

### C++ ASSIGNMENT 1.3

WAP to print following kind of patterns:

```
1) *
   **
  ***
 ****
*****
```

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int a;
```

```
    cout<<"Enter the number of rows to print the character    \t";
```

```
    cin>>a;
```

```
    for(int i=0;i<a;i++)
```

```
    {
```

```
        for(int j=0;j<=i;j++)
```

```
        {
```

```
            cout<<"*";
```

```
        }
```

```
        cout<<endl;
```

```
    }
```

```
    return 0;
```

```
}
```

```
input
Enter the number of rows to print the character 5
*
**
***
****
*****
...Program finished with exit code 0
Press ENTER to exit console.
```

2)       \*  
          \*\*  
         \*\*\*  
        \*\*\*\*  
       \*\*\*\*\*

```
#include<iostream>

using namespace std;

int main()
{
    int a;

    cout<<"Enter the number of rows to print the character       \t";

    cin>>a;

    for(int i=0;i<a;i++)
    {
        for(int k=a-1;k>i;k--)

            cout<<" ";

        for(int j=0;j<=i;j++)

            cout<<"*";

    }
}
```

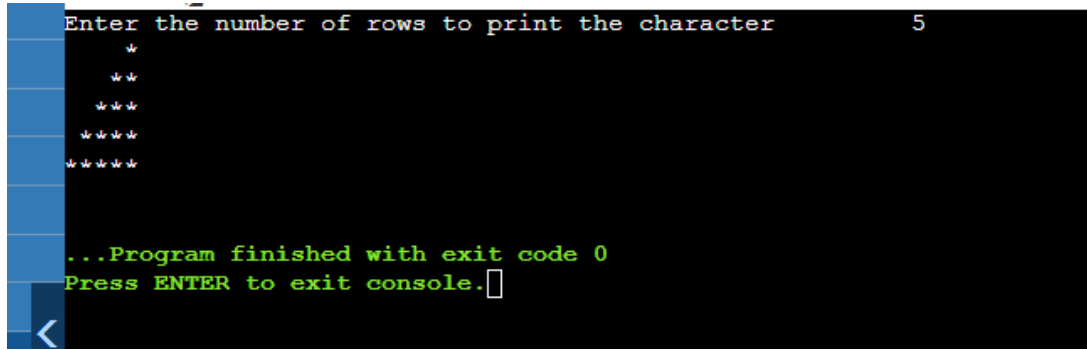
```

        cout<<endl;

    }

    return 0;
}

```



The screenshot shows a terminal window with a black background. The prompt 'Enter the number of rows to print the character' is followed by the input '5'. Below this, a pattern of five rows of stars is printed: the first row has 1 star, the second has 2, the third has 3, the fourth has 4, and the fifth has 5. At the bottom, a green message states '...Program finished with exit code 0' and 'Press ENTER to exit console.' with a cursor icon.

```

Enter the number of rows to print the character      5
*
**
***
****
*****

...Program finished with exit code 0
Press ENTER to exit console.

```

3) \*

```

***
*****
*****
*****
*****

```

```

#include<iostream>

using namespace std;

int main()

{

    int a,j,i;

    cout<<"Enter the number of rows to get the pattern";

    cin>>a;

    for(int i=1;i<=a;i++)

    {

```

```

        for(int j=1;j<=a-i;j++)
        {
            cout<<" ";

        }

        for(int b=1; b<=(2*i-1); b++)
        {

            cout<<"*";

        }

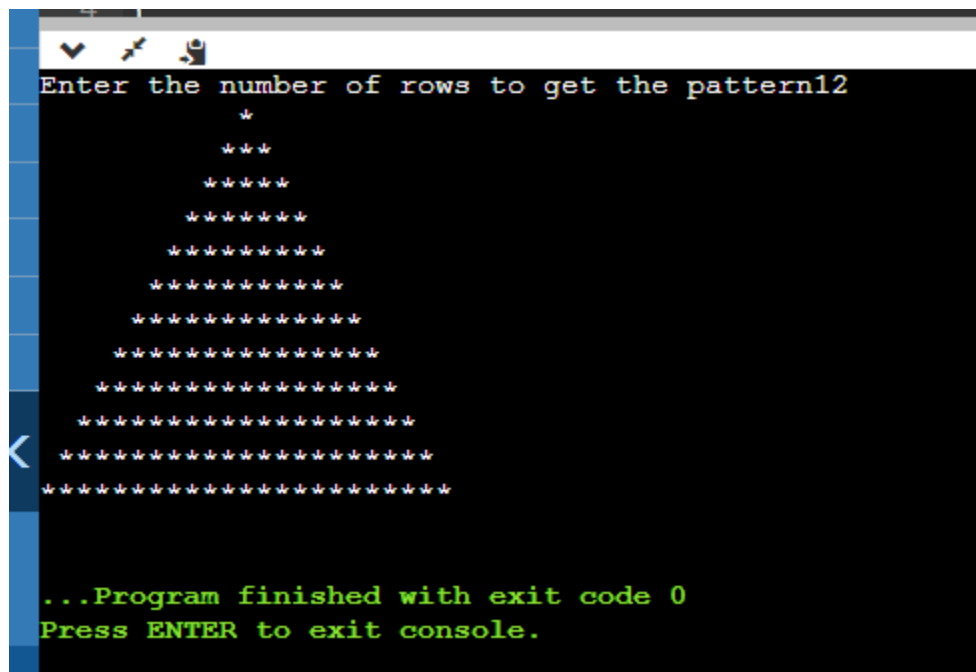
        cout<<endl;

