# pattern  
  
*'''  
\* \* \* \*  
\* \* \* \*  
\* \* \* \*  
\* \* \* \*  
'''*for i in range(**4**):  
 for j in range(**4**):  
 print('\*'**,** end=' ')  
 print()  
  
print()  
  
  
for i in range(**4**):  
 print('\* ' \* **4**)  
  
  
# 0 1 2 3  
print("========================================")  
  
'''  
A A A A  
B B B B  
C C C C  
D D D D  
'''  
  
s = 'ABCD'  
for char in s:  
 print((char + ' ') \* **4**)  
  
print()  
  
for i in range(**65, 69**):  
 print((chr(i)+' ') \* **4**)  
  
  
  
print('---------------------------------------------------------')  
#  
# # WAP for below-mentioned pattern without using alphabets  
# '''  
# A A A A  
# B B B B  
# C C C C  
# D D D D  
# '''  
#  
# for value in range(65, 69):  
# print((chr(value) + ' ') \* 4)  
#  
print('---------------------------------------------------------')  
  
'''  
x x x  
y y y  
z z z  
'''  
  
# 1) with using alphabets  
  
for char in 'xyz':  
 print((char + ' ') \* **3**)  
  
print()  
  
# 2) without using alphabets  
  
for i in range(**120, 123**):  
 print((chr(i) + ' ') \* **3**)  
  
print('----------------------------------------------------')  
'''  
\* - - -  
- \* - -  
- - \* -  
- - - \*  
'''  
  
'''  
 1 2 3 4  
  
1 \* - - -  
 11  
2 - \* - -  
 22  
3 - - \* -  
 33  
4 - - - \*  
 44  
# '''  
n = **9**for row in range(**1,** n):  
 for col in range(**1,** n):  
 if row == col:  
 print('\*'**,** end=' ')  
 else:  
 print('-'**,** end=' ')  
 print()  
  
  
  
print('---------------------------------------------------------')  
  
'''  
\_ \_ \_ \*  
\_ \_ \* \_  
\_ \* \_ \_  
\* \_ \_ \_  
  
'''  
  
'''  
 1 2 3 4  
  
1 \_ \_ \_ \*  
 14  
  
2 \_ \_ \* \_  
 23  
  
3 \_ \* \_ \_  
 32  
  
4 \* \_ \_ \_  
 41  
  
14 1+4 = 5 row + col = 5  
23 2+3 = 5  
32 3+2 = 5  
41 4+1 = 5  
'''  
  
  
for row in range(**1, 5**):  
 for col in range(**1, 5**):  
 if row+col == **5**:  
 print('\*'**,** end=' ')  
 else:  
 print('-'**,** end=' ')  
 print()  
  
print('------------------------------------------------------')  
  
'''  
 row no of col range of col  
\* 1 1 (0, 1) 0  
\* \* 2 2 (0, 2) 0 1  
\* \* \* 3 3 (0, 3) 0 1 2  
\* \* \* \* 4 4 (0, 4) 0 1 2 3  
\* \* \* \* \* 5 5 (0, 5) 0 1 2 3 4  
 row (0, row)  
'''  
n = **6**for row in range(**1,** n):  
 for col in range(row):  
 print('\*'**,** end=' ')  
 print()  
  
print('----------------')  
'''  
\*  
\* \*  
\* \* \*  
\* \* \* \*  
\* \* \* \* \*  
  
row 1 2 3 4 5  
star 1 2 3 4 5 ---> number of row times  
  
'''  
  
for row in range(**1, 6**):  
 print('\* ' \* row)  
  
  
  
print('-------------------------------------------------------')  
  
'''  
\* \* \* \* \*  
\* \* \* \*  
\* \* \*  
\* \*  
\*  
'''  
n = **5**for row in range(n**, 0,** -**1**):  
 print('\* ' \* row)  
  
print()  
  
for row in range(**5, 0,** -**1**):  
 for col in range(row):  
 print('\*'**,** end=' ')  
 print()  
  
  
print('----------------------------------------------------------')  
  
'''  
8  
8 8  
8 8 8  
8 8 8 8  
8 8 8 8 8  
'''  
print('----------------------------------------------------------')  
  
'''  
1 2 3 4 5 '-' col   
- - - - \* 1 2 3 4 <= 4 ==> 5 - 1  
- - - \* \* 1 2 3 <= 3 ==> 5 - 2   
- - \* \* \* 1 2 <= 2 ==> 5 - 3   
- \* \* \* \* 1 <= 1 ==> 5 - 4   
\* \* \* \* \* 0 <= 0 ==> 5 - 5  
 ==> 5 - row   
   
'''  
  
for row in range(**1, 6**):  
 for col in range(**1, 6**):  
 if col <= **5**-row:  
 print('-'**,** end=' ')  
 else:  
 print('\*'**,** end=' ')  
 print()  
  
  
print('----------------------------------------------------------')  
  
'''  
 '-' '\*' row  
- - - - \* 4 = 5-1 1 1  
- - - \* \* 3 = 5-2 2 2  
- - \* \* \* 2 = 5-3 3 3  
- \* \* \* \* 1 = 5-4 4 4  
\* \* \* \* \* 0 = 5-5 5 5  
  
