



# SKILLS

## C++ Assignments | Pattern Printing - 1 | Week 3

1. Print the following pattern

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

solution 1:-

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the number: ";

    int n;

    cin>>n;

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

        for(int j=1 ;j<=n;j++){

            cout<<";

        }

        cout<<endl;

    }

}
```

2. Print the following pattern

Input: n = 4

Output:

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

solution 2:-

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the number: ";

    int n;

    cin>>n;

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

        for(int j=1;j<=n-i+1;j++){

            cout<<j;

        }

        cout<<endl;

    }

}
```

3. Print the following pattern

Input: n = 4

Output:

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

solution 3:-

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the number: ";

    int n;

    cin>>n;

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

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

            cout<<(char)(j+64);

        }

        cout<<endl;

    }

}
```

4. Print the following pattern

Input: n = 4

Output:

```
1
```

#### solution 4:-

```
A B
1 2 3
A B C D
1 2 3 4 5
```

5. Print the following pattern

Input n = 4

Output:

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

6. Print the following pattern

Sample Input : m = 4, n = 6

Sample Output :

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

7. Print the following pattern

Sample Input : n = 4

Output :

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

8. Print the following pattern

Sample Input : n= 4

Output :

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

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the number: ";

    int n;

    cin>>n;

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

        {

            if(i%2==1)

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

                cout<<j;

            }

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

                cout<<(char)(j+64);

            }

        }

        cout<<endl;

    }

}
```

#### solution 5:-

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the number: ";

    int n;

    cin>>n;

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

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

            cout<<"* ";

        }

        cout<<endl;

    }

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

        for(int j=1;j<=n-1-i;j++){

            cout<<"* ";

        }

        cout<<endl;

    }

}
```

#### solution 6:-

```
#include<iostream>using namespace std;

int main(){

    cout<<"enter the row number: ";

    int n;

    cin>>n;

    cout<<"enter the coloum number: ";

    int m;

    cin>>m;

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

        for(int j=1;j<=m;j++){

            if(i==1 || i==n || j==1 || j==m)

                cout<<"* ";

            else cout<<" ";

        }

        cout<<endl;

    }

}
```

## solution 7:-

9. Print the following pattern

Input : n = 4

Output :

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

10. Print the following pattern

Input: n = 4

Output:

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

11. Print the following pattern

Input: n = 4

Output: solution 9:-

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

```
#include<iostream>using namespace std;
int main(){
    cout<<"enter the number : ";
    int n;
    cin>>n;
    for(int i=1;i<=n;i++){
        for(int j=1;j<=n-i;j++){
            cout<<" ";
        }
        for(int k=1;k<=i;k++){
            cout<<(char)(k+64);
        }
        cout<<endl;
    }
}
```

```
#include<iostream>using namespace std;
int main(){
    cout<<"enter the number : ";
    int n;
    cin>>n;
    for(int i=1;i<=n;i++){
        for(int k=1;k<=n-i;k++){
            cout<<" ";
        }
        for(int j=1;j<=n-i;j++){
            cout<<" ";
        }
        cout<<endl;
    }
}
```

## solution 8:-

```
#include<iostream>using namespace std ;
int main(){
    cout<<"enter the number: ";
    int n;
    cin>>n;
    for(int i=1;i<=n;i++){
        for(int j=1;j<=i;j++){
            cout<<j;
        }
        cout<<endl;
    }
}
```

## solution 11:-

```
#include<iostream>using namespace std;
int main(){
    cout<<"enter the number: ";
    int n;
    cin>>n;
    for(int i=1;i<=n;i++){
        for(int j=1;j<=n-i;j++){
            cout<<" ";
        }
        for(int k=1;k<=i;k++){
            cout<<(char)(k+64);
        }
        cout<<endl;
    }
}
```

**Note:-** Please try to invest time doing the assignments which are necessary to build a strong foundation. Do not directly Copy Paste using Google or ChatGPT. Please use your brain 😊.

## solution 10:-

```
#include<iostream>using namespace std;
int main(){
    cout<<"enter the number: ";
    int n;
    cin>>n;
    for(int i=1;i<=n;i++){
        for(int j=i;j>=1;j--){
            cout<<j;
        }
        cout<<endl;
    }
}
```

```
for(int k=1;k<=i;k++){
    cout<<" ";
}
cout<<endl;
}
for(int i=1;i<=n;i++){
    for(int j=1;j<=i;j++){
        cout<<" ";
    }
    for(int k=1;k<=n-i;k++){
        cout<<" ";
    }
}
```