

Divisors.java

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

Reverse.java

```
public class Reverse {  
    public static void main (String[] args){  
        String originalString = args[0];  
        String reversedString = " ";  
        char midChar;  
  
        for (int i = originalString.length() - 1; i >= 0; i--) {  
            reversedString = reversedString + originalString.charAt(i);  
        }  
  
        if (originalString.length()%2 == 0){  
            midChar = originalString.charAt(originalString.length() / 2 - 1);  
        } else {  
            midChar = originalString.charAt(originalString.length() / 2);  
        }  
  
        System.out.println(reversedString);  
        System.out.println("The middle character is " + midChar);  
    }  
}
```

InOrder.java

```
public class InOrder {
    public static void main (String[] args) {
        //// Write your code here

        int num1 = (int)(Math.random()*10);
        System.out.println(num1);

        int num2 = (int)(Math.random()*10);

        while (num2 >= num1) {
            System.out.print(" "+num2);
            num1 = num2;
            num2 = (int)(Math.random()*10);
        }
    }
}
```

DamkaBoard.java

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

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

        for (int i = 1; i <= n; i++) {
            outputString = "";
            for (int j = 1; j <= n; j++) {

                if (i % 2 != 0) {
                    outputString = outputString + "* ";
                } else {
                    outputString = outputString + " *";
                }
            }
            System.out.println(outputString);
        }
    }
}
```

Perfect.java

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

        int x = Integer.parseInt(args[0]);
        int y = 0;
        String Print = "";
        for (int i = 1; i <= (x-1); i++) {
            if ((x % i) == 0) {
                y = y+i;
                if (i != 1) {
                    Print = Print + " + " + i;
                } else {
                    Print = "" + i;
                }
            }
        }
        Boolean n = true;
        n = (y==x) ? true : false;
        if (n==true) {
            System.out.println(x + " is a perfect number since " + x + " = " + Print);
        } else {
            System.out.println( x + " is not a perfect number");
        }
    }
}
```

OneOfEachStats.java

```
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);
        boolean girl = false;
        boolean boy = false;
        int childCount = 0;

        double sum = 0;
        int familyOf2 = 0;
        int familyOf3 = 0;
        int familyOf4 = 0;

        int mode = 0;

        for (int i = 0; i < T; i++) {
            childCount = 0;
            boy = false;
            girl = false;

            do {
                double rnd = generator.nextDouble();
                if (rnd < 0.5) {
                    girl = true;
                } else {
                    boy = true;
                }
                childCount++;
            } while (!boy || !girl);
            if (childCount == 2) {
                familyOf2++;
            } else if (childCount == 3) {
                familyOf3++;
            } else {
                familyOf4++;
            }
            sum += childCount;
        }

        mode = Math.max(Math.max(familyOf2, familyOf3), familyOf4);

        System.out.println("Average: " + (sum/T) + " children to get at least one of each gender.");
        System.out.println("Number of families with 2 children: " + familyOf2);
        System.out.println("Number of families with 3 children: " + familyOf3);
        System.out.println("Number of families with 4 or more children: " + familyOf4);
        System.out.println("The most common number of children is " + ((mode == familyOf2) ? "2." : (mode == familyOf3) ? "3." : "4."));
    }
}
```