2.Display future leap years from current year to final year entered by user.

Input

```
current_year=int(input("Enter the current year:"))
final_year=int(input("Enter the final year:"))
for year in range(current_year,final_year):
 if(year%400==0)or(year%100!=0)and(year%4==0):
 print(year)
```

Output

```
Print leap year between two given years
Enter start year
2000
Enter last year
2021
List of leap years:
2000
2004
2008
2012
2016
2020
```

3.List Comprehensions:

(a)Genereate positive list of numbers from a given list of integers

Input

```
list=[10,-5,4,-8,35,67,-22]
for num in list:
 if num>0:
 print(num)
```

Output

```
ccf@FISATPC0360:~/ananthu/python$ python3 positiveno.py
2  6  22  34  ccf@FISATPC0360:~/ananthu/python$
```

(b)Square of N numbers

Input

```
lst=[]
n=int(input("Enter a number:"))
for num in range(1,n+1):
 num=num*num
 lst.append(num)
print(lst)
```

Output

```
stud@debian:~/ananthu1$ python3 square.py
Enter a number:5
[1, 4, 9, 16, 25]
```

(c)Form a list of vowels selected from a given word

Input

```
L=[]
s="India is my country"
for i in s:
 if i in ("aeiouAEIOU"):
 L.append(i)
print(L)
```

Output

```
stud@debian:~/ananthu1$ python3 vowels.py
['I', 'i', 'a', 'i', 'o', 'u']
```

(d)List ordinal values of each element of a word(Hint:use ord() to get ordinal values)

Input

```
ordinal=input("Enter a word:")
print("The ASCII value of the letters in the word is")
for letter in ordinal:
 n=ord(letter)
 print(n)
```

Output

```
Enter a name:ananthu
The ASCII value of the letters in the word is
97
110
97
110
116
104
117
```

4.Count the occurrences of each word in a line of text.

Input

```
list1=[]
list2=[]
x=input("Enter a string:")
for i in x.split(" "):
 list1.append(i)
 if i not in list2:
 list2.append(i)
for i in list2:
 print(i,"\t",list1.count(i))
```

Output

```
stud@debian:~/ananthu1$ python3 occurence.py
Enter a string:thanks friends thanks for friends
thanks   2
friends          2
for      1
```

5.Prompt the user for a list of integers. For all values greater than 100, store

'over' instead. **Input**

```
lst=[]
n=int(input("Enter an integer:"))
print("Integer numbers are")
for i in range(0,n):
 j=int(input())
 if j>100:
 lst.append("over")
 else:
 lst.append(j)
print(lst)
```

Output

```
ccf@FISATPC0360:~/ananthu/python$ python3 listofintegersgreater.py
Enter an integer: 21
Enter an integer: 32
Enter an integer: 100
Over
[21, 32]
```

6.Store a list of first names. Count the occurrences of ‘a’ within the list.

Input

```
list1=["ananthu","anil","abhinav"]
count=0
for word in list1:
 for letter in word:
 if letter=="a":
 count=count+1
print("The occurences of 'a' within the list is "+str(count))
```

Output

```
ccf@FISATPC0360:~/ananthu/python$ python3 firstnames.py
The occurences of 'a' within the list is 5
```

7.Enter 2 list of integers. Check (a) Whether list are of same length (b) whether list sums to same value (c) whether any value occur in both.

