

# 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
```

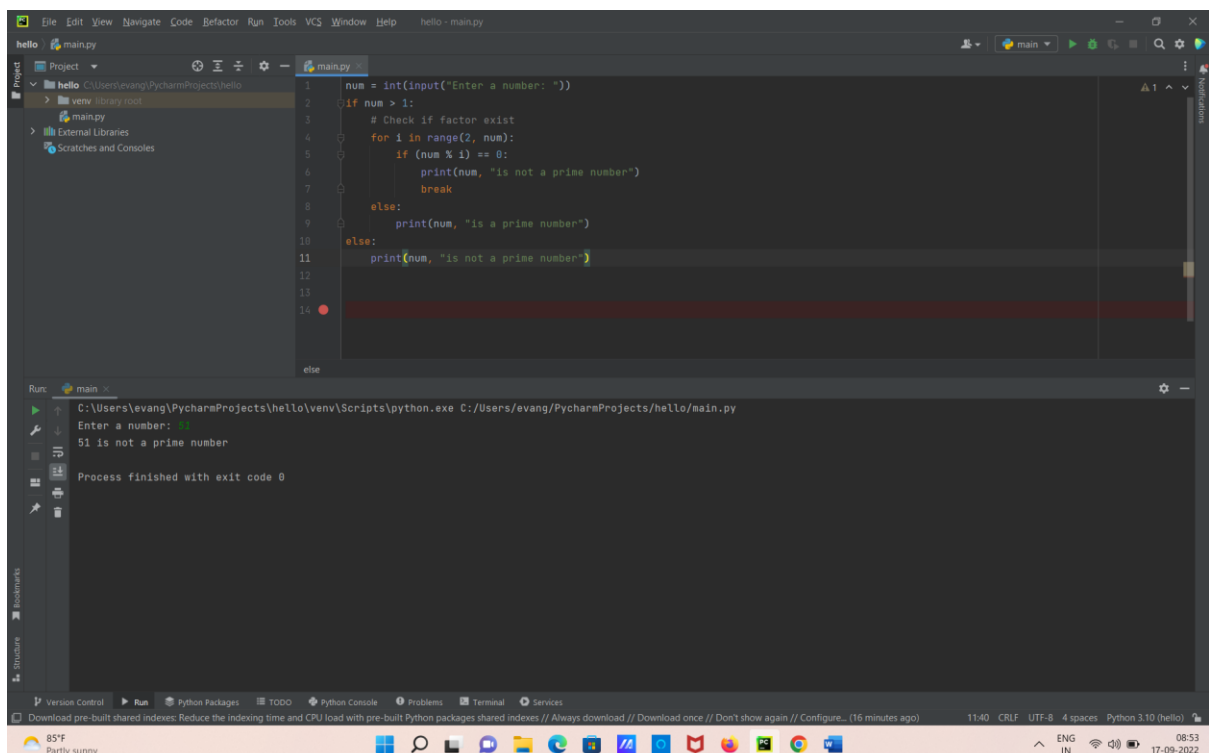
```
else:
```

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

```
else:
```

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

### OUTPUT:



```
1 num = int(input("Enter a number: "))
2 if num > 1:
3     # Check if factor exist
4     for i in range(2, num):
5         if (num % i) == 0:
6             print(num, "is not a prime number")
7             break
8     else:
9         print(num, "is a prime number")
10 else:
11     print(num, "is not a prime number")
12
13
14
```

Run: main

C:\Users\evang\PycharmProjects\hello\venv\Scripts\python.exe C:/Users/evang/PycharmProjects/hello/main.py

Enter a number: 51

51 is not a prime number

Process finished with exit code 0

## 2. 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):
```

