

C++ Triangle Patterns Using For Loops

1. Right-Angled Triangle

Prints a triangle with the right angle at the bottom-left.

```
int n = 5;
for(int i = 1; i <= n; i++) {
    for(int j = 1; j <= i; j++) {
        cout << "*";
    }
    cout << endl;
}
```

Output:

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

2. Inverted Right-Angled Triangle

Right-angled triangle upside down.

```
int n = 5;
for(int i = n; i >= 1; i--) {
    for(int j = 1; j <= i; j++) {
        cout << "*";
    }
    cout << endl;
}
```

Output:

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

```
**  
*
```

3. Equilateral Triangle (Pyramid)

Centered triangle with equal sides.

```
int n = 5;  
for(int i = 1; i <= n; i++) {  
    for(int j = 1; j <= n - i; j++) cout << " ";  
    for(int j = 1; j <= 2*i - 1; j++) cout << "*";  
    cout << endl;  
}
```

Output:

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

4. Inverted Equilateral Triangle

Pyramid upside down.

```
int n = 5;  
for(int i = n; i >= 1; i--) {  
    for(int j = 1; j <= n - i; j++) cout << " ";  
    for(int j = 1; j <= 2*i - 1; j++) cout << "*";  
    cout << endl;  
}
```

Output:

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

5. Right-Angled Triangle (Aligned Right)

Right angle at bottom-right.

```
int n = 5;
for(int i = 1; i <= n; i++) {
    for(int j = 1; j <= n - i; j++) cout << " ";
    for(int j = 1; j <= i; j++) cout << "*";
    cout << endl;
}
```

Output:

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

6. Inverted Right-Angled Triangle (Aligned Right)

Right angle at top-right.

```
int n = 5;
for(int i = n; i >= 1; i--) {
    for(int j = 1; j <= n - i; j++) cout << " ";
    for(int j = 1; j <= i; j++) cout << "*";
    cout << endl;
}
```

Output:

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