

LetterCombOfPhoneNumber.java

```

1  package String;
2  import java.util.*;
3  public class LetterCombOfPhoneNumber {
4      static Character[][] numberToCharMap;
5
6      public static List<String> printWords(int[] numbers, int len, int numIndex, String s) {
7  1      if (len == numIndex) {
8  1          return new ArrayList<>(Collections.singleton(s));
9      }
10
11     List<String> stringList = new ArrayList<>();
12
13  2     for (int i = 0; i < numberToCharMap[numbers[numIndex]].length; i++) {
14         String sCopy = String.valueOf(s.toCharArray());
15         sCopy = sCopy.concat(numberToCharMap[numbers[numIndex]][i].toString());
16  1     stringList.addAll(printWords(numbers, len, numIndex + 1, sCopy));
17     }
18  1     return stringList;
19     }
20
21     public static void generateNumberToCharMap() {
22         numberToCharMap = new Character[10][5];
23         numberToCharMap[0] = new Character[] {'\0'};
24         numberToCharMap[1] = new Character[] {'\0'};
25         numberToCharMap[2] = new Character[] {'a', 'b', 'c'};
26         numberToCharMap[3] = new Character[] {'d', 'e', 'f'};
27         numberToCharMap[4] = new Character[] {'g', 'h', 'i'};
28         numberToCharMap[5] = new Character[] {'j', 'k', 'l'};
29         numberToCharMap[6] = new Character[] {'m', 'n', 'o'};
30         numberToCharMap[7] = new Character[] {'p', 'q', 'r', 's'};
31         numberToCharMap[8] = new Character[] {'t', 'u', 'v'};
32         numberToCharMap[9] = new Character[] {'w', 'x', 'y', 'z'};
33     }
34 }

```

Mutations

[7](#) 1. negated conditional → KILLED
[8](#) 1. replaced return value with Collections.emptyList for String/LetterCombOfPhoneNumber::printWords → KILLED
[13](#) 1. negated conditional → KILLED
2. changed conditional boundary → KILLED
[16](#) 1. Replaced integer addition with subtraction → KILLED
[18](#) 1. replaced return value with Collections.emptyList for String/LetterCombOfPhoneNumber::printWords → KILLED

Active mutators

- CONDITIONALS_BOUNDARY
- EMPTY_RETURNS
- FALSE_RETURNS
- INCREMENTS
- INVERT_NEGS
- MATH
- NEGATE_CONDITIONALS
- NULL_RETURNS
- PRIMITIVE_RETURNS
- TRUE_RETURNS
- VOID_METHOD_CALLS

Tests examined

- String.LetterCombOfPhoneNumberTest.letterCombinationsOfPhoneNumber(String.LetterCombOfPhoneNumberTest) (0 ms)