

## 1.Prime numbers less than 20

```
n=int(input("Enter the number till you want to check: "))
```

```
primes = []
```

```
for i in range(2, n+1):
```

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

```
        if i%j == 0:
```

```
            break
```

```
    else:
```

```
        primes.append(i)
```

```
print(primes)
```



```
IDLE Shell 3.10.6
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test prime.py ==
Enter the number till you want to check: 8
[2, 3, 5, 7]
>>>
===== RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test prime.py =====
Enter the number till you want to check: 9
[2, 3, 5, 7]
>>>
===== RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test prime.py =====
Enter the number till you want to check: 19
[2, 3, 5, 7, 11, 13, 17, 19]
>>>
===== RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test prime.py =====
Enter the number till you want to check: 15
[2, 3, 5, 7, 11, 13]
>>>
===== RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test prime.py =====
Enter the number till you want to check: 18
[2, 3, 5, 7, 11, 13, 17]
>>>
```

2.odd or even

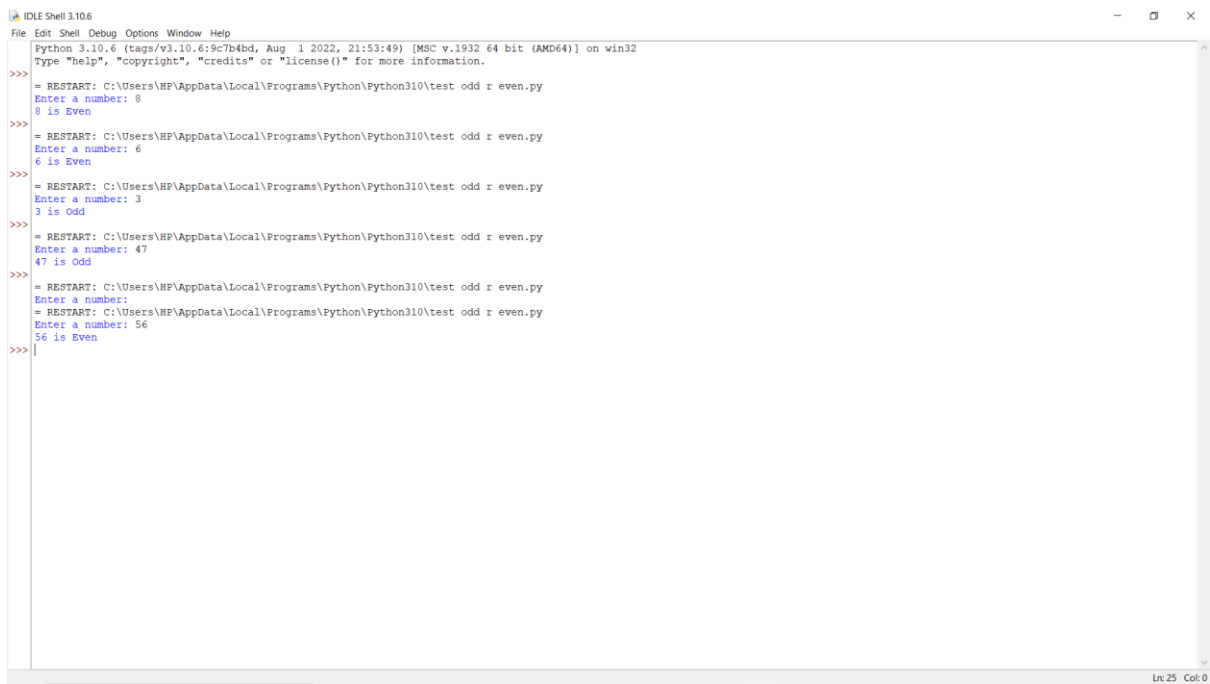
```
num = int(input("Enter a number: "))
```

```
if (num % 2) == 0:
```

```
    print("{0} is Even".format(num))
```

```
else:
```

```
    print("{0} is Odd".format(num))
```



```
IDLE Shell 3.10.6
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number: 0
0 is Even
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number: 6
6 is Even
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number: 3
3 is Odd
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number: 47
47 is Odd
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number:
= RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test odd r even.py
Enter a number: 56
56 is Even
>>>
```

