**Day-01**

**15-03-2025**

**==================**

Assignment:

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1) Write a python program to print multiplication tables from the given range of numbers.

Patterns:

======

-> Three types of patterns:

1) Star Patterns/Asterisk Patterns

2) Number Patterns

3) Character Patterns

\* 1 a

\* \* 1 2 a b

\* \* \* 1 2 3 a b c

\* \* \* \* 1 2 3 4 a b c d

Star pattern Number Pattern character pattern

**Star Patterns:**

**-----------------**

**Pattern-1:**

**----------**

**"""**

**\* \* \* \***

**\* \* \* \***

**\* \* \* \***

**\* \* \* \***

**the above pattern is called as "Square Pattern" with stars**

**"""**

rows = int(input("Enter the number of rows:"))

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

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

print("\*",end = "\t")

print()

**Pattern-2:**

**----------**

**"""**

**\* \* \* \* \***

**\* \* \* \* \***

**\* \* \* \* \***

**Write a logic using python to print above pattern**

**"""**

rows = int(input("Enter the number of rows:"))

cols = int(input("Enter the number of columns:"))

for row in range(1,rows+1):

for col in range(1,cols+1):

print("\*",end = "\t")

print()

**Pattern-3:**

**-----------**

**"""**

**\***

**\* \***

**\* \* \***

**\* \* \* \***

**\* \* \* \* \***

**Write a logic using python to print the above pattern.**

**(Right-faced Right-angled Triangle)**

**"""**

rows = int(input("Enter the number of rows:"))

for row in range(1,rows + 1):

for col in range(1,row + 1):

print("\*",end = "\t")

print()

**Pattern-4:**

**----------**

**"""**

**\* \* \* \* \***

**\* \* \* \***

**\* \* \***

**\* \***

**\***

**Write a logic for the above pattern.**

**(Inverted Pyramid/Inverted Right Angled Triangle)**

**"""**

rows = int(input("Enter number of rows:")) # 6

for r in range(rows,0,-1): # 6 5 4 3 2 1

for c in range(1,r+1):

print("\*",end = "\t")

print()

**Day-02**

**17-03-2025**

**=====================**

**Pattern-5**

**------------**

"""

\*

\* \*

\* \* \*

\* \* \* \*

Write a python program to print the above pattern.

"""

rows = 5

for r in range(1,rows+1):

for s in range(1,2\*(rows - r)+1):

print(" ",end = "")

for c in range(1,r+1):

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

print()

**Pattern-6:**

**-------------**

"""

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\* \*

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\* \*

\* \* \* \* \*

Hallow Square

Write a program in python to print the above pattern.

"""

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:

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

else:

print(" ",end = " ")

print()

**Pattern-7:**

**------------**

"""

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\* \* \*

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\* \* \* \* \* \* \* \* \* \* \*

full pyramid

Write a python program to print the above pattern.

"""

n = 6

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

for s in range(1,2\*(n-r)+1):

print(" ",end = "")

for c in range(1,(2\*r - 1)+1):

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

print()

**Pattern-8:**

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"""

\*

\*

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\*

\*

Left diagonal star pattern

"""

n = 7

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

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

if i == j:

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

else:

print(" ",end = "")

print()

**Day-03**

**18-03-2025**

**=================**

**Pattern-9:**

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"""

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\* \*

Write a python program to print the above pattern (cross pattern with stars)

"""

n = 7

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-10:**

**--------------**

"""

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

Write a python program to print the above inverted pyramid.

"""

n = 8

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

for j in range(1,2\*(i-1)+1):

print(" ",end = "")

for k in range(1,n-i+1+1):# range(1,8+1)

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

print()

**Pattern-11:**

**--------------**

"""

\* \* \* \* \* \* \* \*

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\*

Write a python program to print the above inverted pyramid.

"""

n = 8

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

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

print(" ",end = "")

for k in range(1,n-i+1+1):# range(1,8+1)

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

print()

**Pattern-12:**

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"""

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\*

Rhombus pattern using python

"""

n = 6

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

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

print(" ",end = "")

for k in range(1,(2\*i-1)+1):

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

print()

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

for b in range(1,(2\*a)+1):

print(" ",end = "")

for c in range(1,(2\*(n - a-1)+1)+1):

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

print()

**Day-04**

**20-03-2025**

**================**

**Number Patterns:**

**---------------------**

Pattern-1:

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"""

1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

"""

n = 5

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

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

print(i,end = "\t")

print()

Pattern-2:

-----------

"""

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

"""

n = 7

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

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

print(j,end = "\t")

print()

Pattern-3:

-----------

"""

1 2 3 4 5

1 2 3 4

1 2 3

1 2

1

"""

n = 8

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

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

print(j,end = "\t")

print()

**# Write a python program to print floyd's triangle.**

n = int(input("Enter number of rows:")) # 5

num = 1

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

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

print(num,end = "\t")

num = num + 1

print()