

IBM ASSIGNMENT 1

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

Program

```
n=int(input("enter the number"))
```

```
if n > 1:
```

```
for i in range(2, n):
```

```
if (n % i) == 0:
```

```
print(n, "is not a prime number")
```

```
break
```

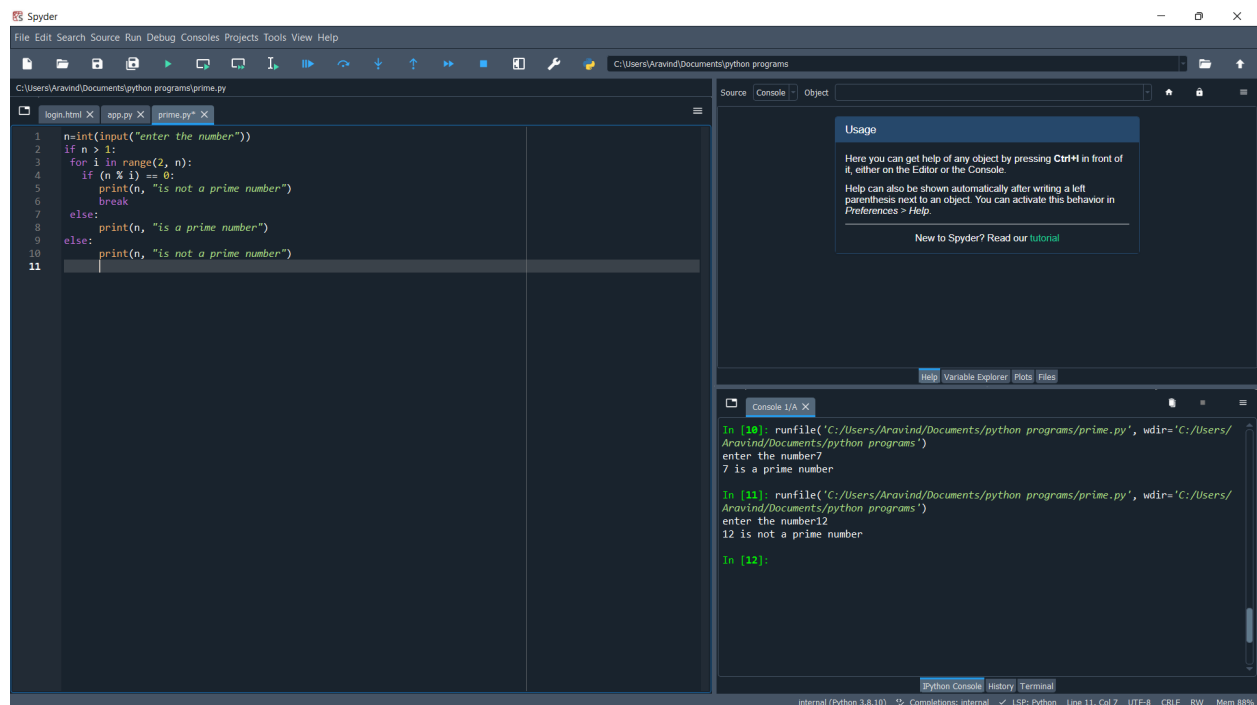
```
else:
```

```
print(n, "is a prime number")
```

```
else:
```

```
print(n, "is not a prime number")
```

OUTPUT:

