Star pattern printing programs in C – For practical classes

1. Printing odd number of stars count in each line and building it as a pyramid.

```c
2  #include<stdio.h>
3
4  int main()
5 ▾ {
6      int n, k, i, j;
7      printf("Enter number of rows: ");
8      scanf("%d",&n);
9      for(i = 1; i <= n; i++)
10 ▾   {
11
12         for(k = i; k < n; k++)
13 ▾       {
14             printf(" ");
15         }
16         for(j = 1; j <= (2 * i - 1); j++)
17 ▾       {
18             printf("*");
19         }
20         printf("\n");
21     }
22  }
```

Output:
```
/tmp/ixHZd1bZvG.o
Enter number of rows: 3
  *
 ***
*****

=== Code Execution Successful ===
```

2. Printing the odd number of stars in an inverted pyramid shape.

```c
1  #include<stdio.h>
2
3  int main()
4 ▾ {
5      int n, k, i, j;
6      printf("Enter number of rows: ");
7      scanf("%d",&n);
8      for(i = n; i >= 1; i--)
9 ▾    {
10        for(k = i; k < n; k++)
11 ▾      {
12            printf(" ");
13        }
14
15        for(j = 1; j <= (2 * i - 1); j++)
16 ▾      {
17            printf("* ");
18        }
19        printf("\n");
20     }
21     return 0;
```

Output:
```
/tmp/CkGqnokBFW.o
Enter number of rows: 3
* * * * *
 * * *
  *

=== Code Execution Successful ===
```

3. Full diamond printing. Include a space in the star's printf, that comes only when you practice and get to know how your code works.

```c
#include<stdio.h>
int main()
{
    int n, s, i, j;
    printf("Enter number of rows: ");
    scanf("%d",&n);
    for(i = 0; i <= n; i++)
    {
        for(s = n; s > i; s--)
        {
            printf(" ");
        }
        for(j=0; j<i; j++)
        {
            printf("* ");
        }
        printf("\n");
    }
    for(i = 1; i < n; i++)
    {
        for(s = 0; s < i; s++)
        {
            printf(" ");
        }
        for(j = n; j > i; j--)
        {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

```
/tmp/OQOxXIHqy3.o
Enter number of rows: 5
        *
       * *
      * * *
     * * * *
    * * * * *
     * * * *
      * * *
       * *
        *

=== Code Execution Successful ===
```

4. Hollow star printing – Square.

```c
#include <stdio.h>
int main()
{
    int n;
    printf("Enter the number of rows in your pattern: ");
    scanf("%d",&n);
    for(int i = 1; i <= n; i++)  {
        for(int j = 1; j <= n; j++)  {
            if(i == 1 || i == n || j == 1 || j == n)
                printf("*");
            else
                printf(" ");
        }
        printf("\n");
    }
    return 0;
}
```

```
/tmp/f3T7zSQHOF.o
Enter the number of rows in your pattern: 4
****
*  *
*  *
****

=== Code Execution Successful ===
```

5. Inverted right angled triangle printing.

```c
#include <stdio.h>
int main()
{
    int n;
    printf("Enter the number of rows in your pattern: ");
    scanf("%d",&n);
    int m = n;
    for(int i = 1;i <= n; i++) {
        for(int j = 1; j < i; j++) {
            printf(" ");
        }
        for(int k = 1; k <= m; k++) {
            printf("*");
        }
        m--;
        printf("\n");
    }
    return 0;
}
```

Output

```
/tmp/m5RMSlQBvi.o
Enter the number of rows in your pattern: 6
******
 *****
  ****
   ***
    **
     *


=== Code Execution Successful ===
```