

Lab12/src/Lab12.java

```
1  /*
2  Name: Hunter Poole
3  Date: 4/22/25
4  Lab #: 12
5  Source Code: Lab12.java
6  Action: Takes an int (as string) from the user and turns it into
7          a 20-digit number (as an int array) with leading zeros.
8          Prints the result ("Large 20 digit Number is ").
9          Calls a function to fill the integer array with the user's string.
10         Loops until user chooses to stop ('n' or 'N').
11  */
12
13  import java.util.Scanner;
14
15  public class Lab12
16  {
17      public static void main(String[] args)
18      {
19          char Choice = 'n';
20          String UserString;
21          int[] LargeInt = new int[20];
22
23          do
24          {
25              ClearArray(LargeInt);
26
27              Scanner Input = new Scanner(System.in);
28              System.out.print("Please enter large number --> ");
29              UserString = Input.nextLine();
30
31              StringToIntArray(LargeInt, UserString);
32
33              System.out.println("Large 20 digit Number is");
34              for (int i = 0; i < LargeInt.length; i++)
35              {
36                  System.out.print(LargeInt[i]);
37              }
38
39              System.out.printf("%n%n%s", "Continue 'Y' or 'N', response --> ");
40              Choice = Character.toLowerCase(Input.next().charAt(0));
41
42          } while (Choice != 'n');
43      }
44
45  /*
46  Action: Fills an integer array using a provided string of integers.
47          Puts the string at the back of the array. Keeps leading 0s.
```

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48         Non-numeric characters are treated as 0s.
49 Parameters: int Array[], String GivenString
50 Returns: void
51 Precondition: Array is initialized / Array is of size > 0.
52             Same conditions for String.
53 */
54
55     static void StringToIntArray (int Array[], String GivenString)
56     {
57         for (int i = 0; i < GivenString.length(); i++)
58         {
59             if (GivenString.charAt(i) >= 48 && GivenString.charAt(i) <= 57)
60             {
61                 Array[Array.length - GivenString.length() + i] =
GivenString.charAt(i) - 48;
62             }
63             else
64             {
65                 Array[Array.length - GivenString.length() + i] = 0;
66             }
67         }
68     }
69
70 /*
71 Action: Clears an array (Sets all values to 0)
72 Parameters: int Array[]
73 Returns: void
74 Precondition: Array is of size > 0.
75 */
76
77     static void ClearArray (int Array[])
78     {
79         for (int i = 0; i < Array.length; i++)
80         {
81             Array[i] = 0;
82         }
83     }
84
85 }
86
87 /*
88 Please enter large number --> 984567
89 Large 20 digit Number is
90 0000000000000000984567
91
92 Continue 'Y' or 'N', response --> j
93 Please enter large number --> ABCD
94 Large 20 digit Number is
95 00000000000000000000
```

```
96
97 Continue 'Y' or 'N', response --> MAYBE????
98 Please enter large number --> 12345678909876543210
99 Large 20 digit Number is
100 12345678909876543210
101
102 Continue 'Y' or 'N', response --> <804>
103 Please enter large number --> AB<3264>      L17
104 Large 20 digit Number is
105 00000003264000000017
106
107 Continue 'Y' or 'N', response --> NO!
108 */
109
```