



150+ Python Pattern Programs

TOP Python exercises to feed your creativity
with if statements and loops



150+ Python Pattern Programs

By Hernando Abella

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INTRODUCTION

Develop your creativity by creating beautiful asterisk patterns with if statements and loops using the Python language. this awesome language will allow you to feel more comfortable writing code because you will master the more essential topics of programming by practicing these techniques.

If you are studying computer science at university, this book is perfect for you. They will require you to create these types of patterns that will be very useful to learn all types of advanced techniques and quickly master this wonderful language.

PATTERN 1

```
for i in range(1, 6):  
    for j in range(1, 6):  
        print("*", end="") # put any character  
    print()
```

PATTERN 2

*

**

```
for i in range(1, 6):  
    for j in range(1, i + 1):  
        print("*", end="")  
    print()
```

PATTERN 3

**

*

```
for i in range(1, 6):  
    for j in range(5, i - 1, -1):  
        print("*", end="")  
    print()
```

PATTERN 4

*

**

n = 5

```
for i in range(1, n + 1):  
    for j in range(n - 1, i - 1, -1):  
        print(" ", end="")  
    for k in range(1, i + 1):  
        print("*", end="")  
    print()
```

PATTERN 5

n = 5

```
for i in range(n, 0, -1):
```

```
for j in range(n - 1, i - 1, -1):
```

```
print(" ", end="")
```

```
for k in range(1, i + 1):
```

```
print("*", end="")
```

```
print()
```

PATTERN 6

*

**

```
p_height = 5
```

```
    for i in range(1, p_height):
```

```
        for k in range(p_height - 1, i - 1, -1):
```

```
            print(" ", end="")
```

```
            for j in range(1, i + 1):
```

```
                print("* ", end="")
```

```
            print()
```


PATTERN 7

* * * * *

* * * *

* * *

* *

*

```
p_height = 5
for i in range(p_height, 0, -1):
    for k in range(p_height - 1, i - 1, -1):
        print(" ", end="")
    for j in range(i, 0, -1):
        print("* ", end="")
    print()
```

PATTERN 8

*

```
p_height = 5
```

```
    min_stars = 1
```

```
    for i in range(p_height):
```

```
        for j in range(p_height - 1, i, -1):
```

```
            print(" ", end="")
```

```
            for k in range(min_stars):
```

```
                print("*", end="")
```

```
            min_stars += 2
```

```
        print()
```

PATTERN 9

*

```
p_height = 5
```

```
max_stars = p_height * 2 - 1
```

```
p_space = p_height - 1
```

```
for i in range(p_height, 0, -1):
```

```
for j in range(p_space, i - 1, -1):
```

```
print(" ", end="")
```

```
for k in range(max_stars):
```

```
print("*", end="")
```

```
max_stars -= 2
```

```
print()
```

PATTERN 10

*

**

**

*

```
size = 3
```

```
for i in range(size, -size-1, -1):
```

```
    for j in range(size, abs(i)-1, -1):
```

```
        print("*", end="")
```

```
    print()
```

PATTERN 11

*

**

**

*

```
size = 3
```

```
for i in range(size, -size-1, -1):
```

```
    for j in range(1, abs(i)+1):
```

```
        print(" ", end="")
```

```
    for k in range(size, abs(i)-1, -1):
```

```
        print("*", end="")
```

```
    print()
```

PATTERN 12

```
# 1****
```

```
# 22***
```

```
# 333**
```

```
# 4444*
```

```
# 55555
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 13

```
# 1****  
  
# 12***  
  
# 123**  
  
# 1234*  
  
# 12345  
  
n = 5  
  
for i in range(1, n + 1):  
    for j in range(1, n + 1):  
        if j > i:  
            print("*", end="")  
        else:  
            print(j, end="")  
    print()
```

PATTERN 14

```
# 55555
# 4444*
# 333**
# 22***
# 1****

n = 5
for i in range(n, 0, -1):
    for j in range(1, n + 1):
        if j > i:
            print("*", end="")
        else:
            print(i, end="")
    print()
```


PATTERN 15

```
# 12345
# 1234*
# 123**
# 12***
# 1****
n = 5
for i in range(n, 0, -1):
    for j in range(1, n + 1):
        if j > i:
            print("*", end="")
        else:
            print(j, end="")
    print()
```

PATTERN 16

```
# ****1
# ***22
# **333
# *4444
# 55555
n = 5
for i in range(1, n + 1):
    for j in range(n, 0, -1):
        if j > i:
            print("*", end="")
        else:
            print(i, end="")
    print()
```

PATTERN 17

```
# ****1
# ***21
# **321
# *4321
# 54321
n = 5
for i in range(1, n + 1):
    for j in range(n, 0, -1):
        if j > i:
            print("*", end="")
        else:
            print(j, end="")
    print()
```

PATTERN 18

```
# 55555
# *4444
# **333
# ***22
# ****1
n = 5
for i in range(n, 0, -1):
    for j in range(n, 0, -1):
        if j > i:
            print("*", end="")
        else:
            print(i, end="")
    print()
```

PATTERN 19

```
# 54321
```

```
  # *4321
```

```
  # **321
```

```
  # ***21
```

```
  # ****1
```

```
n = 5
```

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(j, end="")
```

```
    print()
```

PATTERN 20

```
# A****  
  
# BB***  
  
# CCC**  
  
# DDDD*  
  
# EEEEE  
  
n = 5  
  
for i in range(n):  
    for j in range(n):  
        if j > i:  
            print("*", end="")  
        else:  
            print(chr(i + 65), end="")  
    print()
```

PATTERN 21

```
# A****  
  
# AB***  
  
# ABC**  
  
# ABCD*  
  
# ABCDE  
  
n = 5  
  
for i in range(n):  
    for j in range(n):  
        if j > i:  
            print("*", end="")  
        else:  
            print(chr(j + 65), end="")  
    print()
```

