's execution. It prompts for input, receives '05', and outputs '5 is a prime number'. The terminal also shows the program finishing with exit code 0 and a prompt to press ENTER to exit the console.

## 2.Generate odd number from m to n using while loop:

### Program:

```
print("Generate odd numbers")

print("Finding odd numbers in a given range ... ")

m = int(input("From : "))

n = int(input("To :"))

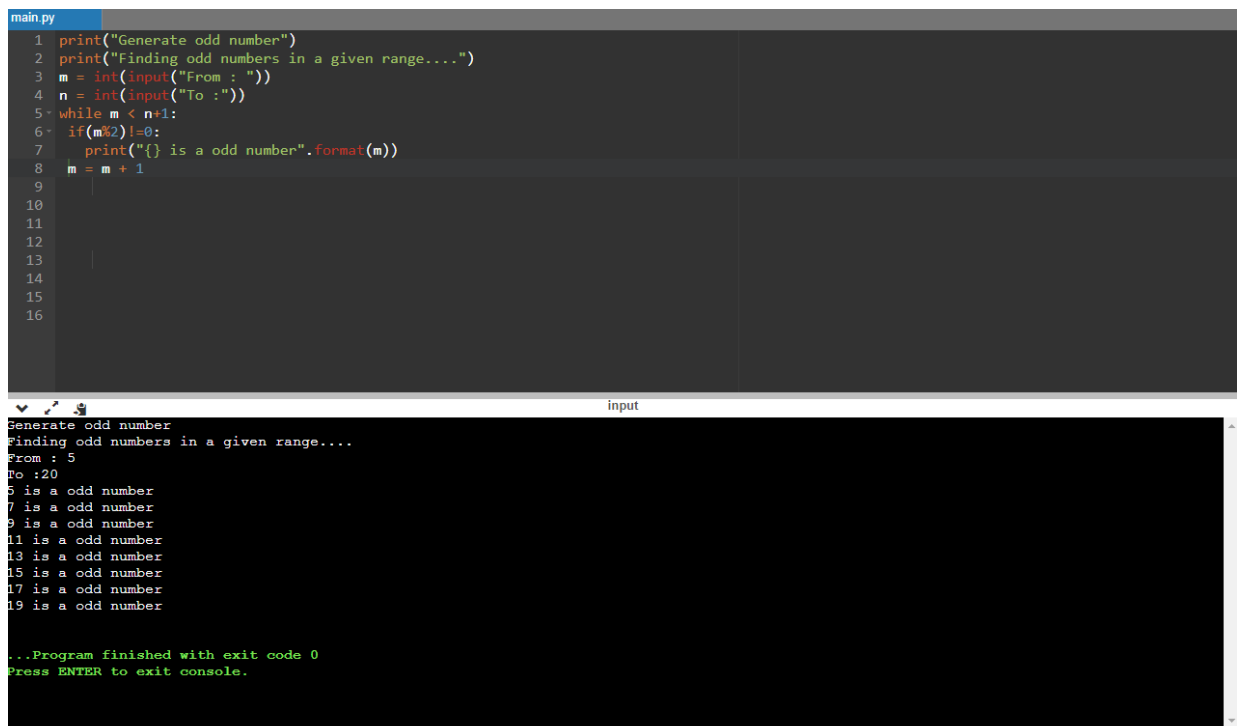
while m < n+1:

    if(m%2)!=0:

        print("{} is a odd number".format(m))

    m = m + 1
```

### Output:



The screenshot displays a code editor window titled 'main.py' containing the following Python code:

```
1 print("Generate odd number")
2 print("Finding odd numbers in a given range....")
3 m = int(input("From : "))
4 n = int(input("To :"))
5 while m < n+1:
6     if(m%2)!=0:
7         print("{} is a odd number".format(m))
8     m = m + 1
9
10
11
12
13
14
15
16
```

Below the code editor is a terminal window showing the program's execution. The user has entered '5' for 'From' and '20' for 'To'. The program outputs odd numbers from 5 to 19. The terminal text is as follows:

```
Generate odd number
Finding odd numbers in a given range....
From : 5
To :20
5 is a odd number
7 is a odd number
9 is a odd number
11 is a odd number
13 is a odd number
15 is a odd number
17 is a odd number
19 is a odd number

...Program finished with exit code 0
Press ENTER to exit console.
```

### 3.Display prime number series upto given number:

#### Program:

```
print("Display Prime number series")

a = int(input("Enter the lower bound: "))
b = int(input("Enter the upper bound: "))

for i in range(a,b+1):

    if i > 1:

        for j in range(2, i):

            if (i % j) == 0:

                break

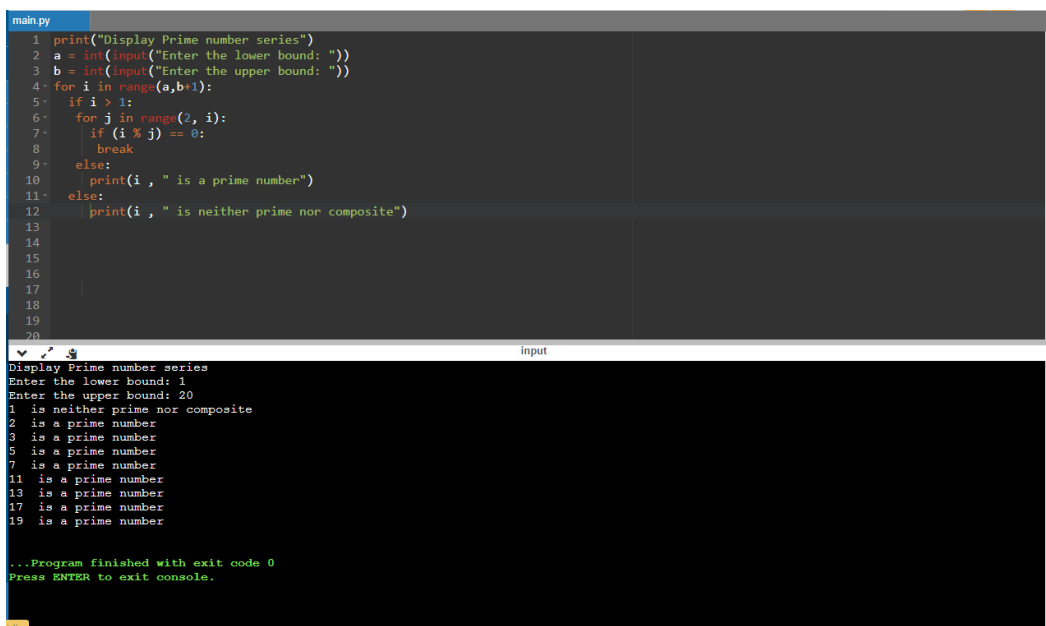
            else:

                print(i , " is a prime number")

        else:

            print(i , " is neither prime nor composite")
```

#### Output:

The image shows a screenshot of a Python IDE. The top pane displays the code for displaying prime numbers between two bounds. The bottom pane shows the output of the program, which prompts the user for lower and upper bounds (1 and 20) and then lists the prime numbers in that range: 2, 3, 5, 7, 11, 13, 17, and 19. The program ends with a message indicating it finished with exit code 0.

```
main.py
1 print("Display Prime number series")
2 a = int(input("Enter the lower bound: "))
3 b = int(input("Enter the upper bound: "))
4 for i in range(a,b+1):
5     if i > 1:
6         for j in range(2, i):
7             if (i % j) == 0:
8                 break
9             else:
10                print(i , " is a prime number")
11        else:
12            print(i , " is neither prime nor composite")
13
14
15
16
17
18
19
20

input
Display Prime number series
Enter the lower bound: 1
Enter the upper bound: 20
1 is neither prime nor composite
2 is a prime number
3 is a prime number
5 is a prime number
7 is a prime number
11 is a prime number
13 is a prime number
17 is a prime number
19 is a prime number

...Program finished with exit code 0
Press ENTER to exit console.
```

