In [ ]:
```
#16 Write a Python program that prompts user to enter numbers. The process will rep
#enters 0. Finally, the program prints sum of the numbers entered by the user.
sum=0
while(1):
    n=int(input("Enter number: "))
    if(n==0):
        break
    sum+=n
print("Sum:",sum)
```

In [30]:
```
#17 Write a Python program to print all the numbers from 1 to 1000 that are not div
#5, 7, 11, 13, 17 and 19
for i in range(1,1001):
    if(i%2!=0 and i%3!=0 and i%5!=0 and i%7!=0 and i%11!=0 and i%13!=0 and i%17!=0
        print(i)
```

```
1
23
29
31
37
41
43
47
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61
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71
73
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89
97
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107
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601
607
613
617
619
631
641
643
647
653
659
661
667
673
677
683
691
701
709
713
719
727
733
739
743
```

```
751
757
761
769
773
787
797
809
811
821
823
827
829
839
841
851
853
857
859
863
877
881
883
887
899
907
911
919
929
937
941
943
947
953
961
967
971
977
983
989
991
997
```

In [ ]:
```python
#18 Write a Python program to find HCF (GCD) of two numbers
n1=int(input("Enter 1st Number: "))
n2=int(input("Enter 2nd Number: "))
hcf=1
if(n1>n2):
    for i in range(2,(n1//2)+1):
        if(n1%i==0 and n2%i==0):
            hcf=i
    print(hcf)
elif(n1<n2):
    for i in range(2,(n2//2)+1):
        if(n1%i==0 and n2%i==0):
            hcf=i
    print(hcf)
else:
    print(n1)
```

In [31]:
```python
#19 WAP to check if a number is armstrong or not
n=int(input("Enter Number: "))
sum=0
```

```
a=n
for i in range(len(str(n))):
    sum+=(a%10)**len(str(n))
    a=a//10
if(sum==n):
    print(n,"is an Armstrong Number.")
else:
    print(n,"is not an Armstrong Number.")
```

```
Enter Number: 8208
8208 is an Armstrong Number.
```

In [1]:
```
#20 WAP to swap first and last digit of a number.
n=list(input("Enter a number: "))
temp=n[0]
n[0]=n[-1]
n[-1]=temp
str=""
print("Swapped successfully:",str.join(n))
```

```
Enter a number: 4569
Swapped successfully: 9564
```

In [29]:
```
#21. Write a Python program for printing prime numbers up to N. (N>100).
n=int(input("Enter number to print prime numbers upto: "))
for i in range(2,n+1):
    flag=0
    for j in range(2,i):
        if(i%j==0):
            flag=1
            break
    if(flag==0):
        print(i,end=',')
```

```
Enter number to print prime numbers upto: 20
2,3,5,7,11,13,17,19,
```

In [ ]:
```
22. Write a Python program to construct the following pattern, using a nested for
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

In [26]:
```
for i in range(1,5):
    for j in range(i):
        print("*   ",end='')
    print("\n")
for i in range(5,0,-1):
    for j in range(i):
        print("*   ",end='')
    print("\n")
```

```
*

*   *

*   *   *

*   *   *   *

*   *   *   *   *

*   *   *   *

*   *   *

*   *

*
```

In [ ]:
```
23. Write a Python program to print following matrix.
1 0 1 0
0 1 0 1
1 0 1 0
0 1 0 1
```

In [28]:
```
for i in range(4):
    for j in range(4):
        if(i%2!=0):
            if(j%2==0):
                print("0   ",end='')
            else:
                print("1   ",end='')
        else:
            if(j%2==0):
                print("1   ",end='')
            else:
                print("0   ",end='')
    print("\n")
```

```
1   0   1   0

0   1   0   1

1   0   1   0

0   1   0   1
```

In [ ]:
```

```