Input

```
l1=[2,4,6,8,10]
l2=[3,5,7,9,10]
print(l1)
print(l2)
if len(l1)==len(l2):
 print("Lists are of same length")
else:
 print("Lists are of different length")
s1=0
s2=0
for i in range(len(l1)):
 s1=s1+l1[i]
print("Sum of first list is",s1)
for j in range(len(l2)):
 s2=s2+l2[j]
print("Sum of second list is",s2)
if (s1==s2):
 print("Sum of lists is same")
else:
 print("Sum of lists are different")
for i in l1:
```

```
if i in l2:
print(i,"occurs in both list")
```

Output

```
stud@debian:~/ananthu1$ python3 listinteger1.py
[2, 4, 6, 8, 10]
[3, 5, 7, 9, 10]
Lists are of same length
Sum of first list is 30
Sum of second list is 34
Sum of lists are different
10 occurs in both list
```

8.Get a string from an input string where all occurrences of first character replaced with '$', except first character. [eg: onion->oni$n]

Input

```
str1=input("enter a string")
print("original string",str1)
char=str1[0]
str1=str1.replace(char,'$')
str1=char+str1[1:]
print("string:",str1)
```

Output

```
stud@debian:~/ananthu1$ python3 onionstring.py
enter a stringonion
original string onion
string: oni$n
```

9.Create a string from given string where first and last characters exchanged. [eg:

python->nythop] **Input**

```
s="python"
t=s[0]
t1=s[-1]
n=len(s)
rs=t1+s[1:n-1]+t
print(rs)
```

Output

```
stud@debian:~/ananthu1$ python3 singlestring.py
nythop
```

10.Accept the radius from the user and find the area of a circle

Input

```
x=input("Enter the radius")
x=int(x)
a=3.14*x*x
print(a)
```

Output

```
stud@debian:~$ cd ananthu1/
stud@debian:~/ananthu1$ python3 area.py
Enter the radius3
28.259999999999998
```

11.Biggest of three numbers

Input

```
a=int(input("Enter the first number"))
b=int(input("Enter the second number"))
c=int(input("Enter the third number"))
if a>b:
 if a>c:
 print(a)
 else:
 print(c)
else:
 if b>c:
 print(b)
 else:
 print(c)
```

Output

```
stud@debian:~$ cd ananthu1/
stud@debian:~/ananthu1$ python3 biggestofthreenumber.py
Enter the first number21
Enter the second number25
Enter the third number28
28
```

12.Accept a file name from user and print extension of that

Input

```
import os
a=input("enter the filename : ")
print("The extension of file",a, "is",os.path.splitext(a))
```

Output

```
stud@debian:~/ananthu1$ python3 extension.py
enter the filename : ananthu
The extension of file ananthu is ('ananthu', '')
```

13.Create a list of colors from commas separated color names entered by the user. Display first and last colors

Input

```
list1=[]
string=input("Enter colors separated by comma:\n")
for i in string.split(","):
 list1.append(i)
print("First and last colors in the list are",list1[0],"and",list1[-1])
```

Output

```
stud@debian:~/ananthu1$ python3 colorlist.py
Enter colors separated by comma:
white,orange,blue,green
First and last colors in the list are white and green
```

14.Accept an integer n and n +nn+nnn.

Input

```
num=input("Enter a number:")
dum1=num+num+num
dum2=num+num
dum3=num
print(int(dum1)+int(dum2)+int(dum3))
```

Output

15.Print out all colors from color-list 1 not contained in color-list2

Input

```
l1=['white','green','violet']
l2=['orange','red','black','white']
print(l1)
print(l2)
for i in l1:
 if i not in l2:
 print(i)
```

Output

16.Create a single string separated with space from two strings by swapping the character at position 1.

Input

```
str1=input("Enter first string:")
str2=input("Enter second string:")
str3=str2[0]+str1[1:]+" "+str1[0]+str2[1:]
print(str3)
```

Output

19.Find gcd of 2 numbers.

Input

```
x=int(input("Enter first number:"))
y=int(input("Enter second number:"))
if x>y:
 s=y
```

```
else:
 s=x
for i in range(1,s+1):
 if(x%i==0)and(y%i==0):
 hcf=i
print(hcf)
```

Output

20.From a list of integers, create a list removing even numbers.

Input

```
l1=[1,2,3,4,5,6]
l2=[]
for i in l1:
 if i%2!=0:
 l2.append(i)
print(l2)
```

Output