

## Pattern Printing – 2

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**Q1. Print the following pattern**

**Input: n = 5**

**Output:**

**1**

**1 2 3**

**1 2 3 4 5**

**1 2 3 4 5 6 7**

```
#include<iostream>
using namespace std;
int main( ) {
int n;
cout<<"enter a number:";
cin>>n;
for(int i=1;i<=n;++i){
    for(int j=1;j<=n-i;++j){
        cout<<" ";
    }
    for(int j=1;j<=2*i-1;++j){
        cout<<j;
    }

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

**Q2. Print the following pattern**

**Input: n = 4**

**Output:**

**A**

**A B C**

A B C D E

A B C D E F G

```
#include<iostream>
using namespace std;
int main( ) {
int n;
cout<<"enter a number:";
cin>>n;
for(int i=1;i<=n;++i){
    for(int j=1;j<=n-i;++j){
        cout<<" ";
    }
    for(int j=1;j<=(2*i-1)/2+1;++j){

        cout<<(char)('A'+j-1);

    }

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

**Q3. Print the following pattern**

**Input: n = 4**

**Output:**

A

B A B

C B A B C

D C B A B C D

```
#include<iostream>
using namespace std;
int main( ) {
int n;
cout<<"enter a number:";
cin>>n;
for(int i=1;i<=2*n-1;i++){
    cout<<(char)('A'+i-1)<<" ";
}
```

```

}
cout<<endl;
for(int i=1;i<=n;++i){
    for(int j=1;j<=n-i;++j){
        cout<<(char)('A'+j-1)<<" ";
    }
    for(int j=1;j<=2*i-1;++j){
        cout<<" ";
    }
    for(int j=1;j<=n-i;++j){
        cout<<(char)('A'+i+j+2)<<" ";
    }

    cout<<endl;
}

return 0;
}

```

**Q.5 Print the following pattern**

**Input: n = 4**

**Output:**

**1 2 3 4 3 2 1**

**1 2 3 3 2 1**

**1 2 2 1**

**1 1**

```

#include<iostream>
using namespace std;
int main( ) {
    int n;
    cout<<"enter a number:";
    cin>>n;
    for(int i=1;i<=2*n-1;i++){
        cout<<i<<" ";
    }
    cout<<endl;
    for(int i=1;i<=n;++i){
        for(int j=1;j<=n-i;++j){
            cout<<j<<" ";
        }
    }
}

```

```

        for(int j=1;j<=2*i-1;++j){
            cout<<" ";
        }
        for(int j=1;j<=n-i;++j){
            cout<<n-(i+j-1)<<" ";
        }

        cout<<endl;
    }

    return 0;
}

```

## Q.6 Print the following pattern

Input : n = 5

Output:

```

* *
* *
* *
* *
*

```

```

#include<iostream>
using namespace std;
int main( ) {
    int n;
    cin>>n;
    for(int i=1;i<=n;++i){
        for(int j=1;j<=i-1;++j){
            cout<<" ";
        }
        for(int j=1;j<=n;++j){
            if(i==j)
                cout<<"*";

        }
        for(int j=1;j<=2*n-2*i-1;++j){
            cout<<" ";
        }
        if(i<n){
            for(int j=1;j<=1;++j){
                cout<<"*";
            }
        }
        cout<<endl;
    }
}

```

```
    return 0;
}
```

### Q.7 Print the following pattern

Sample Input : m = 4, n = 6

Sample Output :

\*

\* \*

\* \*

\* \*

\* \*

\* \*

\*

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

    for(int j=2;j<=2*i-1;++j){
        cout<<" ";
    }
    if(i-1){
        for(int j=1;j<=1;++j){
            cout<<"*";
        }
    }
}
```

```

    }

    cout<<endl;
}

    return 0;
}

```

**Q8. Print the following pattern**

**Sample Input : n = 4**

**Output :**

```

1
2 2
3 3
4 4

```

```

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

    for(int j=2;j<=2*i-1;++j){
        cout<<" ";
    }
    if(i-1){
        for(int j=1;j<=1;++j){
            cout<<i;
        }
    }

    cout<<endl;
}

```

```
    return 0;  
}
```

**Q9. Print the following pattern**

**Sample Input : n = 5**

**Output :**

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

```
#include <bits/stdc++.h>  
using namespace std;  
int main() {  
  
    int n;  
    cin >> n;  
  
    for(int i = 0; i < n; ++i) {  
        for(int j = 0; j <= i; ++j) {  
            cout << "* ";  
        }  
        for(int j = 0; j < 2 * (n - i - 1); ++j) {
```

```

cout << " ";
}
for(int j = 0; j <= i; ++j) {
cout << "* ";
}
cout << endl;
}

for(int i = n-1; i >= 0; --i) {
for(int j = 0; j <= i; ++j) {
cout << "* ";
}
}
return 0;
}

```

**Q10. Print the following pattern**

**Input : n = 4**

**Output :**

\* \*

\*\* \*\*

\*\*\* \*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\* \*\*

\*\* \*\*

\* \*