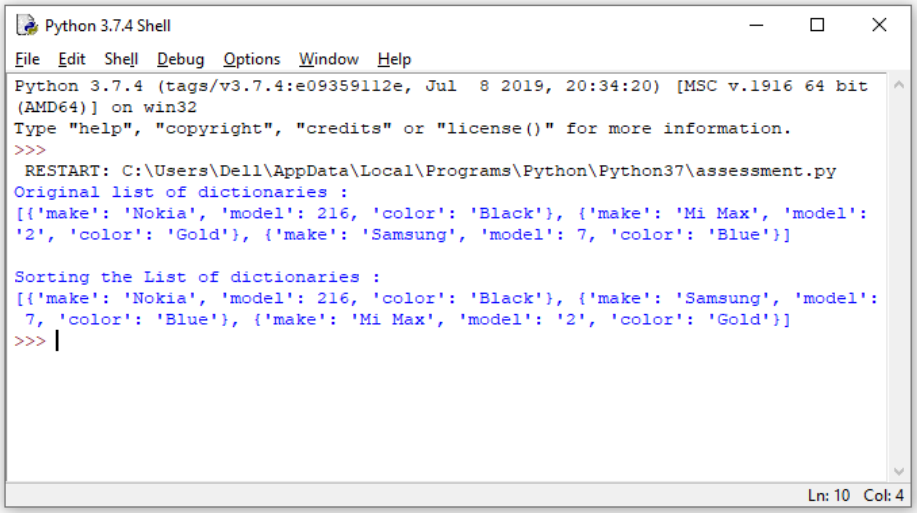
# SYEDA MUSKAN BATOOL
# SUBMITTED TO SYED UMAID AHMED
# SEAT NO : 20202083

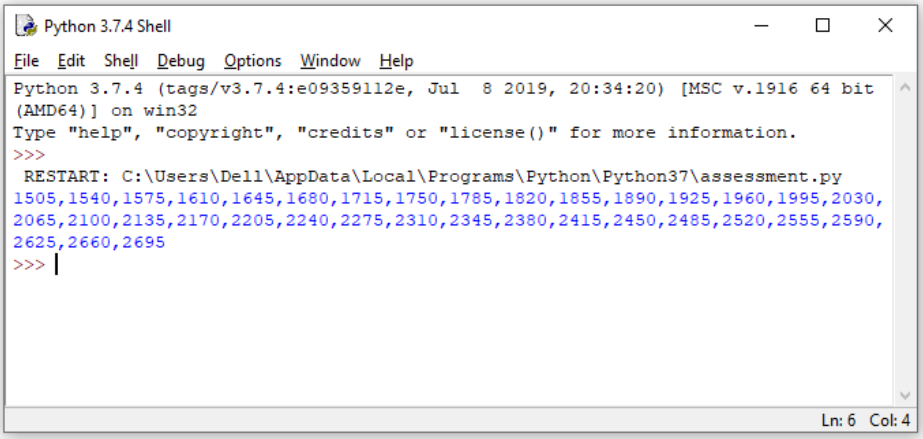
1 Write a Python program to sort a list of dictionaries using Lambda

```
models = [{'make':'Nokia', 'model':216, 'color':'Black'}, {'make':'Mi Max', 'model':'2', 'color':'Gold'}, {'make':'Sa
print("Original list of dictionaries :")
print(models)
sorted_models = sorted(models, key = lambda x: x['color'])
print("\nSorting the List of dictionaries :")
print(sorted_models)
```




2 Write a Python program to find those numbers which are divisible by 7 and multiple of 5, between 1500 and 2700 (both included)