 5-row row  
'''  
  
for row in range(**1, 6**):  
 print('- ' \* (**5**-row)**,** '\* ' \* row**,** sep='')  
  
  
print('--------------------------------------------------------')  
  
'''  
 \*  
 \* \*  
 \* \* \*  
 \* \* \* \*  
\* \* \* \* \*  
'''  
  
for row in range(**1, 6**):  
 print(' ' \* (**5**-row)**,** '\* ' \* row**,** sep='')  
  
print()  
  
for row in range(**1, 6**):  
 print(f'{'\* ' \* row:>10}')  
  
  
name = 'mainak'  
  
print('my name is'**,** name)  
print(f'my name is {name}')  
  
  
  
print('-------------------------------------------------------------')  
  
# '''  
# @  
# @ @  
# @ @ @  
# @ @ @ @  
# @ @ @ @ @  
# @ @ @ @ @ @  
#  
# '''  
# print('----------------------------------------------------------')  
#  
# '''  
# A  
# A A  
# A A A  
# A A A A  
# A A A A A  
# '''  
#  
  
# print('----------------------------------------------------------')  
#  
# '''  
# '-' 'A'  
# ----A 4 1  
# ---A A 3 2  
# --A A A 2 3  
# -A A A A 1 4  
# A A A A A 0 5  
# 5-row row  
# '''  
#  
#  
# print('----------------------------------------------------------')  
#  
# '''  
# \* \* \* \* \* 5  
# \* \* \* \* 4  
# \* \* \* 3  
# \* \* 2  
# \* 1  
#  
# \* \* \* \* \*  
# \* \* \* \*  
# \* \* \*  
# \* \*  
# \*  
#  
# \* \* \* \* \*  
# \* \* \* \*  
# \* \* \*  
# \* \*  
# \*  
# '''  
#  
# print('--------------------------------------------------')  
#  
# '''  
# \_ \_ \_ \_ \*  
# \_ \_ \_ \* \* \*  
# \_ \_ \* \* \* \* \*  
# \_ \* \* \* \* \* \* \*  
# \* \* \* \* \* \* \* \* \*  
#  
# sp = 4 3 2 1 0 -1  
# st = 1 3 5 7 9 +2  
# '''  
  
#  
# print('--------------------------------------------------------')  
# '''  
# \*  
# \* \* \*  
# \* \* \* \* \*  
# \* \* \* \* \* \* \*  
# \* \* \* \* \* \* \* \* \*  
#  
# st = 1 3 5 7 9 +2  
# '''  
#  
  
#  
# print('--------------------------------------------------------')  
#  
# '''  
# \* \* \* \* \* \* \* \* \*  
# \* \* \* \* \* \* \*  
# \* \* \* \* \*  
# \* \* \*  
# \*  
#  
# st => 9 7 5 3 1 :-> -2  
#   
# print('------------------------------------------------')  
#  
# '''  
#  
# \*  
# \* \*  
# \* \*  
# \* \*  
# \* \* \* \* \* \* \* \* \*  
#  
#  
# 1 2 3 4 5 6 7 8 9  
# 1 - - - - \* - - - - 15  
# 15  
# 2 - - - \* - \* - - - 24 26  
# 24 26  
# 3 - - \* - - - \* - -  
# 33 37 33 37  
# 4 - \* - - - - - \* -  
# 42 48 42 48  
# 5 \* \* \* \* \* \* \* \* \* i+j = 6 j-i = 4  
#  
# '''  
#   
#  
#  
#  
# print('------------------------------------------------')  
#  
# '''  
# row sp st  
# - - - - \* 1 4 -1 1 +2  
# - - - \* \* \* 2 3 -1 3 +2  
# - - \* \* \* \* \* 3 2 -1 5 +2  
# - \* \* \* \* \* \* \* 4 1 -1 7 +2  
# \* \* \* \* \* \* \* \* \* 5 0 9  
# - \* \* \* \* \* \* \* 6 1 +1 7 -2  
# - - \* \* \* \* \* 7 2 +1 5 -2  
# - - - \* \* \* 8 3 +1 3 -2  
# - - - - \* 9 4 +1 1 -2  
# '''  
#  
#   
#   
#  
# print('----------------------------------------------------')  
#  
# '''  
# 1 2 3 4 5 6 7 8 9  
# 1 - - - - \* - - - -  
# 15 15 24 33 42 51 i+j=6  
# 2 - - - \* - \* - - -  
# 24 26 26 37 48 59 j-i=4  
# 3 - - \* - - - \* - -  
# 33 37 62 73 84 95 i-j=4  
# 4 - \* - - - - - \* -  
# 42 48 68 77 86 i+j=14  
# 5 \* - - - - - - - \*  
# 51 59  
# 6 - \* - - - - - \* -  
# 62 68  
# 7 - - \* - - - \* - -  
# 73 77  
# 8 - - - \* - \* - - -  
# 84 86  
# 9 - - - - \* - - - -  
# 95  
# '''  
#  
# print('------------------------------------------------------------------')  
#  
#  
# '''  
#  
# print \* pattern for alphabet with which your name is starting  
#  
# \* \* \* \* \*  
# \* \*  
# \* \*  
# \* \* \* \* \*  
# \*  
# \*  
# \*  
#  
#  
#  
#  
# 0 1 2 3 4 5  
# \* \* \* \* \* 0  
# \* \* 1  
# \* \* 2  
# \* \* \* \* \* 3  
#  
#  
# '''  
#  
# '''  
# \* \*  
# \* \* \*  
# \* \* \*  
# \* \* \*  
# \* \* \*  
# \* \* \*  
# \* \*  
#  
#  
#  
# \* \*  
# \* \*  
# \* \*  
# \* \*  
# \*  
#  
#  
# 1 2 3 4 5 6 7 8 9  
# 1 - - - - \*  
# 15  
# 2 - - - \* - \*  
# 24 26  
# 3 - - \* \* \* \* \*  
# 33 34 35 36 37  
# 4 - \* - - - - - \*  
# 42 48  
# 5 \* - - - - - - - \*  
# 51 59  
#  
#  
# 15 24 33 42 51 i+j=6  
# 26 37 48 59 j-i=4  
# 33 34 35 36 37 i==3 and 2<j<8  
# '''  
# # A  
#  
#  
# print('----------------------------------------------')  
# # k  
#  
# print('----------------------------------------------')  
# # V  
#  
# '''  
# 0 1 2 3 4 5 6 7 8  
# \* \* 0  
# \* \* 1  
# \* \* 2  
# \* \* 3  
# \* 4  
# '''  
#  
  
