

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

Program:

```
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:

```
Python 3.9.7 (default, Sep 16 2021, 16:59:28) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.29.0 -- An enhanced Interactive Python.

In [1]: runfile('C:/Users/susvin/untitled0.py', wdir='C:/Users/susvin')

Enter the number to check if it is a prime : 63810536058122556985
63810536058122556985  is not a prime number

In [2]: runfile('C:/Users/susvin/untitled0.py', wdir='C:/Users/susvin')

Enter the number to check if it is a prime : 7871237630984294735588101
7871237630984294735588101  is not a prime number

In [3]: runfile('C:/Users/susvin/untitled0.py', wdir='C:/Users/susvin')

Enter the number to check if it is a prime : 123
123  is not a prime number

In [4]: runfile('C:/Users/susvin/untitled0.py', wdir='C:/Users/susvin')

Enter the number to check if it is a prime : 7
7  is a prime number

In [5]: |
```

2. Write a python program to generate Fibonacci series.

Program:

```
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:

```
In [7]: runfile('C:/Users/susvin/untitled1.py', wdir='C:/Users/susvin')
Enter the range of fibonacci numbers you wish to find : 10
0
1
1
2
3
5
8
13
21
34
In [8]: |
```

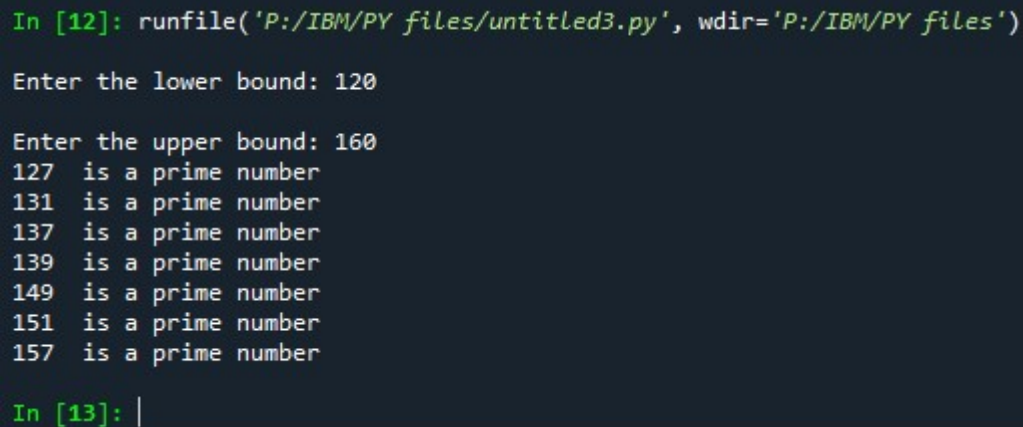
3. Write a python program to find prime numbers within the range.

Program:

```
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:



```
In [12]: runfile('P:/IBM/PY files/untitled3.py', wdir='P:/IBM/PY files')

Enter the lower bound: 120

Enter the upper bound: 160
127 is a prime number
131 is a prime number
137 is a prime number
139 is a prime number
149 is a prime number
151 is a prime number
157 is a prime number

In [13]: |
```

4. Write a python program to odd numbers in while loop.

Program:

```
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:

```
In [10]: runfile('P:/IBM/PY files/untitled2.py', wdir='P:/IBM/PY files')
Finding odd numbers in a given range....

From : 45

To : 68
45 is a odd number
47 is a odd number
49 is a odd number
51 is a odd number
53 is a odd number
55 is a odd number
57 is a odd number
59 is a odd number
61 is a odd number
63 is a odd number
65 is a odd number
67 is a odd number

In [11]: |
```