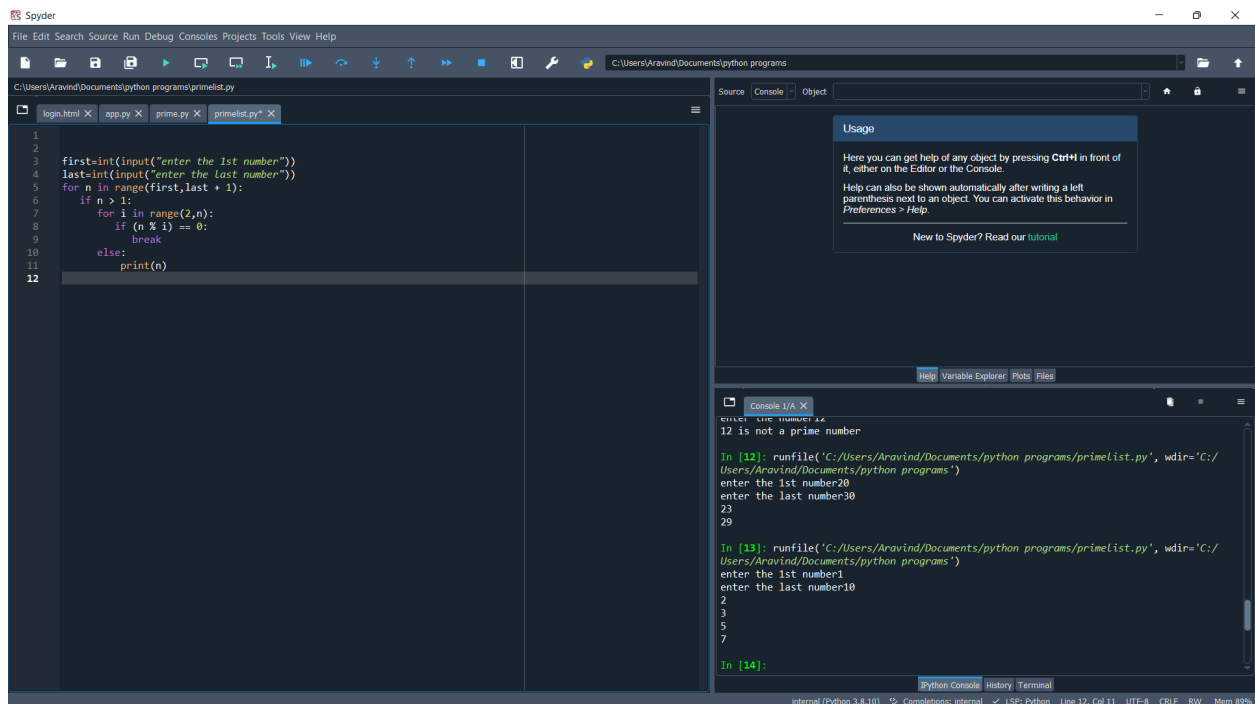


3. Write a python program to display prime number series up to given number

Program:

```
first=int(input("enter the 1st number"))
last=int(input("enter the last number"))
for n in range(first,last + 1):
    if n > 1:
        for i in range(2,n):
            if (n % i) == 0:
                break
            else:
                print(n)
```

OUTPUT:



4. Write a python program to generate fibonacci series

Program:

```
n = int(input("How many times ? "))
a1, a2 = 0, 1
count = 0
```

```

if n <= 0:
print("Please enter a positive integer")
elif n == 1:
print("Fibonacci sequence upto",n,":")
print(a1)
else:
print("Fibonacci sequence:")
while count < n:
print(a1)
a = a1 + a2
a1 = a2
a2 = a
count += 1

```

OUTPUT:

The screenshot shows the Spyder Python IDE interface. The left pane displays the source code for a program that generates the Fibonacci sequence. The code prompts the user for the number of terms, handles edge cases for non-positive integers and single terms, and then uses a while loop to print the sequence. The right pane shows the console output, which includes the program's execution steps and the resulting Fibonacci sequence for 25 terms.

```

1 n = int(input("How many times ? "))
2 a1, a2 = 0, 1
3 count = 0
4 if n <= 0:
5     print("Please enter a positive integer")
6 elif n == 1:
7     print("Fibonacci sequence upto",n,":")
8     print(a1)
9 else:
10    print("Fibonacci sequence:")
11    while count < n:
12        print(a1)
13        a = a1 + a2
14        a1 = a2
15        a2 = a
16    count += 1

```

Console Output:

```

In [15]: runfile('C:/Users/Aravind/Documents/python programs/fibonacci.py', wdir='C:/Users/Aravind/Documents/python programs')
How many times ? 25
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
610
987
1597
2584
4181
6765
10946
17711
28657
46368
In [16]:

```

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

Program:

```
m=int(input("enter the 1st number"))
```

```
n=int(input("enter the last number"))
```

```
p=m
```

