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

		//recieving number from user
		int x = 0;
		x = Integer.parseInt(args[0]);

		//checkimg what are the divisors of x
		for(int i = 1; i <= x; i++){
			if (x % i == 0){
				System.out.println(i);
			}

		}

	}
}
```

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

		//receiving word from user
		String word = "";
		word = args[0];

		//creating a new string for the reversed word
		String newWord = "";

		//creating an integer to save the length of the word
		int n = word.length();

		//going through the word from end to begining
		//and saving every character into the new word
		for(int i = n - 1; i >= 0; i--){

			newWord = newWord + word.charAt(i);

		}

		//printing the new word we created
		System.out.println(newWord);

		//finding the middle character and printing it
		char middleChar = ' ';
		if (word.length() % 2 == 0){
			middleChar = word.charAt((n/2)-1);
		}else{
			middleChar = word.charAt(n/2);
```

```
            }


            System.out.println("The middle character is " +
middleChar);


      }
}
```

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

		//creating the first random num
		int num1 = (int) (Math.random() * 10);
		int num2 = num1;

		//the loop prints the first number
		//creats another random num
		//and does that only while the last num is smaller than the previous
		do{

			System.out.print(num2 + " ");
			num1 = num2;
			num2 = (int) (Math.random() * 10);

		}while(num2 >= num1);

	}
}
```

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

		//receiving a number from user
		int n = 0;
		n = Integer.parseInt(args[0]);

		int sum = 0;

		//creating the string of the answer
		String strOG = n + " is a perfect number since " + n + "
= 1";
		String str = strOG;

		//a loop that will add dividors to the string
		for(int i = 2; i < n; i++){
			if (n % i == 0){
				str = str + " + " + i;
				sum = sum + i;
			}
		}
		//if statemant that determines the answer
		if((sum+1) == n){
			System.out.print(str);
		}
		else{
			System.out.print(n + " is not a perfect number");
		}
	}
}
```

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

		//recieving number from user
		int n = 0;
		n = Integer.parseInt(args[0]);

		//using the number for the size of the board
		for(int i = 1; i <= n; i++){

			if(i%2==0){
				for(int j = 1; j <= n; j++){

					System.out.print(" *");

				}
			}else{

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

					System.out.print("* ");

				}
			}
			System.out.println();


		}
	}
}
```

```
import java.util.Random;
/**
 *  Computes some statistics about families in which the parents decide
 *  to have children until they have at least one child of each gender.
 *  The program expects to get two command-line arguments: an int value
 *   that determines how many families to simulate, and an int value
 *  that serves as the seed of the random numbers generated by the program.
 *  Example usage: % java OneOfEachStats 1000 1
 */
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]);
          // Initailizes a random numbers generator with the given seed value
        Random generator = new Random(seed);

          boolean girl = false;
          boolean boy = false;

          double avg = 0;
          int children = 0;
          int two = 0;
          int three = 0;
          int four = 0;
          int childSum = 0;
```

```
String str = "";
char g = 'g';
char b = 'b';

for(int i = 0; i < T; i++){
      girl = false;
      boy = false;
      children = 0;
      do{
            double rnd = generator.nextDouble();
            if(rnd < 0.5){
                  girl = true;
                  children = children + 1;
            }
            else{
                  boy = true;
                  children = children + 1;
            }

      }while((girl != true) || (boy != true));

      if(children == 2){
            two = two +1;
      }else if(children == 3){
            three = three +1;
      }else if(children >= 4){
            four = four +1;
      }
```

```
                childSum = childSum + children;


           }


           avg = (Double.valueOf(childSum) / Double.valueOf(T));


           System.out.println("Average: " + avg + " children to get
at least one of each gender.");
           System.out.println("Number of families with 2 children: "
+ two );
           System.out.println("Number of families with 3 children: "
+ three );
           System.out.println("Number of families with 4 or more
children: " + four );


           if(two > three && two > four){
                System.out.println("The most common number of
children is 2.");
           }else if(three > two && three > four){
                System.out.println("The most common number of
children is 3.");
           }else if(four > two && four > three){
                System.out.println("The most common number of
children is 4 or more.");
           }else if(two == three || two == four){
                System.out.println("The most common number of
children is 2.");
           }else if(three == four){
                System.out.println("The most common number of
children is 3.");
           }
     }
}
```