

1) *
* *
* * *
* * * *
* * * * *

2) *
* *
* * *
* * * *
* * * * *

3) * * * * *
* * * *
* * *
* *
*

4) * * * * *
* * * *
* * *
* *
*

5) *
* * *
* * * * *
* * * * * * *
* * * * * * * * *

6) * * * * * * * * *
* * * * * * * *
* * * * *
* * *
*

7) *
* * *
* * * * *
* * * * * * *
* * * * * * * * *
* * * * * * * * *
* * * * *
* * *
*

8) * * * * *
* * * * *
* * * * *
* * * * *
* * * * *

9)

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

10)

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

11)

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

12)

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

13)

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

14)

```
      1  
     1 1  
    1 2 1  
   1 3 3 1  
  1 4 6 4 1
```

15)

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

16)

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

17)

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

18)

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

19)

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

20)

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

21) A
B B
C C C
D D D D
E E E E E

22) A
B B
C C C
D D D D
E E E E E

23) A B C D E
A B C D
A B C
A B
A

24) 1
1 2 1
1 2 3 2 1
1 2 3 4 3 2 1
1 2 3 4 5 4 3 2 1

25) A
ABC
ABCDE
ABCDEFGH
ABCDEFGHI
ABCDEFGH
ABCDE
ABC
A

1. Right-Angled Triangle of Stars

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("* ");
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

2. Right-Angled Triangle of Stars (Right Aligned)

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= n - i; j++) {
            printf(" "); // Print spaces for alignment
        }
        for(j = 1; j <= i; j++) {
            printf("*"); // Print stars
        }
        printf("\n");
    }
}
```

Enter the number of rows: 5

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

3. Inverted Right-Angled Triangle of Stars

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        for(j = 1; j <= i; j++) {
            printf("* ");
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

4. Right-Aligned Inverted Right-Angled Triangle of Stars

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        for(j = 1; j <= n - i; j++) {
            printf(" "); // Print spaces for right alignment
        }
        for(j = 1; j <= i; j++) {
            printf("*"); // Print stars
        }
        printf("\n");
    }
}
```

Enter the number of rows: 5

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


5. Pyramid Pattern of Stars

```
void main() {
    int i, j, n, space;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 1; j <= (2 * i - 1); j++)
            printf("* ");
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

6. Inverted Pyramid of Stars

```
void main() {
    int i, j, n, space;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 1; j <= (2 * i - 1); j++)
            printf("* ");
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

7. Diamond Pattern

```
void main() {
    int i, j, space, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 1; j <= (2 * i - 1); j++)
            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++)
            printf("*");
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

```

8. Hollow Square Pattern

```
void main() {
    int i, j, n;
    printf("Enter the side length of the square: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= n; j++) {
            if(i == 1 || i == n || j == 1 || j == n)
                printf("* ");
            else
                printf("  ");
        }
        printf("\n");
    }
}
```

Input:

Enter the side length of the square: 5

Output:

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

9. Hollow Triangle Pattern

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            if(i == n || j == 1 || j == i)
                printf("* ");
            else
                printf("  ");
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

10. Right-Angled Number Triangle

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

11. Inverted Right-Angled Number Triangle

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        for(j = 1; j <= i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

12. Floyd's Triangle

```
void main() {
    int i, j, n, num = 1;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("%d ", num);
            num++;
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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


13. Pascal's Triangle

```
void main() {
    int n, i, j, space, num = 1;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 0; i < n; i++) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 0; j <= i; j++) {
            if (j == 0 || i == 0)
                num = 1;
            else
                num = num * (i - j + 1) / j;
            printf("%4d", num);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

```
      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
```

14. Sandglass Star Pattern

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        for(j = 0; j < n - i; j++)
            printf(" ");
        for(j = 0; j < 2 * i - 1; j++)
            printf("* ");
        printf("\n");
    }
    for(i = 2; i <= n; i++) {
        for(j = 0; j < n - i; j++)
            printf(" ");
        for(j = 0; j < 2 * i - 1; j++)
            printf("* ");
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

15. Half Pyramid Pattern Using Numbers

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("%d ", i);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

16. Binary Number Pattern

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("%d ", (i + j) % 2);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

17. Hollow Pyramid Star Pattern

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= 2*n-1; j++) {
            if(j == n-i+1 || j == n+i-1 || i == n)
                printf("*");
            else
                printf(" ");
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

18. Right Arrow Pattern

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("* ");
        }
        printf("\n");
    }
    for(i = n - 1; i >= 1; i--) {
        for(j = 1; j <= i; j++) {
            printf("* ");
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

19. Left Arrow Pattern

```
void main() {
    int i, j, n, space;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 1; j <= i; j++)
            printf("* ");
        printf("\n");
    }
    for(i = n - 1; i >= 1; i--) {
        for(space = 1; space <= n - i; space++)
            printf(" ");
        for(j = 1; j <= i; j++)
            printf("* ");
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

```

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

20. Alphabet Right-Angled Triangle (Increasing)

```
void main() {
    int i, j, n;
    char ch = 'A';
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= i; j++) {
            printf("%c ", ch);
            ch++; // Increment the character
        }
        printf("\n");
    }
}
```

Enter the number of rows: 5

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


21. Repeating Character Triangle

```
void main() {  
    int i, j, n;  
    printf("Enter the number of rows: ");  
    scanf("%d", &n);  
    for(i = 1; i <= n; i++) {  
        for(j = 1; j <= i; j++) {  
            printf("%c ", 'A' + i - 1); // Print the same character in the row  
        }  
        printf("\n");  
    }  
}
```

Enter the number of rows: 5

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

22. Alphabet Pyramid

```
void main() {
    int i, j, n, space;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(space = 1; space <= n - i; space++) {
            printf(" ");
        }
        for(j = 1; j <= i; j++) {
            printf("%c ", 'A' + i - 1); // Print the same character across
the row
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

23. Inverted Character Right-Angled Triangle

```
void main() {
    int i, j, n;
    char ch;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = n; i >= 1; i--) {
        ch = 'A'; // Reset character at the start of each row
        for(j = 1; j <= i; j++) {
            printf("%c ", ch);
            ch++;
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

```
Copy code
A B C D E
A B C D
A B C
A B
A
```

24. Full Pyramid of Numbers

```
void main() {
    int i, j, n;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(j = 1; j <= n - i; j++)
            printf(" ");
        for(j = 1; j <= i; j++)
            printf("%d ", j);
        for(j = i - 1; j >= 1; j--)
            printf("%d ", j);
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

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

25. Character Diamond Pattern

```
void main() {
    int i, j, n, space;
    char ch;
    printf("Enter the number of rows: ");
    scanf("%d", &n);
    for(i = 1; i <= n; i++) {
        for(space = 1; space <= n - i; space++) {
            printf(" ");
        }
        ch = 'A';
        for(j = 1; j <= (2 * i - 1); j++) {
            printf("%c", ch++);
        }
        printf("\n");
    }
    for(i = n - 1; i >= 1; i--) {
        for(space = 1; space <= n - i; space++) {
            printf(" ");
        }
        ch = 'A';
        for(j = 1; j <= (2 * i - 1); j++) {
            printf("%c", ch++);
        }
        printf("\n");
    }
}
```

Input:

Enter the number of rows: 5

Output:

```
    A
   ABC
  ABCDE
 ABCDEFG
ABCDEFGHI
 ABCDEFG
  ABCDE
   ABC
    A
```