

**Aim:** Write the program for the following: (by using control statements and control structure)

**(F). Write a recursive function to print the factorial for a given number.**

**Theory: -**

**Practical Implementation:-**

```
# python program to find the factorial of a number using recursion
```

```
def recur_factorial (n):
```

```
    """function to return the factorial of a number using recursion"""
```

```
    if n == 1:
```

```
        return n
```

```
    else:
```

```
        return n*recur_factorial(n-1)
```

```
# take input from the user
```

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

```
# check is the number is negative
```

```
if num < 0:
```

```
    print("sorry,factorial does not exist for negative number")
```

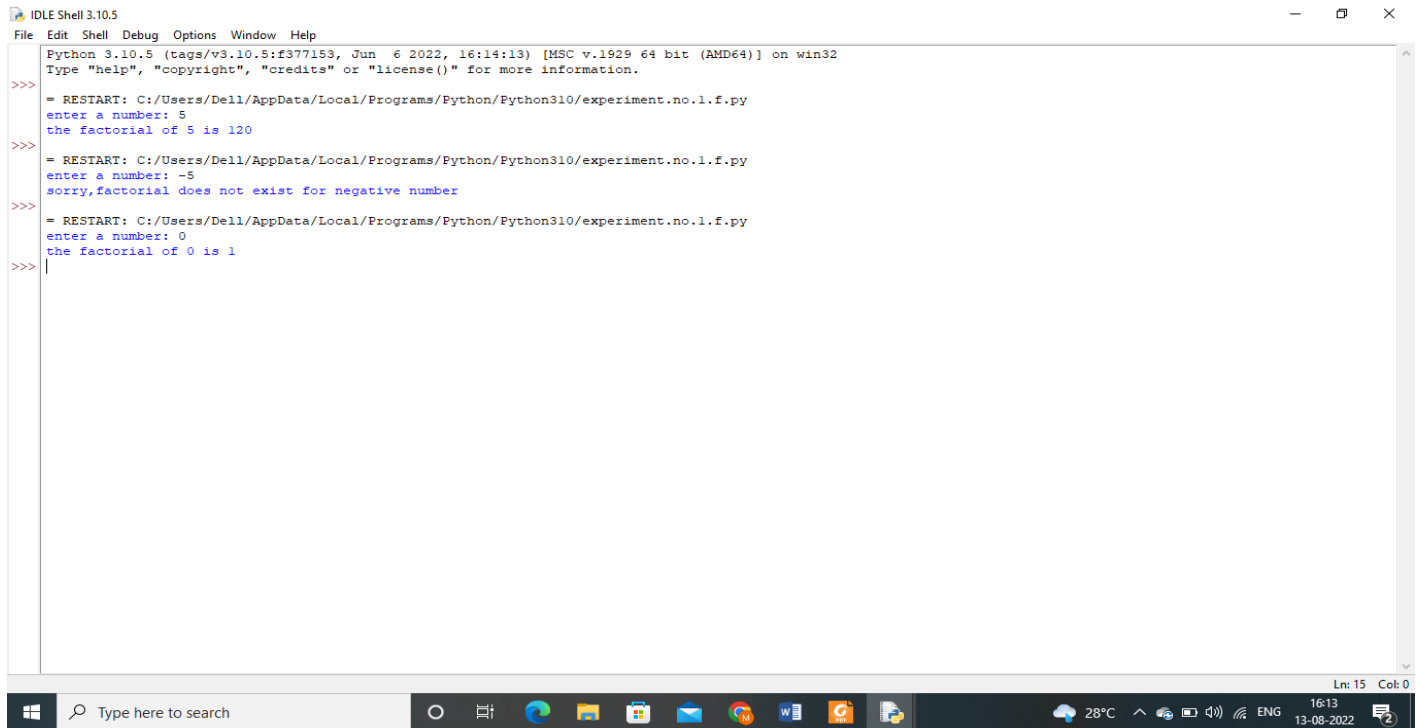
```
elif num == 0:
```

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

```
else:
```

```
    print("the factorial of",num,"is",recur_factorial(num))
```

# output: -



```
IDLE Shell 3.10.5
File Edit Shell Debug Options Window Help
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Dell/AppData/Local/Programs/Python/Python310/experiment.no.1.f.py
enter a number: 5
the factorial of 5 is 120
>>>
= RESTART: C:/Users/Dell/AppData/Local/Programs/Python/Python310/experiment.no.1.f.py
enter a number: -5
sorry,factorial does not exist for negative number
>>>
= RESTART: C:/Users/Dell/AppData/Local/Programs/Python/Python310/experiment.no.1.f.py
enter a number: 0
the factorial of 0 is 1
>>>
|
```

## Conclusion:-