**Basic Structure for Pattern Printing**

for (int i = 1; i <= totalRows; i++) // Outer loop controls rows

{

for (int j = 1; j <= something\_based\_on\_i; j++) // Inner loop controls columns

{

Console.Write("something");

}

Console.WriteLine(); // Move to next line

}

**1. Right-Angled Triangle of Stars**

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\* \*

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\* \* \* \*

**Logic:**

* Outer loop (i) for rows: 1 to n
* Inner loop (j) from 1 to i

for (int i = 1; i <= n; i++)

{

for (int j = 1; j <= i; j++)

Console.Write("\* ");

Console.WriteLine();

}

**Try**

Number Triangle

1

2 2

3 3 3

4 4 4 4

Number Triangle

1

1 2

1 2 3

1 2 3 4

Inverted Right-Angled Triangle

\* \* \* \*

\* \* \*

\* \*

\*

**2. Pyramid Pattern**

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**Logic:**

* Outer loop for rows i = 1 to n
* First inner loop prints spaces: n - i
* Second inner loop prints stars: i times

for (int i = 1; i <= n; i++)

{

for (int j = 1; j <= n - i; j++)

Console.Write(" ");

for (int k = 1; k <= i; k++)

Console.Write("\* ");

Console.WriteLine();

}

**Try**

Diamond Pattern

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**3. Hollow Rectangle**

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**Logic:**

* Print stars in the first and last rows.
* For middle rows: print star at the first and last column; rest are spaces.

int rows = 4, cols = 5;

for (int i = 1; i <= rows; i++)

{

for (int j = 1; j <= cols; j++)

{

if (i == 1 || i == rows || j == 1 || j == cols)

Console.Write("\* ");

else

Console.Write(" ");

}

Console.WriteLine();

}

**4. Hollow Right-Angled Triangle**

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**Logic:**

* Print star in first and last row
* For others: print star only at first or last column

**5. Alphabet Right-Angled Triangle**

A

B B

C C C

D D D D

**Logic:**

* Outer loop from 0 to n-1
* Inner loop prints i+1 times the character 'A' + i

int n = 4;

for (int i = 0; i < n; i++)

{

char ch = (char)('A' + i);

for (int j = 0; j <= i; j++)

Console.Write(ch + " ");

Console.WriteLine();

}

**6. Alphabet Increasing Pattern**

A

A B

A B C

A B C D

**Logic:**

* Outer loop for rows
* Inner loop prints from 'A' to 'A' + i

int n = 4;

for (int i = 0; i < n; i++)

{

for (int j = 0; j <= i; j++)

Console.Write((char)('A' + j) + " ");

Console.WriteLine();

}