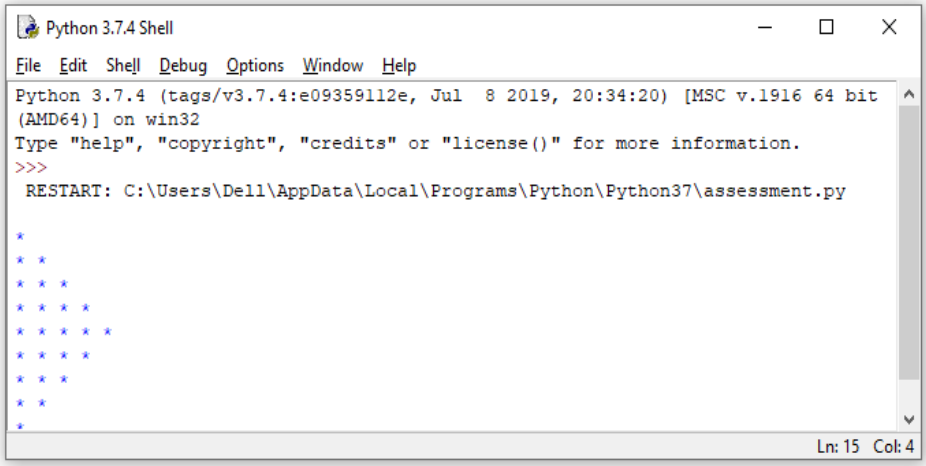
```
nl=[]
for x in range(1500, 2701):
    if (x%7==0) and (x%5==0):
        nl.append(str(x))
print (','.join(nl))
```




3 Write a Python program to construct the following pattern, using a nested for loop.

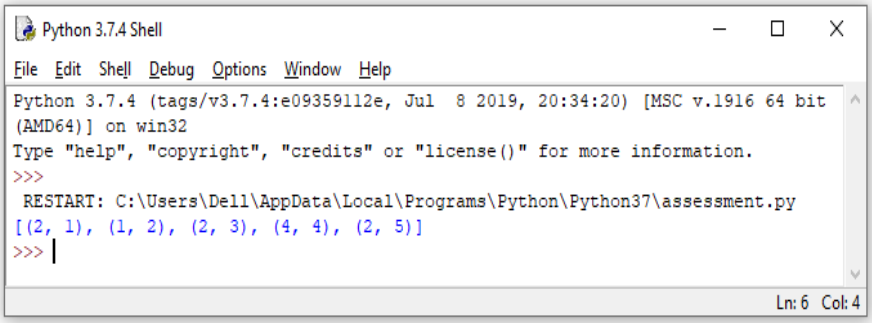
```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

```
n=5;
for i in range(n):
    for j in range(i):
        print ('* ', end="")
    print('')

for i in range(n,0,-1):
    for j in range(i):
        print('* ', end="")
    print('')
```



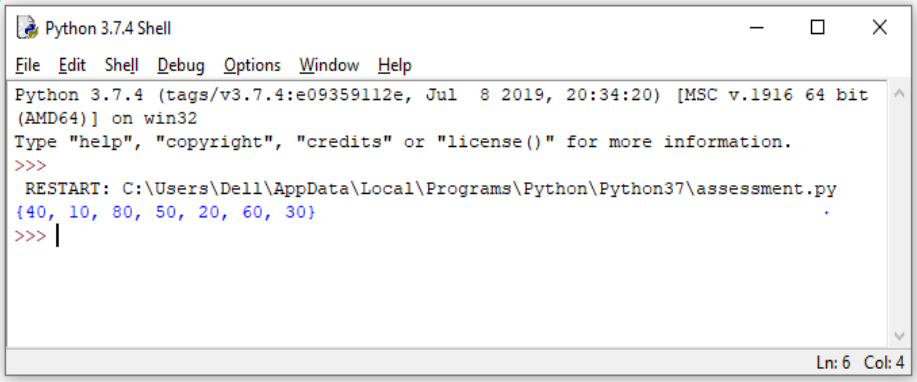

4 Write a Python program to get a list, sorted in increasing order by the last element in each tuple from a given list of non-empty tuples.

```
def last(n): return n[-1]

def sort_list_last(tuples):
  return sorted(tuples, key=last)

print(sort_list_last([(2, 5), (1, 2), (4, 4), (2, 3), (2, 1)]))
```



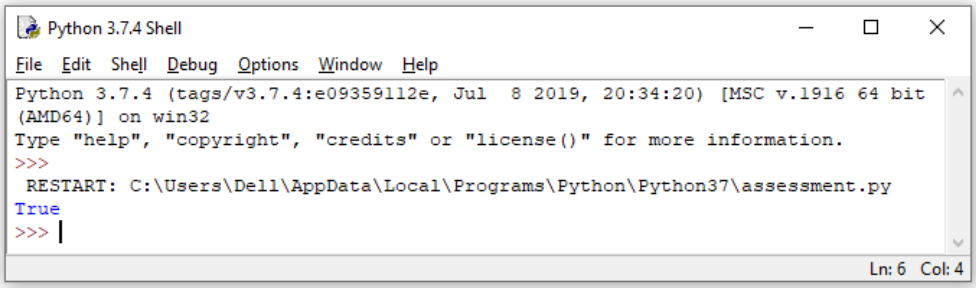

5 Write a Python program to remove duplicates from a list.

```
a = [10,20,30,20,10,50,60,40,80,50,40]

dup_items = set()
uniq_items = []
for x in a:
    if x not in dup_items:
        uniq_items.append(x)
        dup_items.add(x)

print(dup_items)
```



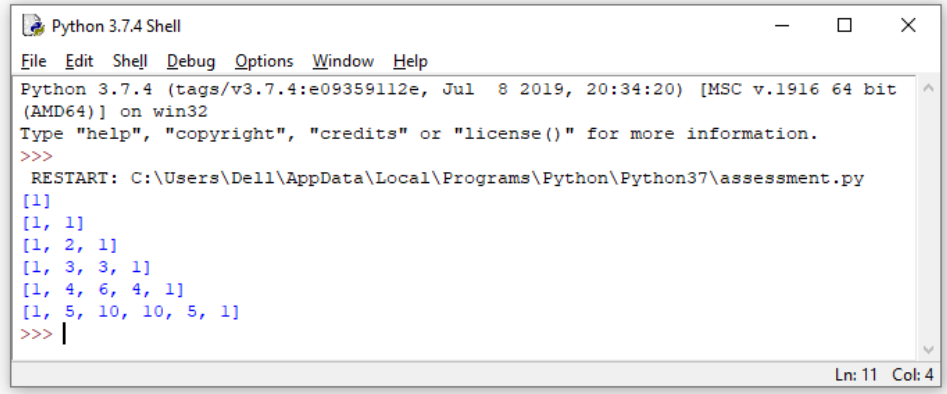

6 Write a Python function to check whether a number is perfect or not.

```
def perfect_number(n):
    sum = 0
    for x in range(1, n):
        if n % x == 0:
            sum += x
    return sum == n
print(perfect_number(6))
```



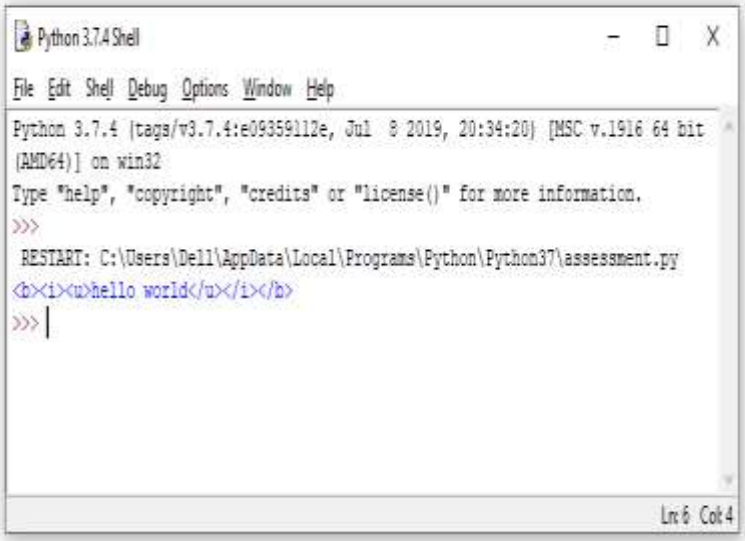

7 Write a Python function that prints out the first n rows of Pascal's triangle.
Note : Pascal's triangle is an arithmetic and geometric figure first imagined by Blaise Pascal.