PATTERN 22

```
# EEEEE
```

```
    # DDDD*
```

```
    # CCC**
```

```
    # BB***
```

```
    # A****
```

```
n = 4
```

```
for i in range(n, -1, -1):
```

```
    for j in range(n + 1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(chr(i + 65), end="")
```

```
    print()
```


PATTERN 23

```
# ABCDE
```

```
    # ABCD*
```

```
    # ABC**
```

```
    # AB***
```

```
    # A****
```

```
n = 4
```

```
for i in range(n, -1, -1):
```

```
    for j in range(n + 1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(chr(j + 65), end="")
```

```
    print()
```

PATTERN 24

```
# ****A  
  
# ***BB  
  
# **CCC  
  
# *DDDD  
  
# EEEEE  
  
n = 4  
  
for i in range(n + 1):  
    for j in range(n, -1, -1):  
        if j > i:  
            print("*", end="")  
        else:  
            print(chr(i + 65), end="")  
    print()
```

PATTERN 25

```
# ****A
# ***BA
# **CBA
# *DCBA
# EDCBA
n = 4
for i in range(n + 1):
    for j in range(n, -1, -1):
        if j > i:
            print("*", end="")
        else:
            print(chr(j + 65), end="")
    print()
```

PATTERN 26

```
# EEEEE
```

```
  # *DDDD
```

```
  # **CCC
```

```
  # ***BB
```

```
  # ****A
```

```
n = 4
```

```
for i in range(n, -1, -1):
```

```
    for j in range(n, -1, -1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(chr(i + 65), end="")
```

```
    print()
```

PATTERN 27

```
# EDCBA
```

```
    # *DCBA
```

```
    # **CBA
```

```
    # ***BA
```

```
    # ****A
```

```
n = 4
```

```
for i in range(n, -1, -1):
```

```
    for j in range(n, -1, -1):
```

```
        if j > i:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(chr(j + 65), end="")
```

```
    print()
```

PATTERN 28

```
# 1 2 3 4 *
```

```
# 1 2 3 * 5
```

```
# 1 2 * 4 5
```

```
# 1 * 3 4 5
```

```
# * 2 3 4 5
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == n - i + 1:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(j, end=" ")
```

```
    print()
```

PATTERN 29

```
# * 1 * 2 *  
  
# 3 * 4 * 5  
  
# * 6 * 7 *  
  
# 8 * 9 * 10  
  
# * 11 * 12 *  
  
n = 5  
  
x = 1  
  
for i in range(1, n + 1):  
    for j in range(1, n + 1):  
        if (i + j) % 2 == 1:  
            print(f'{x:2}', end='')  
            x += 1  
        else:  
            print(" *", end='')  
    print()
```

PATTERN 30

```
# * A* B*
```

```
# C* D* E
```

```
# * F* G*
```

```
# H* I* J
```

```
# * K* L*
```

```
n = 5
```

```
x = ord('A')
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if (i + j) % 2 == 1:
```

```
            print(chr(x), end="")
```

```
            x += 1
```

```
        else:
```

```
            print("* ", end="")
```

```
    print()
```


PATTERN 31

* # # # # #

* *

* * * # # #

* * * *

* * * # # #

* *

* # # # # #

n = 7

x = 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i % 2 == 1 and j <= x:

print("* ", end="")

elif i % 2 == 0 and j >= n - x + 1:

print("* ", end="")

else:

print("# ", end="")

print()

```
if i <= n // 2:
```

```
    x += 1
```

```
else:
```

```
    x -= 1
```

PATTERN 32

```
# * 0 0 0 * 0 0 0 *
```

```
# 0 * 0 0 * 0 0 * 0
```

```
# 0 0 * 0 * 0 * 0 0
```

```
# 0 0 0 * * * 0 0 0
```

```
# 0 0 0 0 * 0 0 0 0
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, 2 * n):
```

```
        if j == i or j == 2 * n - i or j == n:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print("0 ", end="")
```

```
    print()
```

PATTERN 33

```
# 1
```

```
# 1* 2
```

```
# 1* 2* 3
```

```
# 1* 2* 3* 4
```

```
# 1* 2* 3* 4* 5
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, i + 1):
```

```
        print(j, end="")
```

```
    if j != i:
```

```
        print("* ", end="")
```

```
    print()
```

PATTERN 34

```
# 1
# 3* 2
# 4* 5* 6
# 10* 9* 8* 7
# 11* 12* 13* 14* 15
n = 5
px = 1
py = 1
for i in range(1, n + 1):
    t = py
    for j in range(1, i + 1):
        if i % 2 == 1:
            print(f"{px:2}", end="")
        else:
            print(f"{t:2}", end="")
        t -= 1
        px += 1
    if j != i:
        print("* ", end="")
    py = py + i + 1
    print()
```

PATTERN 35

#

**

###

#####

```
n = 5
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, i + 1):
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
        print()
```

PATTERN 36

1

**

333

55555

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, i + 1):
```

```
        if i % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 37

1

**

123

12345

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, i + 1):
```

```
        if i % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(j, end="")
```

```
    print()
```


PATTERN 38

```
# 1
```

```
# 1*
```

```
# 1*3
```

```
# 1*3*
```

```
# 1*3*5
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, i + 1):
```

```
        if j % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(j, end="")
```

```
    print()
```

PATTERN 39

```
# 1
```

```
# 2*
```

```
# 3*3
```

```
# 4*4*
```

```
# 5*5*5
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, i + 1):
```

```
        if j % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 40

#####

###

**

#

```
n = 5
```

```
    for i in range(n, 0, -1):
```

```
        for j in range(1, i + 1):
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
        print()
```