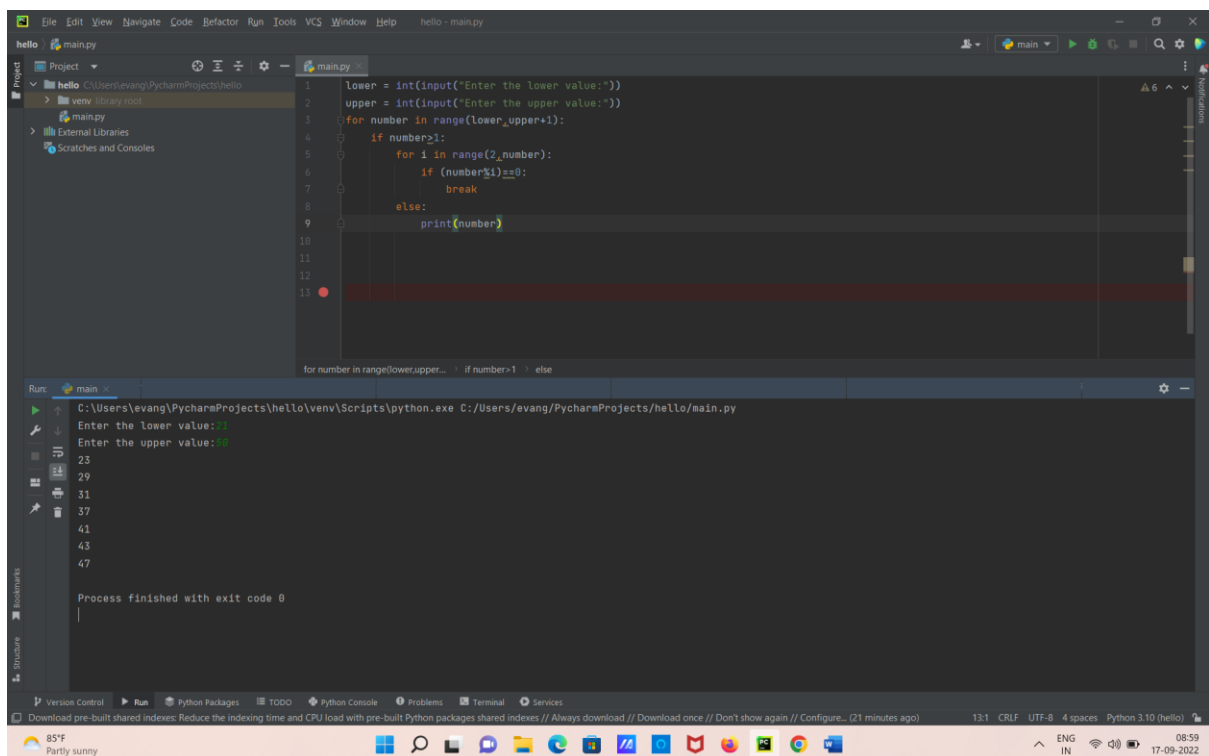
```
if (n % i) == 0:
```

```
break
```

```
else:
```

```
print(n)
```

### OUTPUT:



The screenshot displays the PyCharm IDE interface. The main editor window shows a Python script named `main.py` with the following code:

```
1 lower = int(input("Enter the lower value:"))
2 upper = int(input("Enter the upper value:"))
3 for number in range(lower,upper+1):
4     if number>1:
5         for i in range(2,number):
6             if (number%i)==0:
7                 break
8         else:
9             print(number)
```

The Run console at the bottom shows the execution of the program. It prompts for the lower and upper values, and displays the resulting prime numbers:

```
Run: main
C:\Users\evang\PycharmProjects\hello\venv\Scripts\python.exe C:/Users/evang/PycharmProjects/hello/main.py
Enter the lower value: 23
Enter the upper value: 29
23
29
31
37
41
43
47
Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, the line ending is CRLF, and the Python version is 3.10.

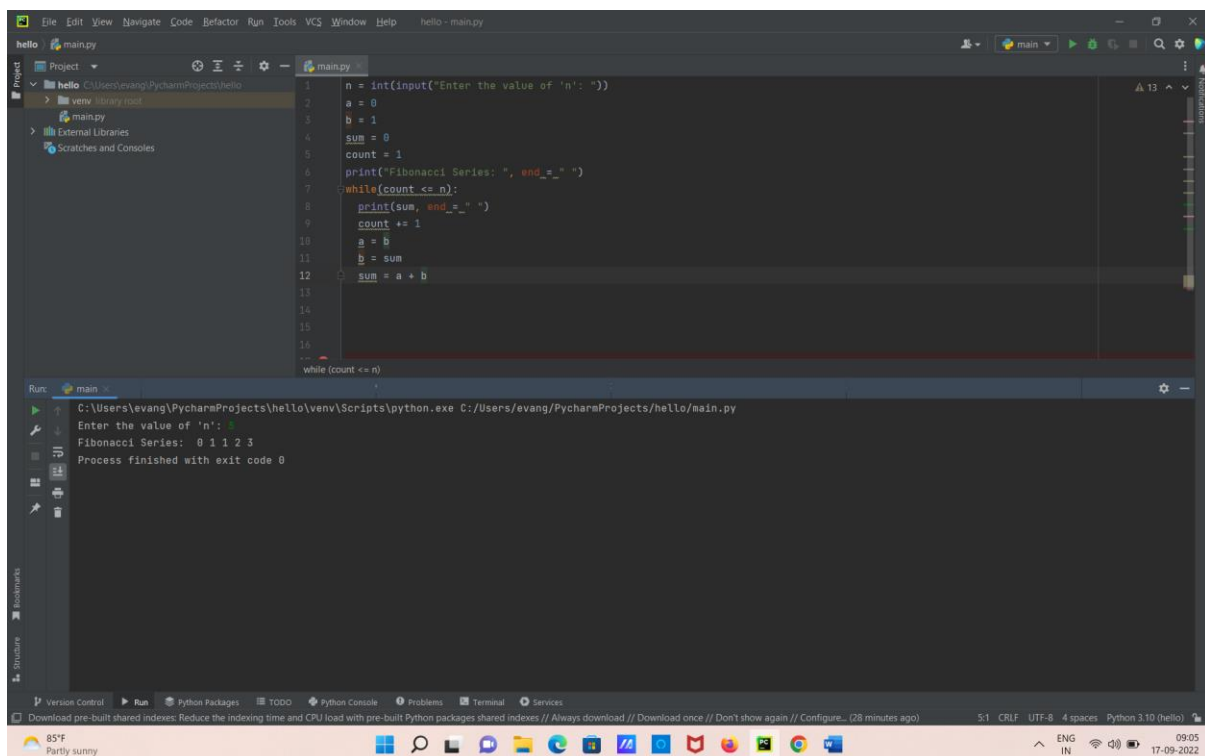
### 3. Write a python program to generate fibonacci series

#### Program:

