

# Letter Combinations of a Phone Number

Try to solve the Letter Combinations of a Phone Number problem.

We'll cover the following ^

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

## Statement

Given a string containing digits from 2 to 9 inclusive, return all possible letter combinations that the number could represent. Return the answer in any order.

A mapping of digits to letters is given below.

**Note:** 1 doesn't map to any letter.

1	→	
2	→	abc
3	→	def
4	→	ghi
5	→	jkl
6	→	mno
7	→	pqrs
8	→	tuv
9	→	wxyz

### Constraints:

- $0 \leq \text{digits.length} \leq 4$
- `digits[i]` is a digit in the range `[2, 9]`

## Examples

Sample example 1

Input

Digits = "23"

?

Tt

Digits = 23

### Output

ad	ae	af	bd	be	bf	cd	ce	cf
----	----	----	----	----	----	----	----	----

All the letter combinations for 23 are given above.

1 of 3



## Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

### Letter Combinations of a Phone Number

1

What should be the output if the following digits are given as input?

Digits = 29

A) [aw, ax, ay, az]

B) [bw, bx, by, bz]

C) [aw, ax, ay, az, bw, bx, by, bz, cw, cx, cy, cz]

D) [cw, cx, cy, cz]

Submit Answer



Question 1 of 4  
0 attempted



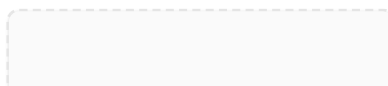
Reset Quiz ↺

## Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.



Drag and drop the cards to rearrange them in the correct sequence.



Initialize an empty list to store all the combinations.

If the input string of digits is empty, return an empty list, since there are no possible combinations.

Initialize a dictionary that maps the digits to their corresponding characters.

Check if the length of our current combination is the same as the length of the input, add it to the list of results and backtrack.

Otherwise, retrieve the list of possible letters corresponding to the digit at the current index and iterate through each letter to generate the combinations recursively.

Reset

Show Solution

Submit

## Try it yourself



Java



usercode > main.java

```
1 import java.util.*;
2
3 public class Main{
4     public List<String> letterCombinations(String digits){
5
6         // Your code will replace this placeholder return statement
7
8         return new ArrayList<>();
9     }
10 }
```

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Submit

Test Cases

Results

Case 1

Case 2

Case 3



Input #1

"2"

### Letter Combinations of a Phone Number

← Back

Solution: Permutations

Next →

Solution: Letter Combi...

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