1. Divisors

```
public class Divisors {
	public static void main (String[] args) {
		int x=Integer.parseInt(args[0]);
		int i=1;
		if (x==0){
			System.out.println(x);
		}
		while(x>=i){
			if(x%i==0)
				System.out.println(i);
			i++;
		}

	}
}
```

2. Reversing a string

```
public class Reverse {
	public static void main (String[] args){
		String index= args[0];
		int n=index.length()-1;
		char middle= index.charAt(n/2);
		while(n>=0){
			System.out.print(index.charAt(n));
			n=n-1;
		}
		System.out.println();
		System.out.print("The middle character is "+middle);
	}
}
```

3. Lucky streak

```
public class InOrder {
	public static void main (String[] args) {
		int random=(int)(Math.random()*10);
		int nextRandom=random;
		while(nextRandom>=random){
			System.out.print(nextRandom + " ");
			random=nextRandom;
			nextRandom=(int)(Math.random()*10);

		}

	}
}
```

4. Perfect

```
public class Perfect {
	public static void main (String[] args) {
		int number = Integer.parseInt(args[0]);
		int i=2;
		int sum=1;
		String perfect=number+" is a perfect number since "+number+" = 1";
		while(number>i){
			if(number%i==0){
				perfect+=" + "+i;
				sum=sum+i;
			}
			i++;
		}
		if(sum==number){
			System.out.println(perfect);
		}
		else{
			System.out.println(number+" is not a perfect number");
		}
	}
}
```

5. DamkaBoard

```
public class DamkaBoard {
	public static void main(String[] args) {

		int n = Integer.parseInt(args[0]);

		for(int rows=0; rows<n; rows++){
			for(int lines=0; lines<n; lines++){

				if((rows%2==0)){
					System.out.print("* ");
				}
				else{
					System.out.print(" *");
				}

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

6.+7.+8. OneOfEachStats

```
public class OneOfEachStats {
	public static void main (String[] args) {
		// Gets the two command-line arguments
		int T = Integer.parseInt(args[0]);
		int seed = Integer.parseInt(args[1]);
		// Initailizes a random numbers generator with the given seed value
	Random generator = new Random(seed);
		boolean girl= false;
		boolean boy= false;
		int childrenSum=0;
		int childrenPerFam=0;
		int two=0;
		int three=0;
		int four=0;
		for(int t=0; t < T; t++){
			while (girl==false || boy==false){
				double rnd=generator.nextDouble();
				if (rnd<0.5){
					girl=true;
				}
				else{
					boy=true;
				}
				childrenPerFam++;
				childrenSum++;
			}
		if(childrenPerFam==2){
			two++;
		}
			else if(childrenPerFam==3){
				three++;
```

```
                    }
                        else if(childrenPerFam>=4){
                            four++;
                        }
            childrenPerFam=0;
            girl= false;
            boy= false;
            }
            double avg=((double)childrenSum/T);
            System.out.println("Average: "+avg+" children to get at least one of
each gender.");
            System.out.println("Number of families with 2 children: "+two);
            System.out.println("Number of families with 3 children: "+three);
            System.out.println("Number of families with 4 or more children: "+four);

            if((two>three)&&(two>four)){
                System.out.println("The most common number of children is
2.");
            }
            else if((three>four)&&(three>two)){
                System.out.println("The most common number of children is
3.");
            }
            else if((four>three)&&(four>two)){
                System.out.println("The most common number of children is 4 or
more.");
            }
```