Hw02-code

Divisors

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

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

        for (int i = 1; i <= x/2; i = i + 1) {

            if (x % i == 0) {
            System.out.println(i);

            }

        }

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

Reverse

```
public class Reverse {
    public static void main (String[] args){
        String s = args[0];

        int length = s.length();
        String reversed = "";

        for (int i = length - 1; i >= 0 ; i = i - 1) {

        reversed = reversed + s.charAt(i);
        }

        System.out.println(reversed);
        System.out.println("The middle character is " + reversed.charAt((s.length())/2));

    }
}
```

InOrder

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

    int num;
    int newnum = -1;

        do {
        num = newnum;
        newnum = (int)((Math.random() * 10));

            if (num <= newnum) {
            System.out.print(newnum + " ");
            }
        }

        while (num <= newnum );
    }
}
```

Damka Board

```
public class DamkaBoard {
    public static void main(String[] args) {
        int board = Integer.parseInt(args[0]);

        for (int t = 0; t < board; t++) {

            if (t % 2 != 0) {
                System.out.print(" ");
            }

                for (int i = 0; i < board; i++) {
                    System.out.print("* ");
            }
        System.out.println();
        }
    }
}
```

Perfect

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

        int x = Integer.parseInt(args[0]);
        String perfect = x + " is a perfect number since " + x + " = 1";
        int sum = 0;

        for (int i = 1; i <= x/2; i = i + 1) {

            if (x % i == 0) {
            perfect = perfect + " + " + i;
            sum = sum + i;
            }
        }

            if (sum == x){
                System.out.println(perfect);
            } else {
                System.out.println(x + " is not a perfect number");
            }

    }
}
```

Oneofeachstats

```
import java.util.Random;

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

      int T = Integer.parseInt(args[0]);
      int seed = Integer.parseInt(args[1]);

      Random generator = new Random(seed);
      String max;
      int two = 0;
      int three = 0;
      int fourandmore = 0;
      float count = 0;


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

         int isgirl = 0;
         int isboy = 0;

         do {
            if (generator.nextDouble()<0.5) {
            isgirl = isgirl + 1;
            } else {
            isboy +=1;
            }

         }
         while (isgirl == 0  || isboy == 0);

         if (isboy + isgirl == 2) {
            two += 1;
         } else if (isboy + isgirl == 3) {
            three += 1;
         } else {
            fourandmore += 1;
         }
         count = count + isboy + isgirl;
      }

      if (two > three && two > fourandmore) {
         max = "2";
         } else if (three > two && three > fourandmore) {
            max = "3";
         } else {
            max = "4 or more";
         }
```

```
        System.out.println("Avrage: " + (count/T) + " 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: " + fourandmore);
        System.out.println("The most common number of children is " + max );

    }
}
```