HW2Code

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1.Divisors

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

2.Reversing a string

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

	}
}
```

3. Lucky streak

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

4.Perfect Numbers

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

5.Damka Board

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

		int n = Integer.parseInt(args[0]);
		for (int i = 0 ; i < n ; i++ ) {
			for (int j = 0 ; j < n ; j++ )
			 {
				if (i % 2 != 0)
				System.out.print(" *");
				else
				System.out.print("* ");
			}
			System.out.println();

		}
	}
}
```

8.One Of Each Stats(final version)

```
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]);
      Random generator = new Random(seed);
        // Initailizes a random numbers generator with the given seed value
                boolean boy = false;
                boolean girl = false;
                int twoChilds = 0 ;
                int threeChilds = 0 ;
                int fourPlusChilds = 0 ;
                double totalChilds = 0;
                int count = 0 ;
                double rnd = (double) (generator.nextDouble());
                for (int t = 0; t < T ; t++ )
                {
                        while (!girl || !boy)
                        {

                                //random number between 0 to 0.5 means a girl
                                //random number between 0.5 to 1 means a boy
                                if (rnd > 0.5)
                                {
                                        boy = true;
                                        count++ ;
                                        totalChilds++ ;
                                        rnd = (double) (generator.nextDouble());
                                }
```

```
                else
                {
                        girl = true;
                        count++ ;
                        totalChilds++ ;
                        rnd = (double) (generator.nextDouble());
                }
            }
            if (count == 2)
                twoChilds++;
            else if (count == 3)
                threeChilds++;
            else if (count > 3)
                fourPlusChilds++;
            boy = false;
            girl = false;
            count = 0;
        }
        String mode = "";
        if ((fourPlusChilds > threeChilds) && (fourPlusChilds >
twoChilds))
            mode = "4 or more.";
        else if(threeChilds > twoChilds)
            mode = "3.";
        else
            mode = "2.";
        System.out.println("Average: " + (double)(totalChilds / T) + "
children to get at least one of each gender.");
        System.out.println("Number of families with 2 children: " +
twoChilds);
        System.out.println("Number of families with 3 children: " +
threeChilds);
```

```
                System.out.println("Number of families with 4 or more children: "
+ fourPlusChilds);
                System.out.println("The most common number of children is "+
mode);


        }
}
```