

Day72 Bunch of Practice 2, due Friday 4/9/21 by midnight.

Open the repl on the Google Classroom for this assignment.

1. Create a Scanner.
2. Do a while loop. Ask the user to enter a number greater than 999. If they enter a value less than 1000 say "Too small, try again.", otherwise, exit the loop.
3. Once they do, create an ArrayList and put each digit from their number into the ArrayList like this: if the user entered 1234, the ArrayList will be [1, 2, 3, 4] where the item at index 0 is 1, the item at index 1 is 2, etc. You will need to use modulo as well as division to get the digits of the user number individually in order to add them to the ArrayList.
4. Print the ArrayList using a simple System.out.println() call.
5. Using nested for loops, check and report if any digits in the ArrayList are duplicates. Use an if/else statement so you say if there are duplicates and if there are not duplicates.
6. Create an int array that has the number of elements as the ArrayList size.
7. Put the digits from the ArrayList into the array, in the same order.
8. Print the digits in the array on a single line with a space between each digit.
9. Using a for loop, print each digit, starting with index 0, multiplied by the power of 10 that it was originally, one on each line. So if the user entered 1234, you'd print 1000, then 200, then 30, then 4. As you print these numbers, add them up.
10. When the printing of the numbers is done, use an if statement to verify that the sum you just calculated by adding all of these numbers up is the same as the number the user originally entered. That is, $1000+200+30+4$ does in fact equal 1234. If it does, say it does, if it doesn't, say it doesn't. (Note, if it doesn't, then please fix your code so that it does before you turn it in.)
11. Turn in a share link for your repl on the Google Classroom when you're done.

Sample output is here below:

Please enter an integer greater than 999: 473211 [4, 7, 3, 2, 1, 1] At least two digits are the same. 4 7 3 2 1 1 400000 70000 3000 200 10 1 And that all adds up to your number: 473211	Please enter an integer greater than 999: 3 Too small, try again. Please enter an integer greater than 999: 1234 [1, 2, 3, 4] All digits in your number are different. 1 2 3 4 1000 200 30 4 And that all adds up to your number: 1234
--	--

I know this touches on a lot of different skills, please don't panic if you find it hard. :-) Just give it a solid try, then watch the video and get it done.