

```
1 // A Fascinating number is one which when multiplied by 2 and 3 and then, after the results are concatenated
2 // with the original number, the new number contains all the digits from 1 to 9 exactly once.
3 // There can be any number of zeroes and are to be ignored.
4 // Accept two positive integers m and n, where m must be less than n and the values of both m and n
5 // must be greater than 99 and less than 10000 as user input. Display all Fascinating numbers that are
6 // in the range between m and n (both inclusive) and output them along with the frequency
7
8 import java.util.Arrays;
9 import java.util.Scanner;
10
11 public class fascinatingNumber {
12     public static void main(String[] args) {
13         Scanner sc = new Scanner(System.in);
14         System.out.println("Enter lower range: ");
15         int l = sc.nextInt();
16         System.out.println("Enter higher range: ");
17         int h = sc.nextInt();
18         sc.close();
19         int count = 0;
20         for (int i = l; i <= h; i++) {
21             if (isFascinating(i)) {
22                 System.out.print(i + " ");
23                 count += 1;
24             }
25         }
26         System.out.println("\nNo of fascinating numbers found: " + count);
27     }
28
29     static boolean isFascinating(int no) {
30         int two = no * 2;
31         int three = no * 3;
32         String str = "" + no + two + three;
33         // Removing all zeroes from number
34         String tmp = str;
35         str = "";
36         for (int i = 0; i < tmp.length(); i++) {
37             char ch = tmp.charAt(i);
38             if (ch != '0')
39                 str += ch;
40         }
41         // Sorting digits in ascending order
42         char[] digits = str.toCharArray();
43         Arrays.sort(digits);
44         String sortedDigits = String.valueOf(digits);
45         return sortedDigits.equals("123456789");
46     }
47 }
```