#  
# print('------------------------------------------------------------')  
#  
# '''  
# 1 2 3 4 5 6  
# 1 \* \* \* \* \*  
# 2 \*  
# 3 \*  
# 4 \* \* \* \*  
# 5 \*  
# 6 \*  
# 7 \* \* \* \* \*  
# '''  
#  
# print('------------------------------------------------------------')  
# '''  
# 0 1 2 3 4 5 6  
# \* \* \* \* \* 0  
# \* \* 1  
# \* \* 2  
# \* \* \* 3  
# \* \* \* 4  
# \* \* \* \* \* 5  
# \* 6  
#  
# '''  
#  
  
#  
#  
#  
# '''  
# 1  
# 2 1  
# 3 2 1  
# 4 3 2 1  
# 5 4 3 2 1  
# '''  
#  
#  
#  
# print('================')  
#  
# '''  
# 1 2 3 4 5 range(1, 6) 6  
# 1 2 3 4 range(1, 5) 5  
# 1 2 3 range(1, 4) 4  
# 1 2 range(1, 3) 3  
# 1 range(1, 2) 2  
# '''  
#  
#  
# print('================')  
# '''  
# 1 range(1, 2) 2 i+1 1  
# 1 2 range(1, 3) 3 i+1 2  
# 1 2 3 range(1, 4) 4 i+1 3  
# 1 2 3 4 range(1, 5) 5 i+1 4  
# 1 2 3 4 5 range(1, 6) 6 i+1 5  
# '''  
#  
#  
# print('==================================')  
#  
# '''  
# 1 1sq row 1 1no of columns range(1) 0  
# 4 9 2sq 3sq 2 2 range(2) 0 1  
# 16 25 36 4sq 5sq 6sq 3 3 range(3) 0 1 2  
# 49 64 81 100 7sq 8sq 9sq 10sq 4 4 range(4) 0 1 2 3  
# '''  
#  
#  
# '''  
# 1 2 3 4 row 1 column 4  
# 5 6 7 row 2 column 3  
# 8 9 row 3 column 2  
# 10 row 4 column 1  
# '''  
#  
# '''  
#  
#  
# \*  
# \* \*  
# \* \* \*  
# \* \* \* \*  
# \* \* \*  
# \* \*  
# \*  
#  
# \*  
# \* \*  
# \* \* \*  
# \* \* \* \*  
# \* \* \*  
# \* \*  
# \*  
#  
# '''  
#  
# print('--------------------------------------------------------')  
# # snake pattern  
#  
# '''  
# 1 2 3 4 5  
# 10 9 8 7 6  
# 11 12 13 14 15  
# 20 19 18 17 16  
# 21 22 23 24 25  
#  
# row start of next row  
# 1 2 3 4 5 1 1 2 3 4 5 +1 odd 6 + 4 ==> 10 o +4  
# ->->->->->  
# 10 9 8 7 6 2 10 9 8 7 6 -1 e 5 + 6 ==> 11 e +6  
# <-<-<-<-<-  
# 11 12 13 14 15 3 11 12 13 14 15 +1 odd 16 + 4 ==> 20 o +4  
# ->->->->->->->  
# 20 19 18 17 16 4 20 19 18 17 16 -1 e 15 + 6 ==> 21 e +6  
# <-<-<-<-<-<-<-  
# 21 22 23 24 25 5 21 22 23 24 25 +1 odd  
# ->->->->->->->  
# '''