```
#pattternStar.py
for i in range(4):
   for j in range(i+1):
      print("*", end=' ')
   print("")
```

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```
#patternNumbers.py
for i in range(4,0,-1):
   for j in range(i):
      print(j+1, end=' ')
   print("")
```

---

```
#patternHash.py
for i in range(4,0,-1):
   for j in range(i):
      print("#", end=' ')
   print("")
```

---

```
#lambdaAndReduce.py

from functools import reduce
str1 =input("Enter the elements separated by a space: ")
list1 = list(str1.split(' '))
result= reduce(lambda x,y: int(x)+int(y), list1)
print(result)
```

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```
#lambdaAndMap.py
#to multiply all elements in a list by a number using map and lambda function
str1 =input("Enter the elements of an array separated by space: ")
my_list = list(str1.split(" "))
print(my_list)
i =int(input("Enter the number to be multiplied: "))
#result=[int(num)*2 for num in my_list]
def mul(list1,iter1):
    return (list(map(lambda num: int(num)*iter1, list1)))

result=mul(my_list,i)
print(result)
```

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```
#FibonacciGenerator.py
#print the list of fibonacci series using generators
no = int(input("Enter the numberof items in fibonacci series: "))
def fibon(max_items):
    f,s =0,1
    for _ in range(max_items):
        yield f
        f,s = s,f+s

for i in fibon(no):
    print(i,end="\t")
```

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```
#FibonacciGenerator2.py
#to generate fibonacci series until a particular number using Generators
```

```
max_number = int(input("Enter the maximum number in the series: "))


def fib():
    f,s=0,1
    while True:
        yield f
        f,s=s,f+s


out = fib()
for i in out:
    if i> max_number:
        break
    print(i,end="\t")
```