

# Nested loop and star pattern problems

Day-12

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# Nested Loop

while ( ) ← 5

{

for ( ; ; ) ←

{

}

==

}

for ( ; ; )

{

for ( ; ; )

{

==

}

==

}

Write a program to generate table chart.

```
for (i = 1; i <= 10; i++)
{
    for (j = 1; j <= 10; j++)
    {
        printf("%d ", j * i);
    }
}
```

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

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1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

$$\frac{i}{1} \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

# Star Pattern (Basic Skeleton)

```
for (i = 1; i <= 6; i++)
{
```

```
    for (j = 1; j <= 6; j++)
    {
        if (j <= 7 - i)
```

```
            printf("*");
        else
            printf(" ");
```

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

*i*

1	<i>j</i> <= 6
2	<i>j</i> <= 5
3	<i>j</i> <= 4
4	<i>j</i> <= 3
5	<i>j</i> <= 2
6	<i>j</i> <= 1

*j*

1	*	*	*	*	*	*
2	*	*	*	*	*	
3	*	*	*	*		
4	*	*	*			
5	*	*				
6	*					

*i*

1	1 2 3 4 5 6
2	1 2 3 4 5
3	1 2 3 4
4	1 2 3
5	1 2
6	1

*j* <= 7 - *i*

Display following pattern.

\*

\* \*

\* \* \*

\* \* \* \*