Ln: 25 Col: 0

### 3.factorial of a number

```
num=int(input("enter a number"))
```

```
factorial = 1
```

```
if num < 0:
```

```
    print("Sorry, factorial does not exist for negative numbers")
```

```
elif num == 0:
```

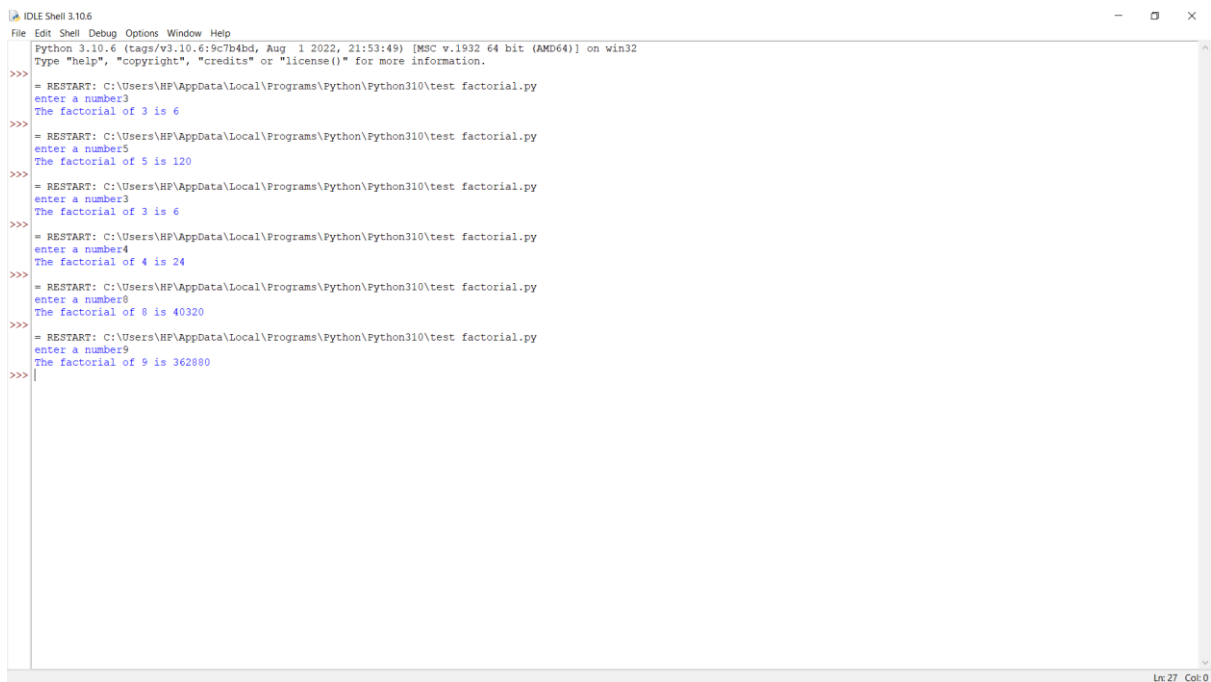
```
    print("The factorial of 0 is 1")
```

```
else:
```

```
    for i in range(1,num + 1):
```

```
        factorial = factorial*i
```

```
    print("The factorial of",num,"is", factorial)
```



The screenshot shows a Python IDE Shell window titled "IDLE Shell 3.10.6". The window contains the following text:

```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number3
The factorial of 3 is 6
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number5
The factorial of 5 is 120
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number3
The factorial of 3 is 6
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number4
The factorial of 4 is 24
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number8
The factorial of 8 is 40320
>>> = RESTART: C:\Users\HP\AppData\Local\Programs\Python\Python310\test factorial.py
enter a number9
The factorial of 9 is 362880
>>> |
```

The status bar at the bottom right indicates "Ln: 27 Col: 0".