## 4.Generate Fibonacci Series:

### Program:

```
print("Fibonacci series")

a = 0

b = 1

n = int(input("Enter the range of fibonacci numbers you wish to find : "))

print(a)

print(b)

for i in range(0,n-2):

    fib = a + b

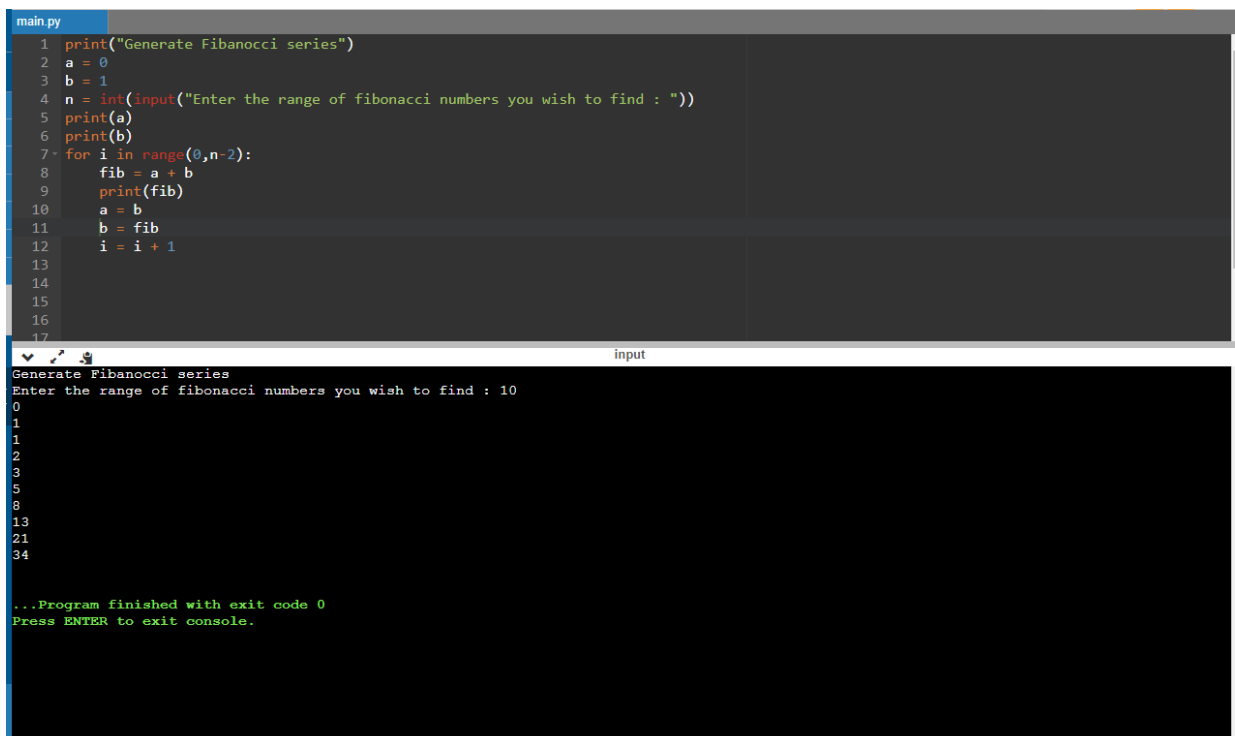
    print(fib)

    a = b

    b = fib

    i = i + 1
```

### Output:



The screenshot shows a code editor with a file named 'main.py' containing the following Python code:

```
1 print("Generate Fibonacci series")
2 a = 0
3 b = 1
4 n = int(input("Enter the range of fibonacci numbers you wish to find : "))
5 print(a)
6 print(b)
7 for i in range(0,n-2):
8     fib = a + b
9     print(fib)
10    a = b
11    b = fib
12    i = i + 1
13
14
15
16
17
```

Below the code editor, the terminal output is displayed:

```
Generate Fibonacci series
Enter the range of fibonacci numbers you wish to find : 10
0
1
1
2
3
5
8
13
21
34

...Program finished with exit code 0
Press ENTER to exit console.
```