PATTERN 41

#*#*#

#*#*

#*#

#*

#

```
n = 5
```

```
    for i in range(n, 0, -1):
```

```
        for j in range(1, i + 1):
```

```
            if j % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
        print()
```

PATTERN 42

```
# 55555
```

```
# ****
```

```
# 333
```

```
# **
```

```
# 1
```

```
n = 5
```

```
for i in range(n, 0, -1):
```

```
    for j in range(1, i + 1):
```

```
        if i % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 43

```
# 12345
```

```
# ****
```

```
# 123
```

```
# **
```

```
# 1
```

```
n = 5
```

```
for i in range(n, 0, -1):
```

```
    for j in range(1, i + 1):
```

```
        if i % 2 == 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(j, end="")
```

```
    print()
```

PATTERN 44

```
# 1*3*5
# 1*3*
# 1*3
# 1*
# 1
n = 5
for i in range(n, 0, -1):
    for j in range(1, i + 1):
        if j % 2 == 0:
            print("*", end="")
        else:
            print(j, end="")
    print()
```

PATTERN 45

```
# 1*3*5
# 1*3*
# 1*3
# 1*
# 1
n = 5
for i in range(n, 0, -1):
    for j in range(1, i + 1):
        if j % 2 == 0:
            print("*", end="")
        else:
            print(i, end="")
    print()
```


PATTERN 46

#

**

###

#####

n = 5

```
for i in range(n, 0, -1):
```

```
    for j in range(1, n + 1):
```

```
        if i <= j:
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            print()
```

PATTERN 47

#

*#

#*#

*##

#*##

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if j % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            print()
```

PATTERN 48

```
# 1
```

```
# **
```

```
# 333
```

```
# ****
```

```
# 55555
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(i, end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 49

```
# 1
```

```
# **
```

```
# 321
```

```
# ****
```

```
# 54321
```

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(j, end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 50

```
# 5
```

```
# **
```

```
# 345
```

```
# ****
```

```
# 12345
```

```
    n = 5
```

```
    for i in range(n, 0, -1):
```

```
        for j in range(1, n + 1):
```

```
            if i <= j:
```

```
                if i % 2 == 0:
```

```
                    print("*", end="")
```

```
                else:
```

```
                    print(j, end="")
```

```
                else:
```

```
                    print(" ", end="")
```

```
            print()
```

PATTERN 51

```
# 1
# *1
# 3*1
# *3*1
# 5*3*1
n = 5
for i in range(1, n + 1):
    for j in range(n, 0, -1):
        if i >= j:
            if j % 2 == 0:
                print("*", end="")
            else:
                print(j, end="")
            else:
                print(" ", end="")
        print()
```

PATTERN 52

```
# 1
# *2
# 3*3
# *4*4
# 5*5*5
n = 5
for i in range(1, n + 1):
    for j in range(n, 0, -1):
        if i >= j:
            if j % 2 == 0:
                print("*", end="")
            else:
                print(i, end="")
            else:
                print(" ", end="")
        print()
```

PATTERN 53

#####

###

**

#

n = 5

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```


PATTERN 54

#*#*#

##

#*#

*#

#

n = 5

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if j % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print("#", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 55

```
# 55555
```

```
# ****
```

```
# 333
```

```
# **
```

```
# 1
```

```
n = 5
```

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(i, end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            print()
```

PATTERN 56

54321

321

**

1

n = 5

for i in range(n, 0, -1):

for j in range(n, 0, -1):

if i >= j:

if i % 2 == 0:

print("*", end="")

else:

print(j, end="")

else:

print(" ", end="")

print()

PATTERN 57

```
# 5*3*1
#  *3*1
#  3*1
#   *1
#    1
n = 5
for i in range(n, 0, -1):
    for j in range(n, 0, -1):
        if i >= j:
            if j % 2 == 0:
                print("*", end="")
            else:
                print(j, end="")
            else:
                print(" ", end="")
        print()
```

PATTERN 58

#

* *

#

* * * *

#

n = 5

```
for i in range(n, 0, -1):
```

```
    for j in range(1, n + 1):
```

```
        if i <= j:
```

```
            if i % 2 == 0:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print("# ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 59

#

*

*

* # *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(n, 0, -1):
```

```
        if i > j:
```

```
            if j % 2 == 0:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print("# ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            print()
```

PATTERN 60

1

**

3 3 3

* * * *

5 5 5 5 5

```
n = 5
```

```
for i in range(1, n + 1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(f"{i} ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 61

#

* * * *

#

* *

#

n = 5

```
for i in range(n, 0, -1):
```

```
for j in range(n, 0, -1):
```

```
if i >= j:
```

```
if i % 2 == 0:
```

```
print("* ", end="")
```

```
else:
```

```
print("# ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```


PATTERN 62

* # *

* # *

*

*

#

n = 5

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if j % 2 == 0:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print("# ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 63

5 5 5 5 5

* * * *

3 3 3

* *

1

```
n = 5
```

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if i >= j:
```

```
            if i % 2 == 0:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(f"{i} ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 64

```
# 0
```

```
# 1*
```

```
# 2**
```

```
# 3***
```

```
# 4****
```

```
# 5*****
```

```
n = 5
```

```
for i in range(n + 1):
```

```
    for j in range(i + 1):
```

```
        if j != 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 65

```
# 5*****
```

```
# 4****
```

```
# 3***
```

```
# 2**
```

```
# 1*
```

```
# 0
```

```
n = 5
```

```
for i in range(n, -1, -1):
```

```
    for j in range(i + 1):
```

```
        if j != 0:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(i, end="")
```

```
    print()
```

PATTERN 66

0

*1

**2

***3

****4

*****5

n = 5

for i in range(n + 1):

for j in range(i + 1):

if i > j:

print("*", end="")

else:

print(i, end="")

print()

PATTERN 67

