Pretend you are taking an exam or a screening for a programmer intern recruitment interview. First, make a fresh directory for this lab. Then, in this directory, start with nothing and perfect a complete Java application (named anything you want) that (when it runs, of course) does the following in the listed order:

1. Print **Please type a small positive integer.** and go to the next line. (Course notes and Java API documentation say that `System.out.print( something )` will print what something means literally or evaluates to and make future printing be on the same line. `println` makes it go to a new line after printing.)

2. Construct a `java.util.Scanner` from `System.in` so you can use it to get input. (Notes and documentation say you code that with `java.util.Scanner sc = new java.util.Scanner(System.in);`)

3. Input one integer which we will call N. (Tip: Use `N` for your variable's name.) (Notes, documentation lead to example code `int N = sc.nextInt( );`)

4. Repeat N times printing Help, all on one line. (Note: You MUST use a loop since you cannot predict what value you or the user will type in for N. Use `while` or `for`, your choice.)

5. Print **Please type N ints including some 8s.** on the next line. (N here is whatever small positive integer the user had typed.) Documentation about Java Strings and the overloaded + operator for concatenation of Strings led us to tell you that a good way to do this is:

   ```java
   System.out.println("\nPlease bla " + N + " ints incl bla bla");
   ```

6. Make (technically, instantiate) a length N array and an array reference variable to refer to it. Notes: `int[ ] A = new int[ N ];`

7. Assuming your or the user followed the instructions of line 5, make the computer read the N numbers and store them all in the array made in step 6, in the original order they are input. (Note: The Note of step 3 applies here.)

8. Print the N numbers in the original order with a space in front of each one, all on one line. (Note the Note above.) Java `String` literal rule: The string of one space is " "

9. Calculate and print on the next line how many copies of 8 is or are in the array. (You'll need a variable, a loop, an `if` inside the loop, and an operation like `count=count+1;` inside the `if`.) Warning: Print the number of copies, NOT the actual 8's! ASK neighbors and/or TAs for how!

10. Demonstrate you understand the distinction we warned you about. Program it to print, AFTER the number of copies, **Here they are:** followed by a sequence of that many 8's. (See the example below and ASK if our English writing of steps 9 and 10 is still confusing.)

11. Print **What is your favorite number?**

12. Input one `int`, the user's favorite number.

13. Calculate and print how many copies of the user's favorite number is or are in the array. For credit, find out (if you don't know already) how to make a (.zip) archive of this lab's directory, and then upload the archive to BB, Lab8 Followup. Sample I/O we expect: