number triangle

10 July 2025 13:48

Half pyramid

```
#include <stdio.h>
int main() {
    int n=5;
    for(int i=1;i<=5;i++)
    {
        for(int j=1;j<=i;j++)
        {
            printf("%d ",j);
        }
        printf("\n");

    }
}
```

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Inverted triangle

10 July 2025 13:49

Inverted half pyramid of numbers

```
#include <stdio.h>
int main() {
    int n=5;
    for(int i=1;i<=n;i++)
    {
        for(int j=i;j<=n;j++)
        {
            printf("%d ",j);
        }
        printf("\n");

    }
}
```

```
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5
```

Floyds triangle

10 July 2025 13:49

```
Floyd's triangle
-----------------
#include <stdio.h>
int main() {
    int n=5;
    int k=1;
    for(int i=1;i<=n;i++)
    {
        for(int j=1;j<=i;j++)
        {
            printf("%4d ",k);
             k++;
        }
        printf("\n");
    }
}
```

```
   1
   2   3
   4   5   6
   7   8   9  10
  11  12  13  14  15
```

right aligned star pattern

10 July 2025 13:53

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

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf(" ");  //single space
        }
        for (int k = 1; k <= i; k++) {
            printf("*");  //no space gere
        }
        printf("\n");
    }
}
```

Star pattern with space

10 July 2025 13:50

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

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf("  "); //2 spaces to align properly
        }
        for (int k = 1; k <= i; k++) {
            printf("* "); //one space here
        }
        printf("\n");
    }
}
```

or you can use formula to calculate spaces:
for example: there will be 8 spaces needed to print first star:

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = 1; j<=2*(n-i); j++) {
            printf(" "); //here single space
        }
        for (int k = 1; k <= i; k++) {
            printf("* ");
        }
        printf("\n");
    }
}
```

```
#include <stdio.h>

int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {

        for (int j = 1; j <= n - i; j++) {
            printf("  ");
        }
        for (int k = 1; k <= i; k++) {
            printf("* ");
        }
        printf("\n");
    }

    return 0;
}
```

full pyramid

10 July 2025 13:52

full pyramid

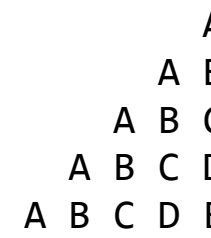
```
    *
   * *
  * * *
 * * * *
* * * * *
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf(" ");
        }
        for (int k = 1; k <= i; k++) {
            printf("* "); //single space, print k for numbers
        }
        printf("\n");
    }
}
```

alphabet right triangle

10 July 2025 13:57

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf("  ");
        }
        for (int k = 0; k < i; k++) {
            printf("%c ",'A'+k); //observe loop starts with 0 for printing
alphabets
        }
        printf("\n");
    }
}
```



alphbet triangle 2

10 July 2025 13:57

```
        A
      B C
    D E F
  G H I J
K L M N O
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    char ch='A';
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf("  ");
        }
        for (int k = 1; k <=i; k++) {
            printf("%c ",ch++);
        }
        printf("\n");
    }
}
```

Inverted star pattern

10 July 2025 13:59

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

```
#include <stdio.h>

int main()
{
  int n=5;
  for(int i=n;i>=1;i--)
  {
      for(int j=i;j<n;j++)
      {
          printf("  ");  //2 spaces
      }
      for(int j=1;j<=i;j++)
      {
          printf("* ");
      }
      printf("\n");
  }
    return 0;
}
```

```
#include <stdio.h>

int main()
{
    int n = 5;
    for (int i = 0; i <n; i++) {

        for (int j = 0; j < 2 * i; j++) {
            printf(" ");   //single space
        }
        for (int k = 0; k < n - i; k++) {
            printf("* ");
        }
        printf("\n");
    }

    return 0;
}
```

Reverse pyramid

10 July 2025 13:59

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

```
#include <stdio.h>

int main()
{
  int n=5;
  for(int i=n;i>=1;i--)
  {
      for(int j=i;j<n;j++)
      {
          printf(" ");  //single space
      }
      for(int j=1;j<=i;j++)
      {
          printf("* ");
      }
      printf("\n");
  }
    return 0;
}
```