```
n=int(input("ENTER THE VALUE OF N:"))

a=0
b=1
sum=0
count=1
print("Fibonnaci Series:",end=" ")
while(count<=n):
print(sum,end=" ")
count += 1
a=b
b=sum
sum=a+b
```

#### OUTPUT:



The screenshot displays the PyCharm IDE interface. The main editor window shows the following Python code:

```
1 n = int(input("Enter the value of 'n': "))
2 a = 0
3 b = 1
4 sum = 0
5 count = 1
6 print("Fibonacci Series: ", end=" ")
7 while(count <= n):
8     print(sum, end=" ")
9     count += 1
10    a = b
11    b = sum
12    sum = a + b
```

The Run console at the bottom shows the execution output:

```
Enter the value of 'n': 4
Fibonacci Series: 0 1 1 2 3
Process finished with exit code 0
```

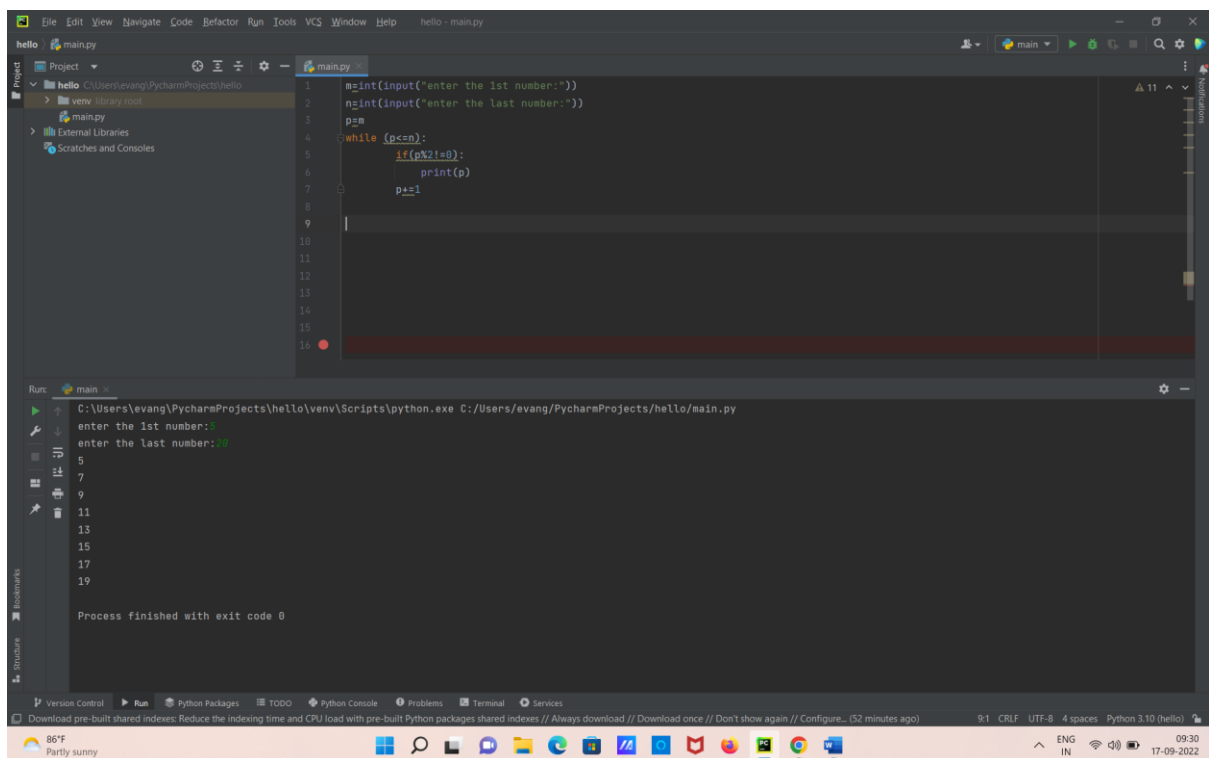
The status bar at the bottom indicates the file encoding is UTF-8, the line length is 4 spaces, and the Python version is 3.10.

#### 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(p%2!=0):
        print(p)
    p+=1
```

##### OUTPUT:



The screenshot shows the PyCharm IDE with a project named 'hello'. The file 'main.py' is open, containing the following Python code:

```
1 m=int(input("enter the 1st number:"))
2 n=int(input("enter the last number:"))
3 p=m
4 while (p<=n):
5     if(p%2!=0):
6         print(p)
7     p+=1
```

The Run console at the bottom shows the execution of the program. It prompts for the first and last numbers, and then prints the odd numbers in the range. The output is:

```
enter the 1st number: 5
enter the last number: 11
5
7
9
11
13
15
17
19
Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, the line ending is CRLF, and the Python version is 3.10 (hello).