```
# *****5
# ****4
# ***3
# **2
# *1
# 0
n = 5
for i in range(n, -1, -1):
    for j in range(i + 1):
        if i > j:
            print("*", end="")
        else:
            print(i, end="")
    print()
```

PATTERN 68

* *

* *

*

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if i == j or i + j == n + 1:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 69

*

*

*

*

```
for i in range(1, 6):  
    for j in range(1, 6):  
        if j == 3 or i == 3:  
            print("*", end="")  
        else:  
            print(" ", end="")  
    print()
```


PATTERN 70

* *

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == 1 or j == n or i == 1 or i == n:
```

```
print("*", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 71

####

####

####

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or j == n or i == 1 or i == n:
```

```
            print("*", end="")
```

```
        else:
```

```
            print("#", end="")
```

```
    print()
```

PATTERN 72

** **

* * * *

* * * *

* * * *

** **

n = 7

```
for i in range(n):
```

```
    for j in range(n):
```

```
        if i == 0 or j == 0 or i == j or i == n - 1 or j == n - 1 or i + j == n - 1:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 73

*

* *

* *

* *

* *

* *

* * * * * *

n = 7

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or i == j or i == n:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 74

* * * * *

* * *

* *

* *

* *

* *

*

n = 7

```
for i in range(n, 0, -1):
```

```
    for j in range(n, 0, -1):
```

```
        if j == n - i + 1 or j == n or i == n:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 75

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

```
n = 5
```

```
for i in range(1, n + 1):  
    for j in range(1, n + 1):  
        if j == n - i + 1 or j == n or i == n:  
            print("* ", end="")  
        else:  
            print(" ", end="")  
    print()
```

PATTERN 76

* * * * *

* *

* *

* *

*

n = 5

```
for i in range(n, 0, -1):
```

```
for j in range(1, n + 1):
```

```
if j == n - i + 1 or j == n or i == n:
```

```
print("* ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 77

*

**

* *

* *

* *

```
n = 5
```

```
px = n
```

```
py = n
```

```
for i in range(1, n + 1):
```

```
for j in range(1, n * 2 + 1):
```

```
if j == px or j == py:
```

```
print("*", end="")
```

```
else:
```

```
print(" ", end="")
```

```
px -= 1
```

```
py += 1
```

```
print()
```


PATTERN 78

* *

* *

* *

* *

*

```
n = 5
```

```
px = 1
```

```
py = n * 2 - 1
```

```
for i in range(1, n + 1):
```

```
for j in range(1, n * 2 + 1):
```

```
if j == px or j == py:
```

```
print("*", end="")
```

```
else:
```

```
print(" ", end="")
```

```
px += 1
```

```
py -= 1
```

```
print()
```

PATTERN 79

*

*

*

*

*

*

*

```
n = 7
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, x + 1):
```

```
            if j == x:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

```
    if i <= n / 2:
```

```
        x += 1
```

else:

x -= 1

PATTERN 80

*

*

*

*

*

*

*

```
n = 7
```

```
    x = n // 2 + 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, x + 1):
```

```
            if j == x:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

```
    if i <= n // 2:
```

```
        x -= 1
```

else:

x += 1

PATTERN 81

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

```
n = 9
```

```
px = n // 2 + 1
```

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == px or j == n - px + 1:
```

```
print("*", end="")
```

```
else:
```

```
print(" ", end="")
```

```
if i <= n // 2:
```

```
    px -= 1
```

```
else:
```

```
    px += 1
```

```
print()
```

PATTERN 82

*

/\

/ \

/ \

/ \

\ /

\ /

\ /

\ /

*

n = 10

px = n // 2

py = n // 2

for i in range(1, n + 1):

for j in range(1, n + 1):

if (i == 1 or i == n) and j == n // 2:

print("*", end="")

elif j == px:

print("/", end="")

elif j == py:


```
print("\\", end="")
```

```
else:
```

```
print(" ", end="")
```

```
if i == n // 2:
```

```
px, py = py, px
```

```
else:
```

```
px -= 1
```

```
py += 1
```

```
print()
```

PATTERN 83

*

- -

- -

- -

- -

- -

- -

- -

- -

*

```
n = 10
```

```
px = n // 2
```

```
py = n // 2
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, n):
```

```
        if (i == 1 or i == n) and j == n // 2:
```

```
print("*", end="")
elif j == px or j == py:
print("-", end="")
else:
print(" ", end="")
if i == n // 2:
t = px
px = py
py = t
else:
px -= 1
py += 1
print()
```

PATTERN 84

*

* *

* * *

* * * *

* * *

* *

*

```
size = 3
```

```
for i in range(size, -size-1, -1):
```

```
for j in range(1, abs(i)+1):
```

```
print(" ", end="")
```

```
for k in range(size, abs(i)-1, -1):
```

```
print("* ", end="")
```

```
print()
```

PATTERN 85

*

**

*

**

*

**

```
n = 3
```

```
for i in range(3):
```

```
    for j in range(1, n+1):
```

```
        print("#" * j)
```

PATTERN 86

*

* *

123

* *

*

```
#include <stdio.h>
```

```
    n = 5
```

```
    x = 1
```

```
    for i in range(1, n+1):
```

```
        for j in range(1, x+1):
```

```
            if i != n//2 + 1:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(j, end=" ")
```

```
            if i <= n//2:
```

```
                x += 1
```

```
            else:
```

```
                x -= 1
```

```
        print()
```

PATTERN 87

*

* *

ABC

* *

*

n = 5

x = 1

for i in range(1, n + 1):

for j in range(1, x + 1):

if i != n // 2 + 1:

print("*", end=" ")

else:

print(chr(64 + j), end=" ")

if i <= n // 2:

x += 1

else:

x -= 1

print()

