In [41]:
```
#patterns:
for i in range(5):
    for j in range(5):
        if(i%2==0):
            print("*",end=" ")
        else:
            print("#",end=" ")
    print()
```

```
* * * * *
# # # # #
* * * * *
# # # # #
* * * * *
```

In [61]:
```
n=7
step=1
for x in range(n):
    for y in range(step):
        print("*",end=" ")
    print()
    step=step+1
```

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

In [79]:
```
n=7
step=7
for x in range(n):
    for y in range(step,1,-1):
        print("*",end=" ")
    print()
    step=step-1
```

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

In [73]:
```
n=7
step=n
space=0
for x in range(n):
    for y in range(space):
        print(" ",end=" ")
    for z in range(step):
        print("*",end=" ")
    print()
    space=space+1
    step=step-1
```

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

In [70]:
```
n=7
step=n
space=0
for x in range(n):
    for y in range(space):
        print("",end=" ")
    for z in range(step):
        print("*",end=" ")
    print()
    space=space+1
    step=step-1
```

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

In [76]:
```
n=7
space=3
star=1
for i in range(n):
    for j in range(space):
        print(" ",end=" ")
    for k in range(star):
        print("*",end=" ")
    print()
    if i<n//2:
        star=star+2
        space=space-1
    else:
        star=star-2
        space=space+1
```

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

In [97]:
```
#string a="Python" or 'python'
#range(included:excluded)
  #0-p,1-y,2-t,3-h,4-o,5-n,6-_,7-D,8-a,9-y,10-2,11-_,12-C,13-l,14-a,15-s,16-s
  #-17-p,-16-y,-15-t,-14-h,-13-o,-12-n,-11-_,-10-D,-9-a,-8-y,-7-2,-6-_,-5-C,-4-l,-3-a,-2-s,-1-s
a="Python_Day2_Class"
b=a[7:11]
print("1st",b)
b=a[11]
print("2nd",b)
b=a[-10:-6]
print("3rd",b)
b=a[-5:]
print("4rth",b)
b=a[:11]
print("5th",b)
b=a[11:]
print("6th",b)
b=a[:-1]
print("7th",b)
b=a[::]
print("8th",b)
b=a[::-1]
print("9th",b)
```

```
1st Day2
2nd _
3rd Day2
4rth Class
5th Python_Day2
6th _Class
7th Python_Day2_Clas
8th Python_Day2_Class
9th ssalC_2yaD_nohtyP
```

In [98]:
```
#Assignment
Str1="I Love Python" #strings are immutable
Str1[0]="U"
print(Str1)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[98], line 3
      1 #Assignment
      2 Str1="I Love Python" #strings are immutable
----> 3 Str1[0]="U"
      4 print(Str1)

TypeError: 'str' object does not support item assignment
```

In [99]:
```
#Acessing
Str1="I Love Python"
```

```
for x in Str1:
    print(x)
```

```
I

L
o
v
e

P
y
t
h
o
n
```

In [101…
```
#Acessing
Str1="I Love Python"
for x in Str1:
    print(x,end=" ")
```

```
I   L o v e   P y t h o n
```

In [108…
```
# +(concatenate), *(repetation) , in  , not in
S1="I Love Python"
a="Python" in S1
print(a)
a="Learn" in S1
print(a)
a="Learn" not in S1
print(a)
```

```
True
False
True
```

In [102…
```
Str1="I Love Python"
print(len(Str1))
```

```
13
```

In [120…
```
a="Python_Day2_Class"
b=a.upper()
print(b)
a="Python_Day2_Class"
b=a.lower()
print(b)
a=" Python_Day2_Class "
b=a.strip() #it will remove starting and ending spaces
print(b)
a="Python_Day2_Class"
b=a.replace("_"," ")
a="Python_Day2_Class"
b=a.replace("D","d")
print(b)
a="Python_Day2_Class"
b=a.split("_")
print(b)
```

```
PYTHON_DAY2_CLASS
python_day2_class
Python_Day2_Class
Python_day2_Class
['Python', 'Day2', 'Class']
```

In [137…
```
#WAP to reverse the given string
string=input("enter the string:")
print(string[::-1])
```

```
nohtyp
```

In [136…
```
n=str(input("enetr the string: "))
rev=" "
for i in n[::-1]:
    rev=rev+i
print(rev)
```

```
 nohtyp
```

In [3]:
```
# program to merge character of 2 strings into a single string by taking inputs S1 ravi S2 teja
S1='ravi'
S2='teja'
c=S1+S2
print(c)
print(c[0]+c[4]+c[1]+c[5]+c[2]+c[6]+c[3]+c[7])
```

```
raviteja
rtaevjia
```

In [133…
```
S1="raviii"
S2="tejaeaaa"
S3=""
size=min(len(S1),len(S2))
size1=max(len(S1),len(S2))
print(size)
for i in range(0,size):
    S3=S3+S1[i]+S2[i]
print(S3)
for i in range(size,size1):
    if(len(S1)>len(S2)):
       S3=S3+S1[i]
    else:
        S3=S3+S2[i]
print(S3)
```

```
6
rtaevjiaieia
rtaevjiaieiaaa
```

In [135…
```
S1="raviii"
S2="tejaeaaa"
size=min(len(S1),len(S2))
for i in range(0,size):
    print(S1[i]+S2[i],end="")
if(len(S1)>size):
    print(S1[size:])
else:
    print(S2[size:])
```

```
rtaevjiaieiaaa
```

In [4]:
```
#input a4b3c2 o/p aaaabbbcc
print("a"*4+'b'*3+'c'*2)
```

```
aaaabbbcc
```

In [119…
```
#replace a with $
s="mamatha"
c=s.replace("a","$")
print(c)
```

```
m$m$th$
```

In [134…
```
#replace first and last char
s='computers'
print(s)
print(len(s))
#print(s[8]+s[1:len(s)-1]+s[0])
print(s[len(s)-1]+s[1:len(s)-1]+s[0])
```

```
computers
9
somputerc
```

In [9]:
```
#count no. of vowels in string
s=input("enter the string:")
print("number of vowels in string are:")
count=0
for i in s:
    if(i=='a'or i=='e' or i=='i' or i=='o'or i=='u'):
        count=count+1
print(count)
```

```
number of vowels in string are:
3
```

In [10]:
```
#even indexes and odd indexes of string
s='computer'
e=''
o=''
for i in range(len(s)):
    if(i%2==0):
        e=e+s[i]
    else:
        o=o+s[i]
print(e)
print(o)
```

```
cmue
optr
```

In [12]:
```
#calculate num of dig and letters in string
```

```
s=input("enter the string:")
print("digit count:")
dcount=0
for i in s:
    if(i.isdigit()):
        dcount=dcount+1
print(dcount)
print("alpha count:")
alphacount=0
for i in s:
    if(i.isalpha()):
        alphacount=alphacount+1
print(alphacount)
```

```
digit count:
4
alpha count:
2
```

In [15]:

```
s=input("enter the string:")
dig=[]
alp=[]
for i in range(len(s)):
    if(s[i].isdigit()):
        dig.append(s[i])
        dig.sort()
        output=" ".join(dig)
for i in range(len(s)):
    if(s[i].isalpha()):
        alp.append(s[i])
        alp.sort()
        out=" ".join(alp)
print(dig)
print(output)
print(alp)
print(out)
```

```
['2', '2', '4', '6', '6', '7', '8']
2 2 4 6 6 7 8
['f', 'g', 'h', 'j', 'r', 's', 'w']
f g h j r s w
```

In [14]:

In [ ]: