

problem Statement : Fire Station

there are 'n' stations between two places A and B.
find number of ways in which a train can be made to stop at 's' of intermediate stations
so that no two stopping stations are consecutive.

Program :

```
def fact(no):
    res = 1
    for i in range(2,no+1):
        res = res * i
    #print(res)
    return res

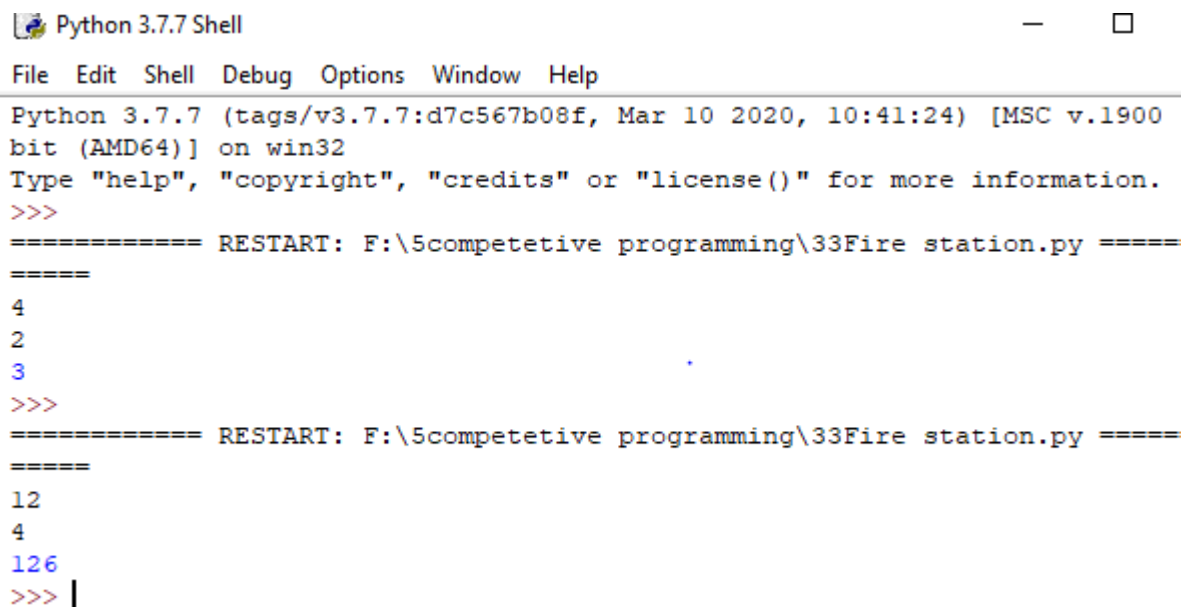
def nCf(n,r):
    return int(fact(n) / (fact(r) * fact(n-r)))

n = int(input())    #number of stations
s = int(input())    #number of stops

n = n-s+1           #because no two stopping stations are conseutive

print(nCf(n,s))     # Using Combination formula(where we have to select s stations from n)
```

Output :



```
Python 3.7.7 Shell
File Edit Shell Debug Options Window Help
Python 3.7.7 (tags/v3.7.7:d7c567b08f, Mar 10 2020, 10:41:24) [MSC v.1900
bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: F:\5competetive programming\33Fire station.py =====
4
2
3
>>>
===== RESTART: F:\5competetive programming\33Fire station.py =====
12
4
126
>>> |
```