    }

    return 0;

}

```



The screenshot shows a terminal window with a dark background. At the top, it says "Enter the number of rows to get the pattern12". Below this, a star pattern is displayed, consisting of 12 rows of stars. The pattern is a diamond shape, with the number of stars in each row increasing from 1 to 12 and then decreasing back to 1. The stars are arranged in a way that they form a continuous shape. At the bottom of the terminal, it says "...Program finished with exit code 0" and "Press ENTER to exit console."

```

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

```

```
#include <iostream>
```

```
using namespace std;
```

```
int a,b,c,d,e;
```

```
int main(){
```

```
    cout<<("Enter any number ");
```

```
    int n;
```

```
        cin>>n;
```

```
        int counter=1;
```

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

```
            if(i==0) {
```

```
                for(int j=0;j<n*2-1;j++) {
```

```
                    cout<<"*";
```

```
                }
```

```
                cout<<endl;
```

```
            }else {
```

```
                for(int j=0;j<n-counter;j++) {
```

```
                    cout<<"*";
```

```
                }
```

```
                for(int j=counter*2-1;j>0;j--) {
```

```
                    cout<<" ";
```

```
                }
```

```
            for(int j=0;j<n-counter;j++) {
```

```

        cout<<"*";

    }

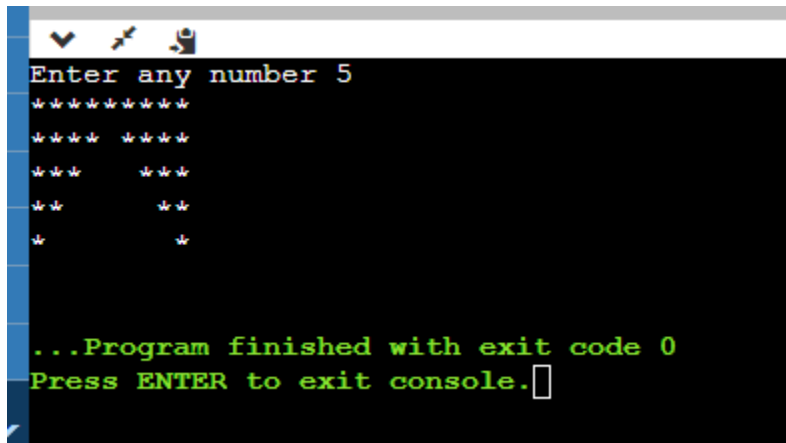
    counter++;

    cout<<endl;

}

}

```



The screenshot shows a console window with a black background and green text. At the top, it says "Enter any number 5". Below this, there is a pattern of stars: a row of 10 stars, followed by two rows of 8 stars each, then two rows of 6 stars each, and finally a row of 4 stars. At the bottom, it says "...Program finished with exit code 0" and "Press ENTER to exit console." with a cursor icon.

5.

```

#include<iostream>

using namespace std;

int main()

{

char n=68;


for(int i=0; i<=4;i++)

{

```

```

for(char j=65;j<=n;j++)
{
cout<<j;

}n--;

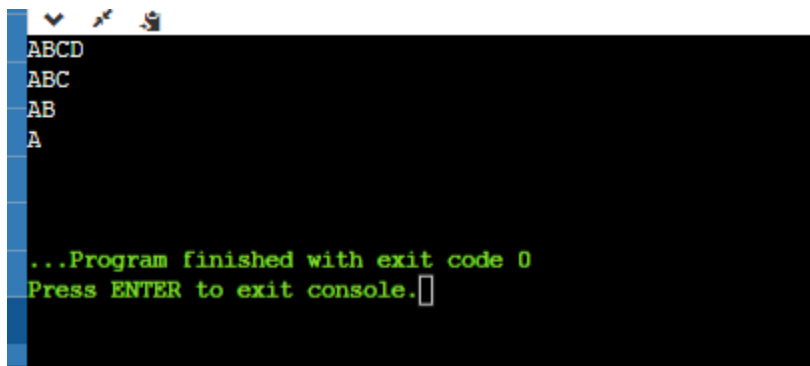
cout<<endl;

}

return 0;

}

```



```

ABCD
ABC
AB
A
...Program finished with exit code 0
Press ENTER to exit console.

```

```

6)  1
    12
    123
    1234
    12345
    123456

```

```

#include<iostream>

using namespace std;

int main()

{

```

```
int n;

cout<< "enter no of rows"<<endl;

cin>>n;

for(int i=1;i<=n;i++)