PATTERN 88

1

2* 2

3* 3* 3

4* 4* 4* 4

3* 3* 3

2* 2

1

n = 7

x = 1

for i in range(1, n + 1):

for j in range(1, 2 * x):

if i <= n // 2 + 1 and j % 2 == 1:

print(i, end="")

elif i > n // 2 + 1 and j % 2 == 1:

print(n - i + 1, end="")

else:

print("*", end=" ")

if i <= n // 2:

x += 1

else:

x -= 1

print()

PATTERN 89

* * * * *

* * * * *

* * *

*

* * *

* * * * *

* * * * *

```
n = 7
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n + 1):
```

```
            if j >= x and j <= n - x + 1:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            if i <= n // 2:
```

```
                x += 1
```

```
            else:
```

```
x -= 1
```

```
print()
```

PATTERN 90

* *

* * * *

* * * * * *

* * * * * *

* * * * * *

* * * *

* *

n = 7

x = 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if j <= x or j >= n - x + 1:

print("* ", end="")

else:

print(" ", end="")

if i <= n // 2:

x += 1

else:

```
x -= 1
```

```
print()
```

PATTERN 91

* * * * *

* * * *

* * *

* *

*

* *

* * *

* * * *

* * * * *

```
size = 4
```

```
for i in range(size, -size - 1, -1):
```

```
for j in range(0, abs(i) + 1):
```

```
print("* ", end="")
```

```
print()
```

PATTERN 92

* * * *

* * *

* *

*

* *

* * *

* * * *

```
n = 7
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n // 2 + 2):
```

```
            if j >= x:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
            if i <= n // 2:
```

```
                x += 1
```

```
            else:
```

```
x -= 1
```

```
print()
```


PATTERN 93

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

n = 5

```
for i in range(1, n + 1):  
    for j in range(1, n * 2):  
        if j <= i or j >= n * 2 - i:  
            print("*", end="")  
        else:  
            print(" ", end="")  
    print()
```

PATTERN 94

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

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

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

```
# **   **
```

```
# *    *
```

```
n = 5
```

```
    px = n
```

```
    py = n
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n * 2):
```

```
            if j > px and j < py:
```

```
                print(" ", end="")
```

```
            else:
```

```
                print("*", end="")
```

```
        px -= 1
```

```
        py += 1
```

```
    print()
```

PATTERN 95

```

#   *   *

#  ***  ***

# ***** *****

# ***** *****

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

```
min_stars = 1
p_height = 5
p_space = p_height - 1
for i in range(p_height):
    for j in range(p_space, i, -1):
        print(" ", end="")
    for k in range(min_stars):
        print("*", end="")
    for l in range(p_space * 2, p_space - 1, -1):
        print(" ", end="")
    for m in range(min_stars):
        print("*", end="")
    min_stars += 2
    print()
```

PATTERN 96

1 2 3 4 * 4 3 2 1

1 2 3 * * * 3 2 1

1 2 * * * * * 2 1

1 * * * * * * * 1

* * * * * * * * *

n = 5

x = n

for i in range(1, n + 1):

for j in range(1, 2 * n):

if j >= x and j <= n + i - 1:

print("* ", end="")

elif j <= n:

print(j, end=" ")

else:

print(2 * n - j, end=" ")

x -= 1

print()

PATTERN 97

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

n = 5

```
x = n
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, 2 * n):
```

```
        if j >= x and j < n + i and j % 2 == 1:
```

```
            print("* ", end="")
```

```
        elif j >= x and j < n + i and j % 2 == 0:
```

```
            print("# ", end="")
```

```
    else:
```

```
        print(" ", end="") # Adjust spacing for better alignment
```

```
    x -= 1
```

```
print()
```

PATTERN 98

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

```
p_height = 5
```

```
p_space = p_height - 1
```

```
x = 1
```

```
# Upper part of the pattern
```

```
for i in range(1, p_height):
```

```
print(" " * p_height, end="")
```

```
for k in range(p_space, i - 1, -1):
```

```
print(" ", end="")
```

```
for j in range(1, i + 1):
    print("* ", end="")
    print()
# Lower part of the pattern
for i in range(p_height):
    for j in range(p_space, i, -1):
        print(" ", end="")
        for k in range(i + 1):
            print("* ", end="")
        for n in range(p_height + p_height - 2, x - 1, -1):
            print(" ", end="")
        for k in range(i + 1):
            print("* ", end="")
        x += 2
    print()
```

PATTERN 99

*

**

```
n = 5
```

```
    px = n
```

```
    py = n
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n * 2):
```

```
            if j == px or j == py or i == n:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        px -= 1
```

```
        py += 1
```

```
    print()
```


PATTERN 100

*

**

* * *

* * *

**

*

```
n = 7
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, x + 1):
```

```
            if j == 1 or j == x:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

```
    if i <= n // 2:
```

```
        x += 1
```

else:

x -= 1

PATTERN 101

*

**

**

*

n = 7

x = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n // 2 + 2):

if j == x or j == n // 2 + 1:

print("*", end="")

else:

print(" ", end="")

if i <= n // 2:

x -= 1

else:

```
x += 1
```

```
print()
```

PATTERN 102

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

```
# *  *
```

```
# *  *
```

```
#  **
```

```
#   *
```

```
n = 5
```

```
    x = 1
```

```
    y = 2 * n - 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, 2 * n):
```

```
            if j == x or j == y or i == 1:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

```
    x += 1
```

```
    y -= 1
```

PATTERN 103

* *

* * * *

* * * *

* * *

* * * *

* * * *

* *

n = 7

x = 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if j == x or j == n - x + 1 or (j == 1 and i != 1 and i != n) or (j == n and i != 1 and i != n):

print("* ", end="")

else:

print(" ", end="")

if i <= n // 2:

x += 1

