Python Exercise 2

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

In [4]:
```
for i in range(1500,2700):
    if(i % 7==0 and i % 5 ==0 ):
        print(i)
    else:
        continue
```

```
1505
1540
1575
1610
1645
1680
1715
1750
1785
1820
1855
1890
1925
1960
1995
2030
2065
2100
2135
2170
2205
2240
2275
2310
2345
2380
2415
2450
2485
2520
2555
2590
2625
2660
2695
```

2. Write a Python program to construct the

following pattern, using a nested for loop.

In [68]:
```
for i in range(0,5):
    print()
    for j in range(0,i+1):
        print('*',end='  ')
for i in range(5,0,-1):
    print()
    for j in range(i-1,0,-1):
        print('*',end='  ')
```

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

3. Write a Python program to count the number of even and odd numbers from a series of numbers.

In [9]:
```
n,m=0,0
for i in range(11,20):
    if(i % 2==0 ):
        n=n+1
    else:
        m=m+1
print("Number of even numbers:",n)
print("Number of Odd numbers:",m)
```

```
Number of even numbers: 4
Number of Odd numbers: 5
```

4. Write a Python program to find numbers between 100 and 400 (both included) where each digit of a number is an even number. The numbers obtained should be printed in a comma-separated sequence.¶

In [47]:
```
finallist=[]
for i in range(100,401):
    i=str(i)
    if(int(i[0])%2==0 and int(i[1])%2==0 and int(i[2])%2==0):
                finallist.append(i)

    #print(",".join(finallist))
print(finallist)
print(",".join(finallist))
```

```
['200', '202', '204', '206', '208', '220', '222', '224', '226', '228', '24
0', '242', '244', '246', '248', '260', '262', '264', '266', '268', '280',
'282', '284', '286', '288', '400']
200,202,204,206,208,220,222,224,226,228,240,242,244,246,248,260,262,264,26
6,268,280,282,284,286,288,400
```

5. Write a Python program to calculate a dog's age in dog's years. Go to the editor¶

In [ ]:
```
Note: For the first two years, a dog year is equal to 10.5 human years. After
```

In [7]:
```
dogAge=float(input("Input a dog's age in human years:"))
if(dogAge <=2):
    print("The dog's age in dog's years is ",10.5)
else:
    dogAge=dogAge-2
    print("The dog's age in dog's years is ",10.5+dogAge*4)
```

```
Input a dog's age in human years:20
The dog's age in dog's years is  82.5
```

6. Write a Python function to find the Max of three numbers.

In [7]:
```
num1 = input("the 1st number is:")
num2 = input("the 2nd number is:")
num3 = input("the 3rd number is:")
if(num1>num2):
    if(num1>num3):
        print(num1)
    else:
        print(num3)
elif(num2>num3):
    print(num2)
else:
    print(num3)
```

```
the 1st number is:3
the 2nd number is:6
the 3rd number is:-5
6
```

In [10]:
```
#another way of finding the max is
num1 = input("the 1st number is:")
num2 = input("the 2nd number is:")
num3 = input("the 3rd number is:")
if(num1>num2 and num1>num3 ):
        print(num1)
elif num2>num1 and num2>num3:
    print(num2)
else:
    print(num3)
```

```
the 1st number is:3
the 2nd number is:6
the 3rd number is:-5
6
```

In [8]:
```
#another way of finding the max is
max(num1,num2,num3)
```

Out[8]: '6'

7. Write a Python function that takes a number as a parameter and check the number is prime or not.

In [33]:
```
def findPrime(n):
    if n==2:
        return True

    else:
        print(int((n/2)+1))
        end=int((n/2)+1)
        for i in range(2,end):
            if(n % i ==0):
                return False
            else:
                return True

n=int(input("The number is:"))
print("is the number prime?:", findPrime(n))
```

```
The number is:5
3
is the number prime?: True
```

8. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters. Go to the editor¶

In [13]:
```
name=input("Original String:")
countUp=0
countLow=0
for i in name:
    if i.isupper():
        countUp=countUp+1
    elif i.islower():
        countLow+=1

print("No. of Upper case characters :",countUp)
print("No. of Lower case Characters",countLow)
```

```
Original String:Inceptz is One of The BeSt Places TO LEarn DataSciEnce
No. of Upper case characters : 13
No. of Lower case Characters 32
```

9. Write a Python program to reverse a string.

In [18]:
```
name=input("The original string is:")
print("Reversed string:",name[len(name)::-1])
```

```
The original string is:1234abcd
Reversed string: dcba4321
```

In [5]:
```
#another way of writing the program
name=input("The original string is:")
reversed=""
for i in range(len(name)-1,-1,-1):
    reversed=reversed+name[i]
print(reversed)
```

```
The original string is:1234abcd
dcba4321
```

10. Write a Python program to find the greatest common divisor (gcd) of two integers.¶

In [13]:
```
num1=int(input("The 1st number is:"))
num2= int(input("The 2nd number is:"))
if(num1>num2):
    minimum=num1
else:
    minimum=num2
for i in range(1,minimum+1):          # another way is while loop
    if num1%i==0 and num2%i==0 :
        gcd=i
    i=i+1
print("The GCD of the numbers are:",gcd)
```

```
The 1st number is:12
The 2nd number is:14
The GCD of the numbers are: 2
```

In [ ]:
```

```