

```
public class Reverse {  
    public static void main (String[] args){  
        String word = args[0];  
        int n = word.length();  
        int i = n - 1;  
        int a = word.length()/2-1;  
        int b = word.length()/2;  
        while (i>=0)  
        {  
  
            System.out.print(word.charAt(i));  
            i= i-1;  
  
        }  
        System.out.println();  
  
        if (word.length()%2 == 0)  
        {  
            System.out.println("The middle character is " + word.charAt(a));  
        } else {  
            System.out.println("The middle character is " + word.charAt(b));  
        }  
  
    }  
  
}
```

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

```

public class OneOfEachStats1 {
    public static void main (String[] args) {
        int T = Integer.parseInt(args[0]);
        int totalChildren = 0;
        int twochildren = 0;
        int threechildren = 0;
        int fourormore = 0;
        for(int i = 0; i<T; i++){
            int childrenPerFamily=0;
            boolean b = false;
            boolean g = false;
            while (!b || !g){
                double probab = Math.random();
                if (probab < 0.5)
                {
                    b = true;
                } else
                {
                    g = true;
                }
                totalChildren++;
                childrenPerFamily++;
            }
            if (childrenPerFamily==2)
            {
                twochildren++;
            }
            else if(childrenPerFamily==3)
            {
                threechildren++;
            }else if(childrenPerFamily >= 4)
            {
                fourormore++;
            }
        }
        double average = (totalChildren/(double)T);
        System.out.print("Average: "+ average+ " children to get at least one of each gender");
        System.out.println();
        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: " + fourormore);
        String mode;

        if (twochildren > threechildren && twochildren > fourormore) {mode = "2";}
        else if (threechildren > twochildren && threechildren > fourormore) {mode = "3";}
        else if (fourormore > twochildren && fourormore > threechildren) {mode = "4 or more";}
        else if (twochildren == threechildren && twochildren > fourormore) {mode = "2";}
        else if (twochildren == fourormore && twochildren > threechildren) {mode = "2";}
        else if (threechildren == fourormore && threechildren > twochildren) {mode = "3";}
        else {mode = "4 or more";}

        System.out.println("The most common number of children is " + mode + ".");
    }
}

```

```

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]);
        // Initializes a random numbers generator with the given seed value
        Random generator = new Random(seed);
        int totalChildren = 0;
        int twochildren = 0;
        int threechildren = 0;
        int fourormore = 0;
        for(int i = 0; i<T; i++){
            int childrenPerFamily=0;
            boolean b = false;
            boolean g = false;
            while (!b || !g){
                double prob = generator.nextDouble();
                if (prob < 0.5){
                    b = true;
                } else {
                    g = true;
                }
                totalChildren++;
                childrenPerFamily++;
            }
            if (childrenPerFamily==2)
            {
                twochildren++;
            }
            else if(childrenPerFamily==3)
            {
                threechildren++;
            }
            else if(childrenPerFamily >= 4)
            {
                fourormore++;
            }
        }
        double average = (totalChildren/(double)T);
        System.out.print("Average: "+ average+ " children to get at least one of each gender.");
        System.out.println();
        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: " + fourormore);
        String mode;

        if (twochildren > threechildren && twochildren > fourormore) {mode = "2";}
        else if (threechildren > twochildren && threechildren > fourormore) {mode = "3";}
        else if (fourormore > twochildren && fourormore > threechildren) {mode = "4 or more";}
        else if (twochildren == threechildren && twochildren > fourormore) {mode = "2";}
        else if (twochildren == fourormore && twochildren > threechildren) {mode = "2";}
        else if (threechildren == fourormore && threechildren > twochildren) {mode = "3";}
        else {mode = "4 or more";}
        System.out.println("The most common number of children is " + mode + ".");
    }
}

```

```

public class OneOfEach {
    public static void main (String[] args) {
        //// Put your code here
        boolean b = false;
        boolean g = false;
        int count = 0;
        while (!b || !g){
            double prob = Math.random();
            if (prob < 0.5){
                g = true;
                count++;
                System.out.print("g ");
            } else {
                b = true;
                count++;
                System.out.print("b ");
            }
        } System.out.println();
        System.out.print("You made it... and you have " + count + " children");
    }
}

```

```

public class InOrder {
    public static void main (String[] args) {
        //// Write your code here
        int a = (int)(Math.random()*(10+1));
        System.out.print(a + " ");

        do{
            int b = (int)(Math.random()*(10+1));
            if(b>=a)
                System.out.print(b+ " ");
            else break;
            a = b;
        }
        while (true);
    }
}

```

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

```
public class DamkaBoard {  
    public static void main(String[] args) {  
        /// Put your code here  
        int n = Integer.parseInt(args[0]);  
        int line = 1;  
        while (line <= n) {  
            int x = 1;  
            while ( x<= n){  
                if (line%2==0) {  
                    System.out.print(" *");  
                }  
                else {  
                    System.out.print(" * ");  
                }  
                x=x+1;  
            }  
            System.out.println();  
            line = line + 1;  
        }  
    }  
}
```