

1.DIAMOND

```
package task1;

public class Diamond {

    public static void main(String[] args) {
        int n=7,i,j,k;
        for( i=1; i<n;++i) {
            for( k=1;k<=n-i;++k) {
                System.out.print(" ");
            }
            for(j=i;j>=1;--j) { //above
                System.out.print(j);
            }
            for(j=2;j<=i;++j) { //above
                System.out.print(j);
            }
            System.out.println();}

        for( i=n; i>=1;--i) {
            for(k=1;k<=n-i;++k) {
                System.out.print(" ");
            }for(j=i;j>=1;--j) { //below
                System.out.print(j);
            }
            for(j=2;j<=i;++j) { //below
                System.out.print(j);
            }

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

OUTPUT:

```
1
212
32123
4321234
543212345
65432123456
7654321234567
65432123456
543212345
4321234
32123
212
1
```

2.NUMBER PATTERN

```
package task1;
import java.util.*;
public class Pattern1 {
    public static void main(String[] args) {
        Scanner read =new Scanner(System.in);
        System.out.println("Enter a number to print star:");
        int n=read.nextInt();

        for(int i=1;i<=n;++i) {
            for(int k=1;k<=n-i;++k) {
                System.out.print(" ");
            }
            int b=1;
            for(int j=1;j<=i;++j) {
                System.out.print(b+" ");
                b=b*(i-j)/j;
            }
        }
    }
}
```

```

        System.out.println();
    }

}

```

OUTPUT:

Enter a number to print star:

5

```

    1
  1 1
 1 2 1
1 3 3 1
1 4 6 4 1

```

3.SQUARE STAR

```

package task1;
import java.util.Scanner;
public class Pattern2 {

    public static void main(String[] args) {
        Scanner scanner= new Scanner(System.in);
        System.out.println("Enter a number to print:");
        int n=scanner.nextInt();

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

            for(int j=0;j<n;++j) {
                if(i==0 || j==0 || j==n-1|| i==n-1) {
                    System.out.print("* ");
                }else {

```

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

OUTPUT:

Enter a number to print:

5

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