Rhombus pattern

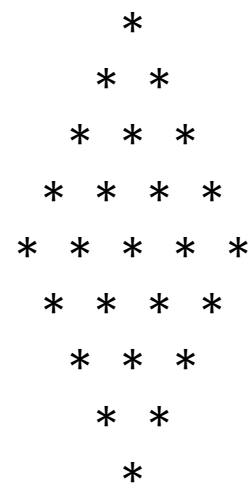
10 July 2025 13:59

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

```
#include <stdio.h>

int main()
{
    int rows = 5;

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

        for (int j = 1; j <=rows - i; j++) {
            printf(" ");
        }
        for (int k = 1; k <=rows; k++) {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

Diamond pattern

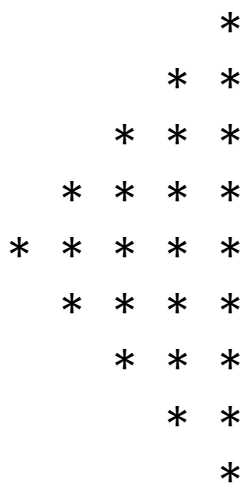
10 July 2025 14:02



```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf(" "); //single space
        }
        for (int k = 1; k <= i; k++) {
            printf("* ");
        }
        printf("\n");
    }
    for(int i=n-1;i>=1;i--)
    {
        for(int j=i;j<n;j++)
        {
            printf(" "); //single space
        }
        for(int k=1;k<=i;k++)
        printf("* ");

        printf("\n");
    }
}
```

Right aligned diamond pattern

10 July 2025 14:06



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

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <=n; i++) {
        for (int j = i; j<n; j++) {
            printf("  "); //2 spaces
        }
        for (int k = 1; k <= i; k++) {
            printf("* ");
        }
        printf("\n");
    }
    for(int i=n-1;i>=1;i--)
    {
        for(int j=i;j<n;j++)
        {
            printf("  "); //2 spaces
        }
        for(int k=1;k<=i;k++)
        printf("* ");

        printf("\n");
    }
}
```

Pyramind star & number

10 July 2025 14:06

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

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 1; j <= n - i; j++) {
            printf("  "); // 2 spaces
        }
        for (int k = 1; k <= 2 * i - 1; k++) {
            printf("* "); // Single space after each star
        }
        printf("\n");
    }
    return 0;
}
```

```
    1
  1 2 3
1 2 3 4 5
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 1; j <= n - i; j++) {
            printf("  "); // 2 spaces
        }
        for (int k = 1; k <= 2 * i - 1; k++) {
            printf("%d ",k); // Single space after each star
        }
        printf("\n");
    }
    return 0;
}
```

right angle number patterns

10 July 2025 14:06

```
        1
      1 2
    1 2 3
  1 2 3 4
1 2 3 4 5
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for(int i=1;i<=n;i++)
    {
        for(int j=1;j<=n-i;j++)
        {
            printf("  ");//2 spaces
        }
        for(int k=1;k<=i;k++)
        {
            printf("%d ",k);
        }
        printf("\n");
    }
}
```

```
        1
      1 3
    1 3 5
  1 3 5 7
1 3 5 7 9
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for(int i=1;i<=n;i++)
    {
        for(int j=1;j<=n-i;j++)
        {
            printf("  ");//2 spaces
        }
        int a=1;
        for(int k=1;k<=i;k++)
        {
            printf("%d ",a);
            a+=2;
        }
        printf("\n");
    }
}
```

hourglass patterns

10 July 2025 14:06

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

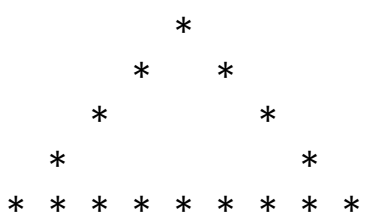
```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 1; j < i; j++) {
            printf(" "); //single space
        }
        for (int k = i; k <= n; k++) {
           printf("* ");
        }
        printf("\n");
    }
     for (int i = n-1; i >= 1; i--) {
        for (int j = 1; j < i; j++) {
            printf(" "); //single space
        }
        for (int k = i; k <= n; k++) {
           printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

```
A B C D E
 A B C D
  A B C
   A B
    A
   A B
  A B C
 A B C D
A B C D E
```

```
#include <stdio.h>
int main()
{
    int n = 5;
   for(int i=n;i>=1;i--)
    {
        for(int j=i;j<n;j++)
        {
            printf(" "); //single space
        }
        for(int k=0;k<i;k++)
        printf("%c ",'A'+k);

        printf("\n");
    }
    for (int i = n-1; i>0; i--) {
        for (int j = 1; j<i; j++) {
            printf(" "); //single space
        }
        char ch='A';
        for (int k = n; k>=i; k--) {
            printf("%c ",ch++);
        }
        printf("\n");
    }
    return 0;
}
```

