Tamir Sida hw 02
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```
/**
 *  Gets a command-line argument n (int), and prints an n-by-n damka board.
 */
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();
		}
	}
}
```

```
/**
 *  Gets a command-line argument (int), and prints all the divisors of the given number.
 */
public class Divisors {
        public static void main (String[] args) {

                int number = Integer.parseInt(args[0]);
                int count= 1;
                int k;


                while (count <= number) {
                        if (number%count==0) {
                                System.out.println(count);
                        }
                                count++;
        }
        }
}
```

```
/**
 *  Generates and prints random integers in the range [0,10),
 *  as long as they form a non-decreasing sequence.
 */
public class InOrder {

public static void main(String[] args) {

        int current = (int) (Math.random() * 10);
        int next;
        int temp;
        System.out.print(current);

        do {
                next = (int) (Math.random() * 10);
                if (next > current) {

                        System.out.print(" " +next);
                        temp= current;
                        current=next;
                        next= temp;



        }
}
        while (next<current);

}
}
```

```
/**
 *  Simulates the formation of a family in which the parents decide
 *  to have children until they have at least one child of each gender.
 */
public class OneOfEach {
        public static void main (String[] args) {
                //// Put your code here
                String answer = "";
                boolean g = false;
                boolean b = false;
                int pick;
                int countt= 0;


                do {
                        pick = (int) (Math.random()*2);
                        if (pick == 1) {
                                g = true;
                                System.out.print("g ");
                                //answer += "g ";
                                 }else {
                                //g = false;
                                b = true;
                                System.out.print("b ");
                                // answer += "b ";

                        }
                        countt++;
                }
                        while (!b||!g);

                        System.out.println();
                        System.out.println("You made it... and you now have " + countt + "
children.");

                        }

                                        }
```

```
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);

        //// In the previous version of this program, you used a statement like:
        //// double rnd = Math.random();
        //// Where "rnd" is the variable that stores the generated random value.
        //// In this version of the program, replace this statement with:
        //// double rnd = generator.nextDouble();
        //// This statement will generate a random value in the range [0,1),
        //// just like you had in the previous version, except that the
        //// randomization will be based on the given seed.
        //// This is the only change that you have to do in the program.
        /**
 *  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 one command-line argument: an int value
 *      that determines how many families to simulate.
 */

        //// Put your code here

/**
 *  Simulates the formation of a family in which the parents decide
 *  to have children until they have at least one child of each gender.
 */
        int num = Integer.parseInt(args[0]);
        String answer = "";
        boolean g = false;
        boolean b = false;
        int pick;
        int countt= 0;
        int avgkids= 0;
        int twokids = 0;
        int threekids= 0;
        int fourmore= 0;
        for (int i=0; i<num; i++){
            g=false;
            b=false;
            countt=0;

            do {
                pick = (int) (Math.random()*2);
                if (pick == 1) {
                    g = true;

                    //answer += "g ";
                    }else {
                    b = true;
                }
                countt++;
            }
                while (!b||!g);


                avgkids+=countt;
                if (countt==2){
                    twokids++;
                }else if (countt==3){
                    threekids++;
                }else if (countt>=4){
                    fourmore++;

                }
            }

                    System.out.println("Average: " + ((double) avgkids)/((double)num));
                    System.out.println("Number of families with 2 children: " + twokids);
                    System.out.println("Number of families with 3 children: " + threekids);
                    System.out.println("Number of families with 4 or more children: " + fourmore);
```

```
                              }




}
```

```
/**
 *  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 one command-line argument: an int value
 *        that determines how many families to simulate.
 */
public class OneOfEachStats1 {
        public static void main (String[] args) {
                //// Put your code here

/**
 *  Simulates the formation of a family in which the parents decide
 *  to have children until they have at least one child of each gender.
 */
                int num = Integer.parseInt(args[0]);
                String answer = "";
                boolean g = false;
                boolean b = false;
                int pick;
                int countt= 0;
                int avgkids= 0;
                int twokids = 0;
                int threekids= 0;
                int fourmore= 0;
                for (int i=0; i<num; i++){
                        g=false;
                        b=false;
                        countt=0;

                        do {
                                pick = (int) (Math.random()*2);
                                if (pick == 1) {
                                        g = true;

                                        //answer += "g ";
                                        }else {
                                        b = true;
                                }
                                countt++;
                        }
                                while (!b||!g);


                                avgkids+=countt;
                if (countt==2){
                    twokids++;
                }else if (countt==3){
                    threekids++;
                }else if (countt>=4){
                    fourmore++;

                }
            }

                    System.out.println("Average: " + ((double)
avgkids)/((double)num));
                    System.out.println("Number of families with 2 children: " +
twokids);
                    System.out.println("Number of families with 3 children: " +
threekids);
                    System.out.println("Number of families with 4 or more
children: " + fourmore);



                        }



    }
```

```
/**
 *  Gets a command-line argument (int), and chekcs if the given number is perfect.
 */
public class Perfect {
    public static void main (String[] args) {
        //// Put your code here
        int num = Integer.parseInt(args[0]);
        int sum = 0;
        String perfectNum = (num + " is a perfect number since " + num + " = " + "1");

        for (int i=1; i>0; i++) {
            if (num % i == 0 && i!= num) {
                sum+= i;
                if (num % i == 0 && i!= num && i!=1){
                     perfectNum+= " + " + i;
                }
            }
        }
            if (sum == num) {
                System.out.print(perfectNum);
            }
            else {
                System.out.print(num + " is not a perfect number");
            }
        }
    }
```

```
/**
 * Prints a given string, backward. Then prints the middle character in the string.
 * The program expects to get one command-line argument: A string.
 */
public class Reverse {
    public static void main (String[] args){
        //// Put your code here

        String word= args[0];
        int wrd_Length = word.length();
        int middle_chr = 0;

        if (wrd_Length==0){
        System.out.println(" ");
    }
        else  {
        // get the mid char
        middle_chr = wrd_Length/2;

    for (int i = (word.length()-1); i>=0; i--){
        System.out.print(word.charAt(i));
    }
        System.err.println();

        System.out.println("The middle character is " + word.charAt(middle_chr));

    }
}
}
```