```
else:
```

```
x -= 1
```

```
print()
```

PATTERN 104

* * *

* * *

* * *

* * * * * *

* * *

* * *

* * *

n = 7

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == i or j == n - i + 1 or i == n // 2 + 1 or j == n // 2 + 1:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```


PATTERN 105

* * * * *

* *

* *

* * * * * * *

* *

* *

* * * * * *

n = 7

```
for i in range(1, n + 1):
    for j in range(1, n + 1):
        if i == n // 2 + 1 or j == n // 2 + 1 or \
        (i == 1 and j >= n // 2 + 1) or \
        (i == n and j <= n // 2) or \
        (j == 1 and i <= n // 2) or \
        (j == n and i >= n // 2 + 1):
            print("* ", end="")
        else:
            print(" ", end="")
```

print()

PATTERN 106

* * * *

* * * *

* * * * * *

* * *

* * *

* * *

* * * * * *

n = 7

```
for i in range(1, n + 1):
    for j in range(1, n + 1):
        if (i == n // 2 or i == n) or \
            ((j == 1 or j == n) and i >= n // 2) or \
            (j % 2 == 1 and i <= n // 2):
            print("* ", end="")
        else:
            print(" ", end="")
    print()
```

PATTERN 107

* * * * *

* * *

* * * * *

* * * *

* * * *

* * * *

* * * * *

* * *

* * * * *

n = 9

x = 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if (j <= x or j >= n - x + 1) and j % 2 == 1:

print("* ", end="")

elif (j >= x and j <= n - x + 1) and i % 2 == 1:

print("* ", end="")

```
else:  
    print(" ", end="")  
    print()  
    if i <= n // 2:  
        x += 1  
    else:  
        x -= 1
```

PATTERN 108

* * *

* * * *

* * *

* * * *

* * *

* * * *

* * *

n = 7

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if (i + j) % 2 == 1:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 109

* * *

** *** **

*** ***** ***

n = 7

x = n

for i in range(1, n + 1):

for j in range(1, 2 * n):

if (j >= x and j <= 2 * n - x) or j <= n - x + 1 or j >= n + x - 1:

print("*", end="")

else:

print(" ", end="")

x -= 1

print()

PATTERN 110

```

#      *

#     ***

#    *  *  *

#   *   *   *

#  *  *  *  *  *  *  *  *

# *   *   *   *

#  *   *   *

#   *  *  *

#      *
```

```
n = 9

c1 = (n - 1) // 2
c2 = 3 * n // 2 - 1

for i in range(n):
    for j in range(n):
        if i + j == c1 or i - j == c1 or j - i == c1 or i + j == c2 or i == c1 or j ==
c1:
            print("* ", end="")
```


else:

print(" ", end="")

print()

PATTERN 111

* * * * *

* * * * * * * * *

* * * * * * * *

* * * * * * *

* * * * * *

* * * * * * *

* * * * * * * *

* * * * * * * * *

* * * * * * * * *

n = 9

c1 = (n - 1) // 2

c2 = 3 * n // 2 - 1

for i in range(n):

for j in range(n):

if i + j <= c1 or i - j >= c1 or j - i >= c1 or i + j >= c2:

print("* ", end="")

else:

```
print(" ", end="")
```

```
print()
```

PATTERN 112

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

n = 8

c1 = (n - 1) // 2

c2 = 3 * n // 2 - 1

for i in range(n):

for j in range(n):

if i + j <= c1 or i - j >= c1 or j - i >= c1 or i + j >= c2:

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 113

* *

** **

*** **

*** **

** **

* *

n = 7

px = 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if j <= px or j >= n - px + 1:

print("*", end="")

else:

print(" ", end="")

if i <= n // 2:

px += 1

else:

```
px -= 1
```

```
print()
```

PATTERN 114

```
z = 1
```

```
    n = 5
```

```
    for i in range(n):
```

```
        for j in range(n - 1, i, -1):
```

```
            print(" ", end="")
```

```
            for k in range(n):
```

```
                print("*", end="")
```

```
        z += 1
```

```
    print()
```


PATTERN 115

**

**

```
for i in range(1, 7):  
    k = i + 1 if i % 2 != 0 else i  
    print("*" * k)
```

PATTERN 116

**

**

```
for i in range(1, 7):  
    k = i + 1 if i % 2 != 0 else i  
    print(" " * (6 - k), "*" * k)
```

PATTERN 117

**

**

```
n = 6
```

```
for i in range(n, 0, -1):
```

```
    k = i + 1 if i % 2 != 0 else i
```

```
    print("*" * k)
```

PATTERN 118

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

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

```
#  ****
```

```
#  ****
```

```
#   **
```

```
#   **
```

```
n = 6
```

```
for i in range(n, 0, -1):
```

```
    k = i + 1 if i % 2 != 0 else i
```

```
    print(" " * (n - k) + "*" * k)
```

PATTERN 119

*

*

**

**

n = 3

```
for i in range(1, n + 1):
```

```
    for c in range(n - 1, 0, -1):
```

```
        for j in range(i):
```

```
            print("*", end="")
```

```
        print()
```

PATTERN 120

*

*

**

**

```
for i in range(1, 4):  
    for x in range(2, 0, -1):  
        for y in range(2, i - 1, -1):  
            print(" ", end="")  
        for j in range(i):  
            print("*", end="")  
        print()
```

PATTERN 121

**

**

*

*

```
for i in range(3, 0, -1):  
    for x in range(2, 0, -1):  
        for j in range(i):  
            print("*", end="")  
        print()
```

PATTERN 122

**

**

*