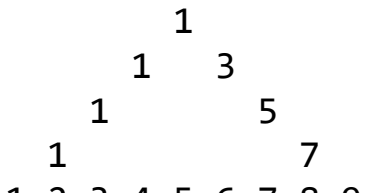
Hollow Patterns

10 July 2025 14:06



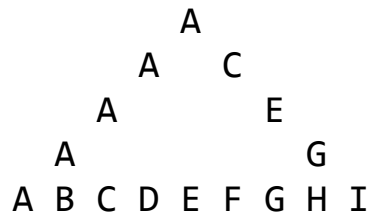
```
*
*   *
*       *
*           *
* * * * * * * * *
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 0; j < 2 * (n - i); j++) {
            printf(" "); // Spaces for alignment
        }
        for (int k = 1; k <= 2 * i - 1; k++) {
            if (k == 1 || k == 2 * i - 1 || i == n) {
                printf("* "); // Print stars at the edges or last row
            } else {
                printf("  "); // Hollow space
            }
        }
        printf("\n");
    }
    return 0;
}
```



```
1
1   3
1       5
1           7
1 2 3 4 5 6 7 8 9
```

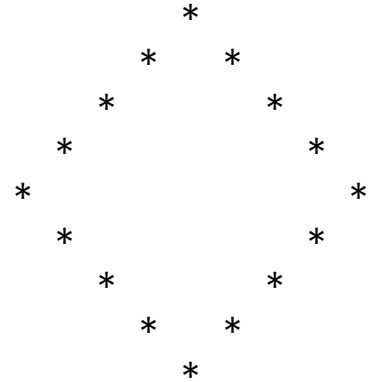
```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 0; j < 2 * (n - i); j++) {
            printf(" "); // Spaces for alignment
        }
        for (int k = 1; k <= 2 * i - 1; k++) {
            if (k == 1 || k == 2 * i - 1 || i == n) {
                printf("%d ",k); // Print stars at the edges or last row
            } else {
                printf("  "); // Hollow  2 space
            }
        }
        printf("\n");
    }
    return 0;
}
```



```
A
A   C
A       E
A           G
A B C D E F G H I
```

```
#include <stdio.h>
int main()
{
    int n = 5;
    for (int i = 1; i <= n; i++) {
        for (int j = 0; j < 2 * (n - i); j++) {
            printf(" ");
        }

        char ch = 'A';
        for (int k = 1; k <= 2 * i - 1; k++) {
            if (k == 1 || k == 2 * i - 1 || i == n) {
                printf("%c ", ch);
            } else {
                printf("  ");
            }
            ch ++;
        }
        printf("\n");
    }
    return 0;
}
```

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



```
int main() {
    int n, i, j, space;
    printf("Enter number of rows: ");
    scanf("%d", &n);

    for (i = 1; i <= n; i++) {
        for (space = 1; space <= n - i; space++) {
            printf("  "); //2 spaces or space=0 space<2*(n-i)
        }
        for (j = 1; j <= 2 * i - 1; j++) {
            if (j == 1 || j == 2 * i - 1)
                printf("* ");
            else
                printf("  ");
        }
        printf("\n");
    }

    for (i = n - 1; i >= 1; i--) {
        for (space = 1; space <= n - i; space++) {
            printf("  ");
        }
        for (j = 1; j <= 2 * i - 1; j++) {
            if (j == 1 || j == 2 * i - 1)
                printf("* ");
            else
                printf("  ");
        }
        printf("\n");
    }

    return 0;
}
```