{

    for(int j=1;j<=i;j++)

    {

        cout<<j;

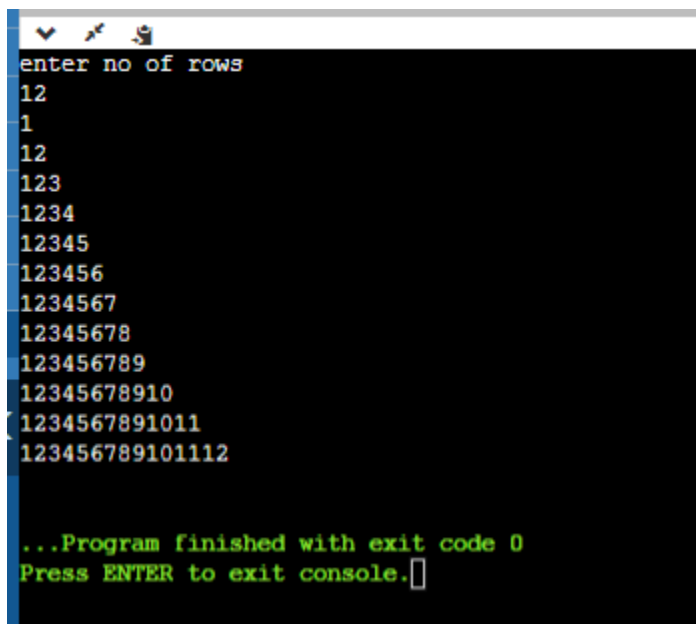
    }

    cout<<endl;

}

return 0;

}
```



```
enter no of rows
12
1
12
123
1234
12345
123456
1234567
12345678
123456789
12345678910
1234567891011
123456789101112

...Program finished with exit code 0
Press ENTER to exit console.
```



7.

```
#include <iostream>
```

```
using namespace std;
```

```
int main() {
```

```
    cout << "Enter any number: ";
```

```
    int n;
```

```
    cin >> n;
```

```
    int counter = 1;
```

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

```
        for (int j = 0; j <= n - counter; j++) {
```

```
            cout << char('A' + j);
```

```
        }
```

```
        for (int j = i * 2 - 1; j > 0; j--) {
```

```
            if (i != 0) {
```

```
                cout << " ";
```

```
            }
```

```
        }
```

```
        for (int j = n - counter; j >= 0; j--) {
```

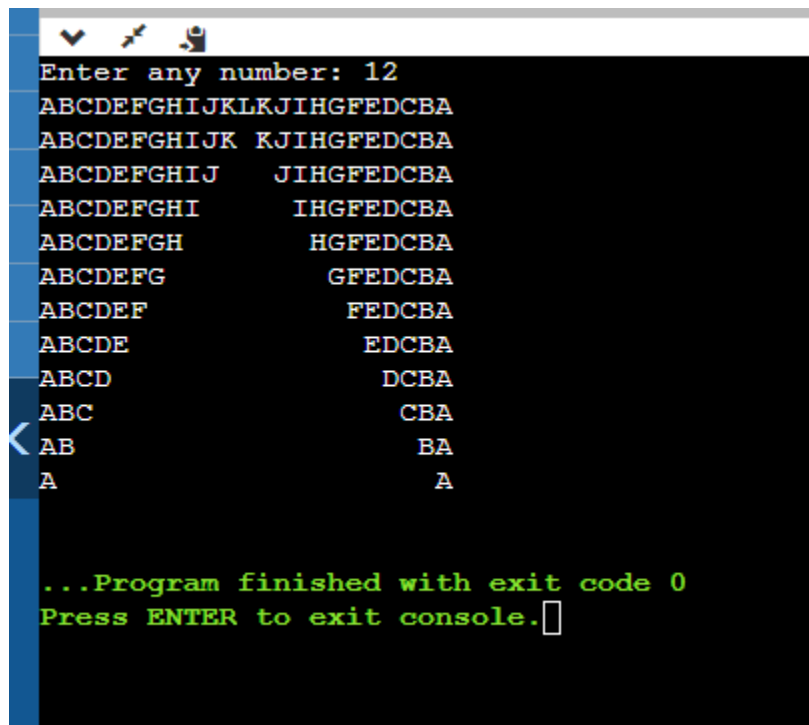
```
            if (j != n - 1) {
```

```
                cout << char('A' + j);
```

```
            }
```

```
        }
```

```
        counter++;  
  
        cout << endl;  
    }  
  
    return 0;  
}
```



```
Enter any number: 12  
ABCDEFGHIJKLKJIHGFEDCBA  
ABCDEFGHIJK KJIHGFEDCBA  
ABCDEFGHIJ JIHFEDCBA  
ABCDEFGHI IHGFEDCBA  
ABCDEFGH HGFEDCBA  
ABCDEFG GFEDCBA  
ABCDEF FEDCBA  
ABCDE EDCBA  
ABCD DCBA  
ABC CBA  
AB BA  
A A  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```