*

```
for i in range(3, 0, -1):
    for x in range(2, 0, -1):
        for y in range(2, i - 1, -1):
            print(" ", end="")
        for j in range(i):
            print("*", end="")
        print()
```


PATTERN 123

*

*

```
n = 3
```

```
z = 1
```

```
for i in range(n):
```

```
    for j in range(2, 0, -1):
```

```
        for x in range(n - 1, i - 1, -1):
```

```
            print(" ", end="")
```

```
            for y in range(z):
```

```
                print("*", end="")
```

```
            print()
```

```
        z += 2
```

PATTERN 124

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

```
n = 7
```

```
x = n
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, 2 * n + 1):
```

```
        if j == x or j == 2 * n - x + 1:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

```
    if i % 2 == 0:
```

```
        x -= 2
```

PATTERN 125

*

```
n = 3
```

```
    s1 = n * 2 - 1
```

```
    s2 = 3
```

```
    for i in range(1, n + 1):
```

```
        print(" " * (i - 1), end="")
```

```
        print("*" * s1)
```

```
    s1 -= 2
```

```
    for i in range(1, n):
```

```
        print(" " * (n - i - 1), end="")
```

```
        print("*" * s2)
```

```
    s2 += 2
```

PATTERN 126

* * * * *

* * * * * * * *

* * * * * * * * *

* * * * * * * * * *

* * * * * * * * * *

* * * * * * * * * *

* * * * * * * * *

* * * * * * * *

* * * * * *

```
for i in range(1, 10):  
    if i == 1 or i == 9:  
        x = 6  
        z = 4  
    elif i == 2 or i == 8:  
        x = 8  
        z = 2  
    elif i == 3 or i == 7:
```

```
x = 9
```

```
z = 1
```

```
else:
```

```
x = 10
```

```
z = 0
```

```
print(" " * z, end="")
```

```
print("* " * x)
```

PATTERN 127

*** ***

*

n = 6

Top part of the heart

for i in range(n // 2, n + 1, 2):

print(" " * (n - i), end="")

print("*" * i, end="")

print(" " * (n - i), end="")

print("*" * i)

Bottom part of the heart

for i in range(n, 0, -1):

```
print(" " * (n - i), end="")
```

```
print("*" * (2 * i - 1))
```

PATTERN 128

** **

* * *

* *

* *

* *

*

```
for row in range(6):
    for col in range(7):
        if (row == 0 and col % 3 != 0) or (row == 1 and col % 3 == 0) or (row -
col == 2) or (row + col == 8):
            print("*", end="")
        else:
            print(" ", end="")
    print()
```


PATTERN 129: X-MAX TREE

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

height = 3

width = 4

space = width * 5

```
r = 1
m = 1
for r in range(1, height):
    for i in range(m, width + 1):
        for j in range(space, i - 1, -1):
            print(" ", end="")
        for k in range(1, i + 1):
            print("* ", end="")
        print()
    m += 2
    width += 2
for i in range(1, 5):
    for j in range(space - 3, 0, -1):
        print(" ", end="")
    for k in range(1, 5):
        print("* ", end="")
    print()
```

PATTERN 130

* * * * *

* * *

* * *

* * *

* * * * *

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if i == 1 or i == n or j == 1 or j == n or i + j == n + 1:
```

```
print("* ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 131

* *

* *

*

*

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if j == mid or i == n or (i + j == mid and j <= mid):

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 132

* * * * *

*

* * * * *

*

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or (j == 1 and i >= mid) or (j == n and i < mid):

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 133

* * * * *

*

* * * * *

*

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or j == n:

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 134

* *

* *

* * * * *

*

*

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == mid or (j == 1 and i <= mid) or j == n:

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 135

* * * * *

*

* * * * *

*

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or (j == 1 and i <= mid) or (j == n and i >
mid):

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 136

* * * * *

*

* * * * *

* *

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or j == 1 or (j == n and i > mid):

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 137

* * * *

*

*

*

*

```
n = 5
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n):
```

```
            if i == 1 or i + j == n + 1:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

PATTERN 138

* * * * *

* *

* * * * *

* *

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or j == 1 or j == n:

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 139

* * * * *

* *

* * * * *

*

* * * * *

n = 5

mid = n // 2 + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if i == 1 or i == n or i == mid or (j == 1 and i <= mid) or j == n:

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 140

*

**

* *

* *

n = 5

x = n

for i in range(1, n + 1):

for j in range(1, 2 * n + 1):

if j == x or j == n + i - 1:

print("*", end="")

elif j >= x and j <= n + i - 1 and i == n // 2 + 1:

print("*", end="")

else:

print(" ", end="")

print()

x -= 1

PATTERN 141

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or (i == 1 or i == n or i == n // 2 + 1) and j <= n - 1:
```

```
            print("*", end="")
```

```
        elif i != 1 and i != n and j == n:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 142

*

*

*

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if i == 1 or i == n or j == 1:
```

```
            print("*", end="")
```

```
        print()
```

PATTERN 143

* *

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or (i == 1 or i == n) and j <= n - 1:
```

```
            print("*", end="")
```

```
        elif i != 1 and i != n and j == n:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```


PATTERN 144

*

*

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == 1 or i == 1 or i == n or i == n // 2 + 1:
```

```
print("*", end="")
```

```
print()
```

PATTERN 145

*

*

*

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or i == 1 or i == n // 2 + 1:
```

```
            print("*", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 146

*

* ***

* * *

n = 5

for i in range(1, n + 1):

for j in range(1, n + 1):

if j == 1 or i == 1 or i == n or (i > n // 2 and j == n) or (i == (n // 2 + 1)
and j > n // 2):

print("*", end="")

else:

print(" ", end="")

print()

PATTERN 147

* *

* *

* * * * *

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == 1 or j == n or i == n // 2 + 1:
```

```
            print("*", end=" ")
```

```
        else:
```

```
            print(" ", end=" ")
```

```
    print()
```

