

Patterns Part 2

Pattern 1:

```
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
1 2 3 4 5
```

Solution:

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

Pattern 2:

```
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
```

Solution:

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

Pattern 3:

```
1 2 3
4 5 6
7 8 9
```

Solution:

```
int i=1;
int count = 1;
while(i<=n){
    int j=1;
    while(j<=n){
        cout<<count<<" ";
        count++;
        j++;
    }
    cout<<endl;
    i++;
}
return 0;
```

Pattern 4:

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

Solution:

```
int i=1;  
while(i<=n){  
    int j=1;  
    while(j<=i){  
        cout<<"* ";  
        j++;  
    }  
    cout<<endl;  
    i++;  
}
```

Pattern 5:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Solution:

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

Pattern 6:

```
1
2 3
4 5 6
7 8 9 10
```

Solution:

```
int i=1;
int count = 1;
while(i<=n){
    int j=1;
    while(j<=i){
        cout<<count<<" ";
        count++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 7:

```
1
2 3
3 4 5
4 5 6 7
5 6 7 8 9
```

Solution:

```
int i=1;
int count;
while(i<=n){
    int j=1;
    count = i;
    while(j<=i){
        cout<<count<<" ";
        count++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 8:

```
1
2 1
3 2 1
4 3 2 1
5 4 3 2 1
```

Solution:

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


Pattern 9:

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

Solution:

```
int i=1;
while(i<=n){
    int j=1;
    while(j<=n){
        cout<<ch<<" ";
        j++;
    }
    ch++;
    cout<<endl;
    i++;
}
```

Pattern 10:

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

Solution:

```
int i=1;
while(i<=n){
    int j=1;
    char ch = 'A';
    while(j<=n){
        cout<<ch<<" ";
        j++;
        ch++;
    }
    cout<<endl;
    i++;
}
```

Pattern 11:

```
A B C D
E F G H
I J K L
M N O P
```

Solution:

```
int i=1;
char ch = 'A';
while(i<=n){
    int j=1;
    while(j<=n){
        cout<<ch<<" ";
        ch++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 12:

A B C

B C D

C D E

Solution:

```
int i=1;
while(i<=n){
    int j=1;
    char ch = 'A'+i-1;
    while(j<=n){
        cout<<ch<<" ";
        ch++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 13:

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

Solution:

```
int i=1;
char ch = 'A';
while(i<=n){
    int j=1;
    while(j<=i){
        cout<<ch<<" ";
        j++;
    }
    ch++;
    cout<<endl;
    i++;
}
```

Pattern 14:

A
B C
D E F
G H I J

Solution:

```
int i=1;
char ch = 'A';
while(i<=n){
    int j=1;
    while(j<=i){
        cout<<ch<<" ";
        ch++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 15:

```
A
B C
C D E
D E F G
```

Solution:

```
int i=1;
while(i<=n){
    int j=1;
    char ch = 'A'+i-1;
    while(j<=i){
        cout<<ch<<" ";
        ch++;
        j++;
    }
    cout<<endl;
    i++;
}
```

Pattern 16:

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

Solution:

```
int i=1;
while(i<=n){
    char ch = 'A'+n-i;
    int j=1;
    while(j<=i){
        cout<<ch<<" ";
        ch++;
        j++;
    }
    ch--;
    cout<<endl;
    i++;
}
```


Pattern 17:

A diagram showing a 5x5 grid of asterisks. Above each column, there is a vertical line of varying height. The lines are positioned at the top of the grid, with heights increasing from left to right. The asterisks are arranged in a pattern that suggests a staircase or a series of steps.

Solution:

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

Pattern 18:

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

Solution:

```
int i=1;
while(i<=n){
    int j=n;
    while(j>=i){
        cout<<"* ";
        j--;
    }
    cout<<endl;
    i++;
}
```

Pattern 19:

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

Solution:

```
int i=1;
while(i<=n){
    int k=2;
    while(k<=i){
        cout<<" ";
        k++;
    }
    int j=n;
    while(j>=i){
        cout<<"* ";
        j--;
    }
    cout<<endl;
    i++;
}
```

Pattern 20:

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

Solution:

```
int i=1;
while(i<=n){
    int k=2;
    while(k<=i){
        cout<<" ";
        k++;
    }
    int j=n;
    while(j>=i){
        cout<<i<<" ";
        j--;
    }
    cout<<endl;
    i++;
}
```

Pattern 21:

			1
		2	2
	3	3	3
4	4	4	4

Solution:

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

Pattern 22:

```
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5
```

Solution:

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

Pattern 23:

```
|
|
| 1
| 2 3
| 4 5 6
7 8 9 10
```

Solution:

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

Pattern 24:

```

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

Solution:

```
int i=1;
while(i<=n){
    int j=n;
    while(j>i){
        cout<<" ";
        j--;
    }
    int k=1;
    while(k<=i){
        cout<<k<<" ";
        k++;
    }
    int l=2;
    while(l<=i){
        cout<<i-l+1<<" ";
        l++;
    }
    cout<<endl;
    i++;
}
```


Pattern 25:

```
1 2 3 4 5 5 4 3 2 1
1 2 3 4 * * 4 3 2 1
1 2 3 3 * * * * 2 1
1 2 * * * * * * 2 1
1 * * * * * * * * 1
```

Solution:

```
int i=1;
while(i<=n){
    int j=1;
    while(j<=n-i+1){
        cout<<j<<" ";
        j++;
    }
    int k=2;
    while(k<=i){
        cout<<"* * ";
        k++;
    }
    int l=n;
    while(l>=i){
        cout<<l-i+1<<" ";
        l--;
    }
    cout<<endl;
    i++;
}
```