```
def pascal_triangle(n):
    trow = [1]
    y = [0]
    for x in range(max(n,0)):
        print(trow)
        trow=[l+r for l,r in zip(trow+y, y+trow)]
    return n>=1
pascal_triangle(6)
```



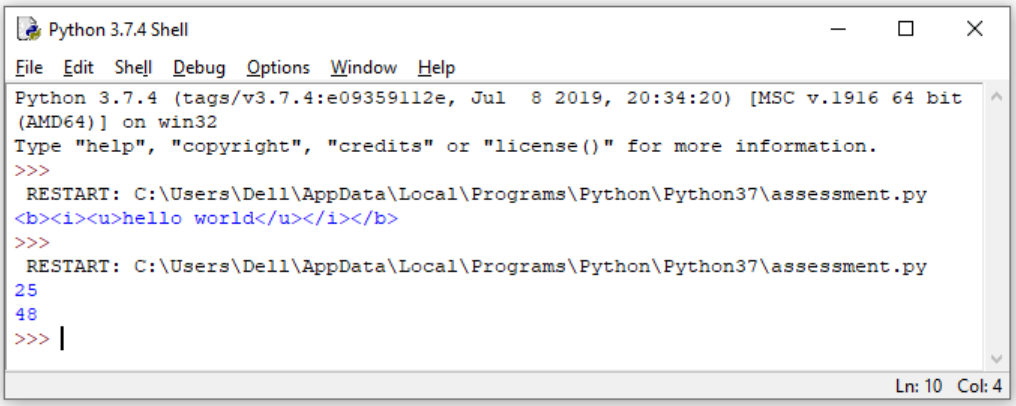

8 Write a Python program to make a chain of function decorators (bold, italic, underline etc.) in Python

```
def make_bold(fn):
    def wrapped():
        return "<b>" + fn() + "</b>"
    return wrapped

def make_italic(fn):
    def wrapped():
        return "<i>" + fn() + "</i>"
    return wrapped

def make_underline(fn):
    def wrapped():
        return "<u>" + fn() + "</u>"
    return wrapped
@make_bold
@make_italic
@make_underline
def hello():
    return "hello world"
print(hello()) ## returns "<b><i><u>hello world</u></i></b>"
```



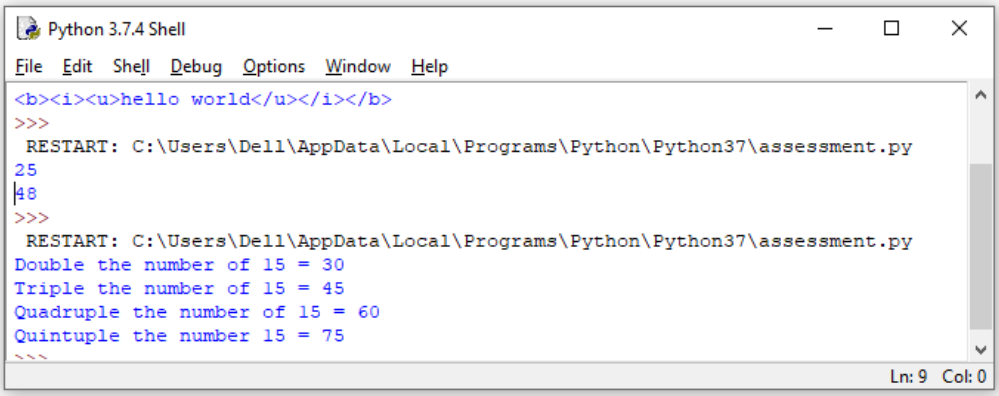
9 Write a Python program to create a lambda function that adds 15 to a given number passed in as an argument, also create a lambda function that multiplies argument x with argument y and print the result.