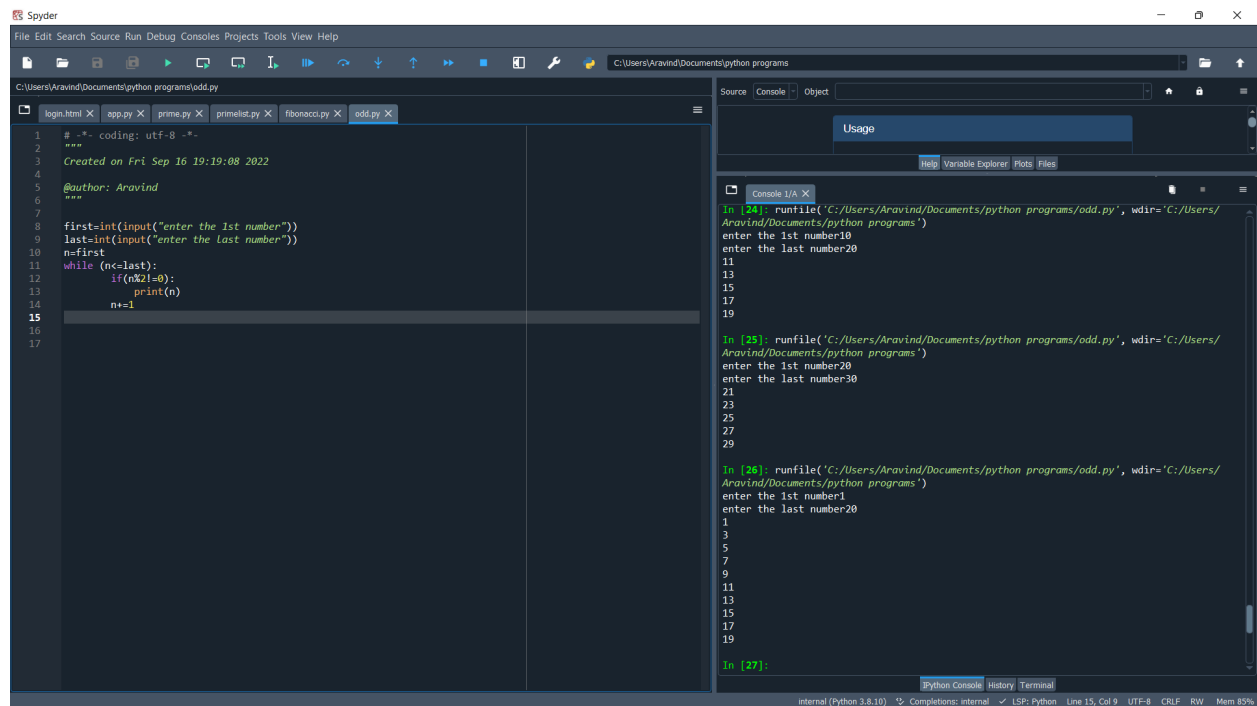
```
while (p<=n):
```

```
    if(n%2!=0):
```

```
        print(n)
```

```
    p+=1
```

OUTPUT:



```
1  #-*- coding: utf-8 -*-
2  """
3  Created on Fri Sep 16 19:19:08 2022
4
5  @author: Aravind
6  """
7
8  first=int(input("enter the 1st number"))
9  last=int(input("enter the last number"))
10 n=first
11 while (n<=last):
12     if(n%2!=0):
13         print(n)
14     n+=1
15
16
17
```

Console I/O X

```
In [24]: runfile('C:/Users/Aravind/Documents/python programs/odd.py', wdir='C:/Users/
Aravind/Documents/python programs')
enter the 1st number10
enter the last number20
11
13
15
17
19

In [25]: runfile('C:/Users/Aravind/Documents/python programs/odd.py', wdir='C:/Users/
Aravind/Documents/python programs')
enter the 1st number20
enter the last number30
21
23
25
27
29

In [26]: runfile('C:/Users/Aravind/Documents/python programs/odd.py', wdir='C:/Users/
Aravind/Documents/python programs')
enter the 1st number1
enter the last number20
1
3
5
7
9
11
13
15
17
19

In [27]:
```

Python Console History Terminal

internal (Python 3.8.10) ✓ Completions: internal ✓ LSP: Python Line 15, Col 9 UTF-8 CRLF RW Mem 85%