1) Divisors.java :

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

2) Reverse.java :

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

3) InOrder.java

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

4) Perfect.java

```java
public class Perfect {
    public static void main(String[] args){
        int a = Integer.parseInt(args[0]);
        boolean isPerfect = true;
        int y = 0;
        for (int x = 1; x < a; x++){
            if (a % x == 0){
                y += x;
            }
        }
        if (y != a){
            isPerfect = false;
        }

        String s = (a) + " is a perfect number since " + (a) + " = 1";
        for (int i = 2; i < a; i++){
           if (a % i == 0){
            s += " + " + i;
           }
        }

        if (isPerfect){
            System.out.println(s);
        } else {
            System.out.println(a + " is not a perfect number");
        }
    }
}
```

5) DamkaBoard.java

```java
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();
        }
    }
}
```

6) OneOfEach.java

```java
public class OneOfEach {
    public static void main(String[] args){
        int boy = 0;
        int girl = 0;
        boolean OneBoy;
        boolean OneGirl;
        do {
            if (Math.random() < 0.5){
                boy += 1;
                System.out.print("b ");
            } else {
                girl += 1;
                System.out.print("g ");
            }
            OneBoy = (boy >= 1);
            OneGirl = (girl >= 1);
        } while (!(OneBoy && OneGirl));
        System.out.println();
        System.out.print("You made it... and you now have " + (boy + girl) + "
children.");
    }
}
```

7) OneOfEachStats1.java

```
public class OneOfEachStats1{
    public static void main(String[] args){
        int T = Integer.parseInt(args[0]);
        int boy = 0;
        int girl = 0;
        boolean OneBoy;
        boolean OneGirl;
        int TwoChildren = 0;
        int ThreeChildren = 0;
        int MoreChildren = 0;
        double TotalChildren = 0;
        for (int x = 0; x < T; x++) {
        do {
            if (Math.random() < 0.5){
                boy += 1;
            } else {
                girl += 1;
            }
            OneBoy = (boy >= 1);
            OneGirl = (girl >= 1);
        } while (!(OneBoy && OneGirl));
        if ((boy + girl) == 2) {
            TwoChildren += 1;
        } else if ((boy + girl) == 3){
            ThreeChildren += 1;
        } else if ((boy + girl) >= 4){
            MoreChildren += 1;
        }
        TotalChildren += (boy + girl);
        boy = 0;
        girl = 0;
        }
        System.out.println("Average: " + (TotalChildren / T) + " children to get at
least one of each gender.");
        int max =  Math.max(TwoChildren , Math.max(ThreeChildren , MoreChildren));
        System.out.println("Number of families with 2 children: " + TwoChildren);
        System.out.println("Number of families with 3 children: " + ThreeChildren);
        System.out.println("Number of families with 4 or more children: " +
MoreChildren);
        if (max == TwoChildren) {
            System.out.println("The most common number of children is 2.");
        } else if (max == ThreeChildren) {
            System.out.println("The most common number of children is 3.");
        } else if (max == MoreChildren) {
            System.out.println("The most common number of children is 4 or more.");
        }
    }
}
```

8) 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);
        int boy = 0;
        int girl = 0;
        boolean OneBoy;
        boolean OneGirl;
        int TwoChildren = 0;
        int ThreeChildren = 0;
        int MoreChildren = 0;
        double TotalChildren = 0;
        for (int x = 0; x < T; x++) {
        do {
            if (generator.nextDouble() < 0.5){
                boy += 1;
            } else {
                girl += 1;
            }
            OneBoy = (boy >= 1);
            OneGirl = (girl >= 1);
        } while (!(OneBoy && OneGirl));
        if ((boy + girl) == 2) {
            TwoChildren += 1;
        } else if ((boy + girl) == 3){
            ThreeChildren += 1;
        } else if ((boy + girl) >= 4){
            MoreChildren += 1;
        }
        TotalChildren += (boy + girl);
        boy = 0;
        girl = 0;
        }
        System.out.println("Average: " + (TotalChildren / T) + " children to get at
least one of each gender.");
        int max =  Math.max(TwoChildren , Math.max(ThreeChildren , MoreChildren));
        System.out.println("Number of families with 2 children: " + TwoChildren);
        System.out.println("Number of families with 3 children: " + ThreeChildren);
        System.out.println("Number of families with 4 or more children: " +
MoreChildren);
        if (max == TwoChildren) {
            System.out.println("The most common number of children is 2.");
        } else if (max == ThreeChildren) {
            System.out.println("The most common number of children is 3.");
        } else if (max == MoreChildren) {
            System.out.println("The most common number of children is 4 or more.");
```

```
        }
    }
}
```