```
public class Divisors {
   public static void main (String[] args) {
    int x = Integer.parseInt(args[0]);
    int i = 1;

      while (x >= i){
         if (x % i == 0){
          System.out.println(i);
                i++;
       } else {
                i++;
           }
    }

   }
}
```

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

```
public class InOrder {
   public static void main (String[] args) {
      int i;
      int a = -1;
       do{
          i = (int) (Math.random() * 10);
        if (i>=a){
            System.out.print(i + " ");
                a = i;
         } else {
            break;
         }

       } while (i < 10);
   }
}
```

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

   }

   }
```

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

```
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 totalChildren = 0;
      int childrenCount = 0;
      int familiesWith2Children = 0;
      int familiesWith3Children = 0;
      int familiesWith4orMoreChildren = 0;

   for (int i = 0; i < T; i++){
          int boy = 0;
          int girl = 0;
      do{
           double rnd = generator.nextDouble();
           if ( rnd < 0.5 ){
                    girl++;
          } else {
                    boy++;
          }
      }
          while (boy == 0 || girl== 0);

           childrenCount = boy + girl;
           totalChildren += childrenCount;
     if (childrenCount == 2) {
            familiesWith2Children++;
      } else if (childrenCount == 3) {
            familiesWith3Children++;
      } else if (childrenCount >= 4) {
            familiesWith4orMoreChildren++;
      }
   }
       double average = (double) totalChildren / T;

      System.out.println("Average: " + average + " children to
get at least one of each gender.");
       System.out.println("Number of families with 2 children:
" + familiesWith2Children);
       System.out.println("Number of families with 3 children:
" + familiesWith3Children);
```

```
       System.out.println("Number of families with 4 or more
children: " + familiesWith4orMoreChildren);

        int a = 0 ;
   if (familiesWith2Children > familiesWith3Children ){
      if(familiesWith2Children > familiesWith4orMoreChildren){
          a = 2;
       System.out.println("The most common number of children
is " + a + ".");
      } else {
            a = 4 ;
            System.out.println("The most common number of
children is " + a + " or more.");
         }
} else {
if(familiesWith3Children > familiesWith4orMoreChildren){
            a = 3;
            System.out.println("The most common number of
children is " + a + ".");
   } else {
            a = 4 ;
            System.out.println("The most common number of
children is " + a + " or more.");
         }
      }
   }
}
```