PATTERN 148

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

```
#      *
```

```
#      *
```

```
#      *
```

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

```
n = 5
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n + 1):
```

```
            if i == 1 or i == n or j == n // 2 + 1:
```

```
                print("*", end=" ")
```

```
            else:
```

```
                print(" ", end=" ")
```

```
        print()
```

PATTERN 149

* * * * *

*

*

*

* * *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if i == 1 or (i == n and j <= n // 2 + 1) or j == n // 2 + 1:
```

```
            print("*", end=" ")
```

```
        else:
```

```
            print(" ", end=" ")
```

```
    print()
```

PATTERN 150

* *

* *

*

* *

* *

```
n = 5
```

```
    x = n // 2 + 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n // 2 + 2):
```

```
            if j == 1 or j == x:
```

```
                print("*", end=" ")
```

```
            else:
```

```
                print(" ", end=" ")
```

```
            if i <= n // 2:
```

```
                x -= 1
```

```
            else:
```

```
                x += 1
```

```
            print()
```

PATTERN 151

*

*

*

*

* * *

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == 1 or (i == n and j <= (n # 2) + 1):
```

```
print("* ", end="")
```

```
print()
```


PATTERN 152

```
# *   *
```

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

```
# *   *   *
```

```
# *   *
```

```
# *   *
```

```
n = 5
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n + 1):
```

```
            if j == 1 or j == n or (j == x or j == n - x + 1) and i <= (n // 2) + 1:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        x += 1
```

```
    print()
```

PATTERN 153

* *

* * *

* * *

* * *

* *

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == 1 or j == n or i == j:
```

```
print("* ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 154

* * * * *

* *

* *

* *

* * * * *

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if j == 1 or j == n or i == 1 or i == n:
```

```
print("* ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 155

* * *

* *

* * *

*

*

n = 5

x = (n // 2) + 1

for i in range(1, n + 1):

for j in range(1, n + 1):

if (i == 1 and j <= x) or j == 1 or (j == x and i <= x) or (i == x and j <= x):

print("* ", end="")

else:

print(" ", end="")

print()

PATTERN 156

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

```
# *      *
```

```
# *      *
```

```
# *      *
```

```
# *      * *
```

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

```
#          *
```

```
n = 7
```

```
x = n - n // 2 + 1
```

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if (i == 1 or i == x + 1) and j <= x + 1 or (j == 1 or j == x + 1) and i <= x  
+ 1 or (j == i and i >= x):
```

```
            print("* ", end="")
```

```
        else:
```

```
            print("  ", end="")
```

```
    print()
```

PATTERN 157

* * *

* *

* * *

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    x = 1
```

```
    for j in range(1, (n // 2) + 2):
```

```
        if j == 1 or i == 1 or i == (n // 2) + 1 or (i <= n // 2 and j == (n // 2) + 1)
```

```
or j == x:
```

```
            print("* ", end="")
```

```
    else:
```

```
        print(" ", end="")
```

```
    x += 1 if i > n // 2 else 0
```

```
    print()
```

PATTERN 158

* * * * *

*

* * * * *

*

* * * * *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if i == 1 or i == n or i == n // 2 + 1 or (j == 1 and i <= n // 2 + 1) or (j ==
n and i > n // 2 + 1):
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 159

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

```
#      *
```

```
#      *
```

```
#      *
```

```
#      *
```

```
n = 5
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, n + 1):
```

```
            if i == 1 or j == n // 2 + 1:
```

```
                print("* ", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```


PATTERN 160

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

n = 5

```
for i in range(1, n + 1):  
    for j in range(1, n + 1):  
        if j == 1 or j == n or i == n:  
            print("* ", end="")  
        else:  
            print(" ", end="")  
    print()
```

PATTERN 161

* *

* *

* *

* *

*

```
n = 5
```

```
    x = 1
```

```
    for i in range(1, n + 1):
```

```
        for j in range(1, 2 * n):
```

```
            if j == x or j == 2 * n - x:
```

```
                print("*", end="")
```

```
            else:
```

```
                print(" ", end="")
```

```
        print()
```

```
    x += 1
```

PATTERN 162

* * *

* * * *

* * * *

** **

* *

n = 5

x = n

for i in range(1, n + 1):

for j in range(1, 2 * n):

if j == 1 or j == 2 * n - 1 or j == x or j == 2 * n - x:

print("*", end="")

else:

print(" ", end="")

print()

x -= 1

PATTERN 163

* *

* *

*

* *

* *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if j == i or j == n - i + 1:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

PATTERN 164

* *

* *

*

*

*

n = 5

```
for i in range(1, n + 1):
```

```
for j in range(1, n + 1):
```

```
if (j == i or j == n - i + 1) and i <= n // 2 + 1 or (j == n // 2 + 1 and i > n //
```

2):

```
print("* ", end="")
```

```
else:
```

```
print(" ", end="")
```

```
print()
```

PATTERN 165

* * * * *

*

*

*

* * * * *

n = 5

```
for i in range(1, n + 1):
```

```
    for j in range(1, n + 1):
```

```
        if i == 1 or i == n or j == n - i + 1:
```

```
            print("* ", end="")
```

```
        else:
```

```
            print(" ", end="")
```

```
    print()
```

In every line of code, they have woven a story of innovation and creativity. This book has been your compass in the vast world of Python.

Close this chapter knowing that every challenge overcome is an achievement, and every solution is a step toward mastery.

Your code is the melody that gives life to projects. May they continue creating and programming with passion!

Thank you for allowing me to be part of your journey.

With gratitude,

Hernando Abella

Author of 150+ Python Pattern Programs

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