

## L4 : Pattern 1 Practice Questions

### 1-Tut : Code : Square Pattern

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Print the following pattern for the given N number of rows.

#### Pattern for N = 4

```
4444
4444
4444
4444
```

#### Input format :

Integer N (Total no. of rows)

#### Output format :

Pattern in N lines

#### Constraints

0 <= N <= 50

#### Sample Input 1:

```
7
```

#### Sample Output 1:

```
7777777
7777777
7777777
7777777
7777777
7777777
7777777
```

#### Sample Input 1:

```
6
```

#### Sample Output 1:

```
666666
666666
666666
666666
666666
666666
```

1. `#include<iostream>`
2. `using namespace std;`
3. `int main(){`
- 4.
5. `/* Read input as specified in the question.`
6. `* Print output as specified in the question.`
7. `*/`
8. `int N;`

```

9.    cin >> N;
10.   int i =1;
11.   while(i <= N){
12.       int j=1;
13.       while(j <= N){
14.           cout << N;
15.           j++;
16.       }
17.       cout << endl;
18.       i++;
19.   }
20. }

```

## 2-Tut : Code : Triangular Star Pattern

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Print the following pattern for the given N number of rows.

**Pattern for N = 4**

```

*
**
***
****

```

**Note :** There are no spaces between the stars (\*).

**Input format :**

Integer N (Total no. of rows)

**Output format :**

Pattern in N lines

**Constraints**

0 <= N <= 50

**Sample Input 1:** 5

**Sample Output 1:**

```

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

```

**Sample Input 2:** 6

**Sample Output 2:**

```

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

```

```

1. #include<iostream>
2. using namespace std;
3. int main(){
4.
5.     /* Read input as specified in the question.
6.        * Print output as specified in the question.
7.        */
8.     int N;
9.     cin >> N;
10.    int i = 1;
11.    while(i <= N){
12.        int j = 1;
13.        while(j <= i){
14.            cout << "***";
15.            j++;
16.        }
17.        cout<<endl;
18.
19.        i++;
20.    }
21. }

```

### 3-Tut : Code : Triangle Number Pattern

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Print the following pattern for the given N number of rows.

#### Pattern for N = 4

```

1
22
333
4444

```

**Input format :** Integer N (Total no. of rows)

**Output format :** Pattern in N lines

**Constraints**  $0 \leq N \leq 50$

**Sample Input 1:**5

**Sample Output 1:**

```

1
22
333
4444
55555

```

**Sample Input 2:**6

**Sample Output 2:**

```

1
22
333
4444

```

55555

666666

```
1. #include<iostream>
2. using namespace std;
3. int main(){
4.
5.     /* Read input as specified in the question.
6.        * Print output as specified in the question.
7.        */
8.     int N;
9.     cin >> N;
10.    int i =1;
11.    while(i <= N){
12.        int j =1;
13.        while(j <= i){
14.
15.            cout<< i;
16.            j++;
17.        }
18.        cout << endl;
19.
20.        i++;
21.    }
22. }
```

#### 4-Tut : Code : Reverse Number Pattern

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Print the following pattern for the given N number of rows.

##### Pattern for N = 4

```
1
21
321
4321
```

**Input format :** Integer N (Total no. of rows)

**Output format :** Pattern in N lines

**Constraints**  $0 \leq N \leq 50$

**Sample Input 1:** 5

**Sample Output 1:**

```
1
21
321
4321
54321
```

**Sample Input 2:** 6

**Sample Output 2:**

```
1
```

21  
321  
4321  
54321  
654321

```
1. #include<iostream>
2. using namespace std;
3.
4.
5. int main(){
6.
7.     /* Read input as specified in the question.
8.        * Print output as specified in the question.
9.        */
10.    int N;
11.    cin >> N;
12.    int i =1;
13.    while(i <= N){
14.        int j =1;
15.        int p =i;
16.        while(j <= i){
17.            cout << p;
18.            p--;
19.            j++;
20.        }
21.        cout << endl;
22.        i++;
23.    }
24. }
```

## 5-Tut : Code : Alpha Pattern

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Print the following pattern for the given N number of rows.

### Pattern for N = 3

A  
BB  
CCC

**Input format :** Integer N (Total no. of rows)

**Output format :**Pattern in N lines

**Constraints** 0 <= N <= 26

**Sample Input 1:**7

**Sample Output 1:**

A  
BB  
CCC  
DDDD

EEEEEE  
FFFFFFF  
GGGGGGG

**Sample Input 2:**6

**Sample Output 2:**

A  
BB  
CCC  
DDDD  
EEEEEE  
FFFFFFF

```
1. #include<iostream>
2. using namespace std;
3. int main(){
4.
5.     /* Read input as specified in the question.
6.      * Print output as specified in the question.
7.      */
8.     int N ;
9.     cin >> N;
10.    int i =1;
11.    while(i <= N){
12.        int j =1;
13.        char ch = 'A' + i-1;
14.        while(j <= i){
15.            cout << ch;
16.            j++;
17.        }
18.        cout << endl;
19.        i++;
20.    }
21. }
```

## 6-Tut : Code : Character Pattern

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Print the following pattern for the given N number of rows.

**Pattern for N = 4**

A  
BC  
CDE  
DEFG

**Input format :**Integer N (Total no. of rows)

**Output format :**Pattern in N lines

**Constraints**0 <= N <= 13

**Sample Input 1:**5

**Sample Output 1:**

A  
BC  
CDE  
DEFG  
EFGHI

**Sample Input 2:**6

**Sample Output 2:**

A  
BC  
CDE  
DEFG  
EFGHI  
FGHIJK

```
1. #include<iostream>
2. using namespace std;
3. int main(){
4.
5.     /* Read input as specified in the question.
6.        * Print output as specified in the question.
7.        */
8.     int N;
9.     cin >> N;
10.    int i =1;
11.    while(i <= N){
12.        int j =1;
13.        char ch = 'A'+i-1;
14.        while(j <= i){
15.            char c = ch + j-1;
16.            cout << c;
17.            //ch = ch + j-1;
18.            // cout << ch;
19.            j++;
20.
21.        }
22.        cout << endl;
23.
24.        i++;
25.    }
26. }
```

## 7-Tut : Code : Interesting Alphabets

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Print the following pattern for the given number of rows.

**Pattern for N = 5**

E  
DE  
CDE  
BCDE  
ABCDE

**Input format :** N (Total no. of rows)

**Output format :** Pattern in N lines

**Constraints**

$0 \leq N \leq 26$

**Sample Input 1:**

8

**Sample Output 1:**

H  
GH  
FGH  
EFGH  
DEFGH  
CDEFGH  
BCDEFGH  
ABCDEFGH

**Sample Input 2:**

7

**Sample Output 2:**

G  
FG  
EFG  
DEFG  
CDEFG  
BCDEFG  
ABCDEFG

```
1. #include<iostream>
2. using namespace std;
3. int main() {
4.
5.     /* Read input as specified in the question.
6.      * Print output as specified in the question.
7.      */
8.     int N;
9.     cin >> N;
10.    int i =1;
11.    while(i <= N){
12.        int j =1;
13.        char start = 'A' + N- i;
14.        while(j <= i){
15.            char c = start + j -1;
16.            cout << c;
17.            j++;
18.        }
```



```
19.     cout << endl;
20.     i++;
21. }
22. }
```