```java
import java.util.*;

// 1. pattern:increasing triangle
// 2. number :1's
public class PatternWithSingleNumber {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;

		for(int i=1;i<=n;i++){
			for(int j=1;j<=i;j++){
				System.out.print("1");
			}
			System.out.println();
		}



	}

}
//1
//11
//111
//1111
//11111



package IncreasingTriangleWithNP;
import java.util.*;

//1. pattern:increasing triangle
//2. number :incrementing rows
public class One {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;

		for(int i=1,p=1;i<=n;i++,p++){
			for(int j=1;j<=i;j++){
				System.out.print(p+" ");
			}
			System.out.println();
		}

	//i=row
```

```
   //j=col

      }

}
//1
//2 2
//3 3 3
//4 4 4 4
//5 5 5 5 5



package IncreasingTriangleWithNP;
import java.util.*;

//1. pattern:increasing triangle
//2. number :incrementing rows
public class One {

      public static void main(String[] args) {
            // TODO Auto-generated method stub
            int n=5;

//          for(int i=1,p=1;i<=n;i++,p++){
//                for(int j=1;j<=i;j++){
//                      System.out.print(p+" ");
//                }
//                System.out.println();
//          }

            for(int i=1,p=5;i<=n;i++,p--){
                  for(int j=1;j<=i;j++){
                        System.out.print(p+" ");
                  }
                  System.out.println();
            }

      //i=row
   //j=col

      }

}
//1
//2 2
//3 3 3
//4 4 4 4
//5 5 5 5 5
```

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

```
package IncreasingTriangleWithNP;

public class DiamondPattern {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5,p=1;

		for(int i=1;i<=n;i++,p++){
			for(int j=i;j<=n;j++){
				System.out.print(" ");
			}
			for(int j=1;j<i;j++){
				System.out.print(p);
			}

			for(int j=1;j<=i;j++){
				System.out.print(p);
			}

			System.out.println();
		}

		for(int i=1;i<=n;i++,p++){
			for(int j=1;j<=i;j++){
				System.out.print(" ");
			}
			for(int j=i;j<=n;j++){
			   System.out.print(p);
		    }
			for(int j=i;j<=n;j++){
				System.out.print(p);
			}
			System.out.println();
		}

	}
```

```
}


//    1
//   222
//  33333
// 4444444
//555555555
//6666666666
// 77777777
//  888888
//   9999
//   1010
```

```
package ChangeInColumnNumbers;
//pattern : increasing triangle
//number  : incrementing columns
public class RightTriangle {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;

		for(int i=1;i<=n;i++){
			int p=1;
			for(int j=1;j<=i;j++){
				System.out.print(p+++" ");
			}
			System.out.println();
		}

	}

}

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

```
package ChangeInColumnNumbers;
```

```java
//Decreasing triangle
//decreasing columns
public class LeftTriangle {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;
		for(int i=1;i<=n;i++){
			for(int j=1;j<=i;j++){
				System.out.print(" ");
			}
			int p=1;
			for(int j=i;j<=n;j++){
			System.out.print(p++);
		}
				System.out.println();
		}

	}

}

//12345
// 1234
//  123
//   12
//    1



package ChangeInColumnNumbers;

public class HillTriaangle {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;
		for(int i=1;i<=n;i++){
			int p=1;
			for(int j=i;j<=n;j++){
				System.out.print(" ");
			}
			for(int j=1;j<i;j++){
				System.out.print(p++);
			}

			for(int j=1;j<=i;j++){
				System.out.print(p++);
			}
```

```
                System.out.println();
            }

      }

}

//    1
//   123
//  12345
// 1234567
//123456789



package DecreasingColumn;

public class InitialNoSame {

      public static void main(String[] args) {
            // TODO Auto-generated method stub
            int n=5;

            for(int i=1;i<=n;i++){
                  int p=5;
                  for(int j=1;j<=i;j++){
                        System.out.print(p--);
                  }
                  System.out.println();
            }

      }

}

//5
//54
//543
//5432
//54321



package DecreasingColumn;
//pattern : Decreasing Triangle
//Number : Decreasing columns
//initial value different
public class EndValSame {
```

```
	public static void main(String[] args) {
		// TODO Auto-generated method stub
		int n=5;

		for(int i=1,k=n;i<=n;i++,k--){
			int p=k;
			for(int j=1;j<=i;j++){
				System.out.print(" ");
			}
			for(int j=i;j<=n;j++){
			System.out.print(p--);
		}
				System.out.println();
			}

	}

}

//54321
// 4321
//  321
//   21
//    1



package DecreasingColumn;

public class HillPattern {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		int n=5;
		for(int i=1;i<=n;i++){
			//starting value same
			int p=1;
			for(int j=i;j<=n;j++){
				System.out.print(" ");
			}
			for(int j=1;j<i;j++){
				System.out.print(p++);
			}

			for(int j=1;j<=i;j++){
				System.out.print(p--);
			}
```

```
                System.out.println();
            }

      }

      }

//     1
//    121
//   12321
// 1234321
//123454321



package ChangeInColumnNumbers;

public class FloydTriangle {

      public static void main(String[] args) {
            // TODO Auto-generated method stub
            int n=4,p=1;

            for(int i=1;i<=n;i++){
                  for(int j=1;j<=i;j++){
                        System.out.print(p++);
                  }
                  System.out.println();
            }

      }

}
//1
//23
//456
//78910



package ChangeInColumnNumbers;

public class pattern {

      public static void main(String[] args) {
            // TODO Auto-generated method stub
            int n=5,p=0,a;
```

```
            for(int i=1;i<=n;i++){
                  p+=i;
                  a=p;
                 for(int j=1;j<=i;j++){
                       System.out.print(a);
                       a--;
                 }
                 System.out.println();
            }

      }

}
//1
//32
//654
//10987
//1514131211



public class Alphabet {

      public static void main(String[] args) {
            // TODO Auto-generated method stub
            int n=5;

            for(int i=1,p='A';i<=n;i++,p++){
                 for(int j=1;j<=i;j++){
                       System.out.print((char)p);
                 }
                 System.out.println();
            }

      }

}

//A
//BB
//CCC
//DDDD
//EEEEE
```