DIVISOR

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

}
```

IN ORDER

```
public class InOrder {
    public static void main (String[] args) {
        //// Write your code here
        int lastnum = 0;
                int randomnum;
                while(true){
                randomnum = (int)(10 * Math.random());
                if(randomnum < lastnum){
                        break;
                }
                System.out.println(randomnum);
                lastnum = randomnum;
                }
    }
}
```

PERFECT

```
public class Perfect{
    public static void main(String[] args) {
        int x = Integer.parseInt(args[0]);
        String isperfect = args[0] + " is a perfect number since " + args[0] + " =";
        int totaldividers = 0;
        for(int i = 1; i <= (x - 1); i++) {
            if(x % i == 0){
                isperfect = isperfect + " " + i + " +";
                totaldividers = totaldividers + i;
            }
        }


        if(totaldividers == x)
        {
          System.out.print(isperfect.substring(0, isperfect.length() - 1));
        }
        else
        {
          System.out.print(args[0] + " is not a perfect number");
        }
    }
}
```

REVERSE

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

       String str = args[0];
       int length = str.length();
       for(int curentplace = length - 1; curentplace >= 0; curentplace--)
       {
          System.out.print(str.charAt(curentplace));
       }

       System.out.println();

       if((length % 2) == 0){
         System.out.print("The middle character is "
         + str.charAt(length - (length / 2) - 1));
       }
       else
       {
          System.out.print("The middle character is "
          + str.charAt((length - 1) - ((length - 1) / 2)));
       }

   }
}
```

DAMKABOARD

```
public class DamkaBoard{
    public static void main(String[] args) {
        int n = Integer.parseInt(args[0]);
        for(int i = 1; i <= n; i++){
            if(i % 2 == 0){
                System.out.print(" ");
            }
            for(int t = 1; t < n; t++){
                System.out.print("* ");
            }
            System.out.print("*");
            if (i % 2 == 1) System.out.print(" ");
            System.out.println();
        }
    }
}
```

OneOfEachStats

```
import java.util.Random;

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

      int familytwo = 0;
      int familythree = 0;
      int familyforeandmore = 0;
      int avergechildrecounter = 0;
      int T = Integer.parseInt(args[0]);
      int seed = Integer.parseInt(args[1]);
      Random rand = new Random(seed);

          for (int i = 1; i <= T; i++){
          int children = 0;
          double boy = 0.0;
          double girl = 1.0;
            while(!( boy > 0.5 && girl <= 0.5)) {
                if(rand.nextDouble() > 0.5) {
                   boy = (double)1;
                }
                else{
                  girl = (double)0;
                }
                children++;
            }
            avergechildrecounter = avergechildrecounter + children;

            if(children == 2){
              familytwo++;
            }

            else if(children == 3){
              familythree++;
            }

            else{
              familyforeandmore++;
            }

        }

      double everge = ((double)avergechildrecounter / T);
      System.out.println("Average: " + everge + " children to get at least one of
each gender.");
```

```
        int common = Math.max(familytwo, familythree);
        int mostcommon = Math.max(common, familyforeandmore);
        System.out.println("Number of families with 2 children: " + familytwo);
        System.out.println("Number of families with 3 children: " + familythree);
        System.out.println("Number of families with 4 or more children: " +
familyforeandmore);


        if(familytwo == mostcommon){
           System.out.println("The most common number of children is 2.");
        }

        else if(familythree == mostcommon){
            System.out.println("The most common number of children is 3.");

        }

        else{
             System.out.println("The most common number of children is 4 or
more.");

        }
    }
}
```