```
r = lambda a : a + 15
print(r(10))
r = lambda x, y : x * y
print(r(12, 4))
```



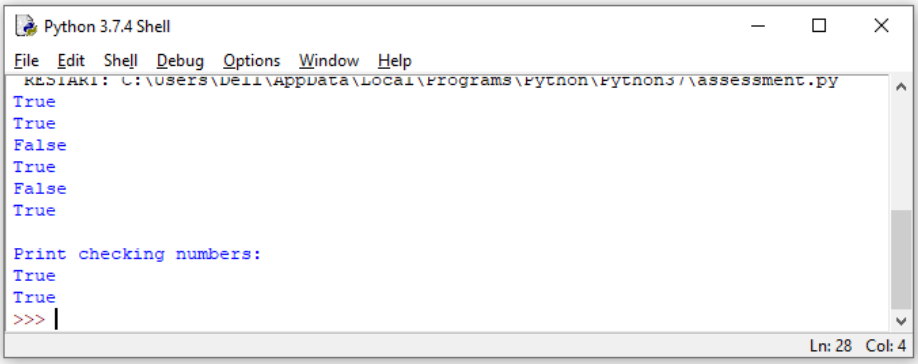

10 Write a Python program to create a function that takes one argument, and that argument will be multiplied with an unknown given number.

```
def func_compute(n):
 return lambda x : x * n
result = func_compute(2)
print("Double the number of 15 =", result(15))
result = func_compute(3)
print("Triple the number of 15 =", result(15))
result = func_compute(4)
print("Quadruple the number of 15 =", result(15))
result = func_compute(5)
print("Quintuple the number 15 =", result(15))
```



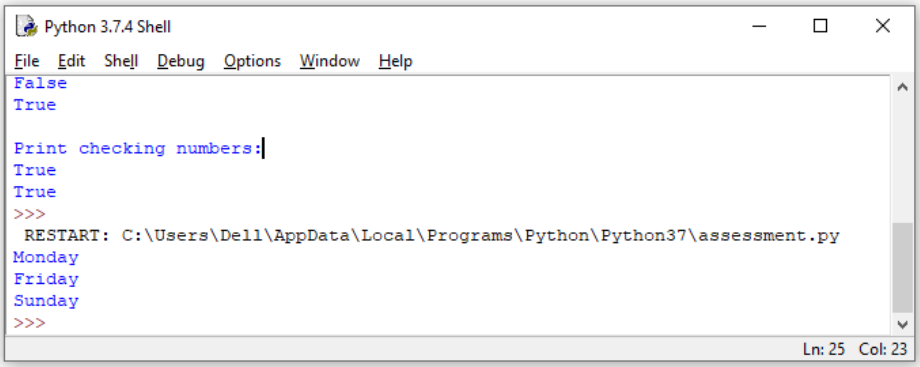

11 Write a Python program to check whether a given string is number or not using Lambda

```
is_num = lambda q: q.replace('.','',1).isdigit()
print(is_num('26587'))
print(is_num('4.2365'))
print(is_num('-12547'))
print(is_num('00'))
print(is_num('A001'))
print(is_num('001'))
print("\nPrint checking numbers:")
is_numl = lambda r: is_num(r[1:]) if r[0]=='-' else is_num(r)
print(is_numl('-16.4'))
print(is_numl('-24587.11'))
```




## 12 Write a Python program to find the values of length six in a given list using Lambda

```
weekdays = ['Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday']
days = filter(lambda day: day if len(day)==6 else '', weekdays)
for d in days:
  print(d)
```




## 13 Write a Python program to find palindromes in a given list of strings using Lambda

```
texts = ["php", "w3r", "Python", "abcd", "Java", "aaa"]
print("Orginal list of strings:")
print(texts)
result = list(filter(lambda x: (x == "".join(reversed(x))), texts))
print("\nList of palindromes:")
print(result)
```