

# [CS 11] Prac 1a – JaNein

[oj.dcs.upd.edu.ph/problem/cs11prac1a](https://oj.dcs.upd.edu.ph/problem/cs11prac1a)

## Problem Statement

JaNein likes the number nine.

Please help JaNein enumerate all integers divisible by 99 that are at least  $a$  and at most  $b$ .

## Task Details

Your task is to implement a function called `div_by_9_between`. This function has two parameters `a` and `b` in that order, both `ints`, whose meanings are described in the problem statement. In particular, your function will be declared as follows:

Copy

```
def div_by_9_between(a, b):
```

The function must return a `tuple` whose elements are `ints`. It must return the sequence of integers divisible by 99 that are at least  $a$  and at most  $b$  **in increasing order**.

## Restrictions

For this problem:

- Assignment is allowed.
- Recursion is allowed.
- Up to 66 function definitions are allowed.
- Comprehensions are **disallowed**.
- `range` is **disallowed**.
- The `abs` symbol is now allowed.
- The source code limit is 10001000.

The main idea is that you should implement the required functions yourself using conditionals, function composition, recursion, and basic operations.

## Example Calls

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### Example 1 Function Call

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```
div_by_9_between(25, 50)
```

### Example 1 Return Value

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```
(27, 36, 45)
```

### Example 2 Function Call

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```
div_by_9_between(27, 45)
```

### Example 2 Return Value

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```
(27, 36, 45)
```

### Example 3 Function Call

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```
div_by_9_between(91, 98)
```

### Example 3 Return Value

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```
()
```

## Constraints

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- The function `div_by_9_between` will be called at most 1010 times.
- $|a|, |b| \leq 1010000$   $|a|, |b| \leq 10^{10000}$ .

- $|a-b| \leq 100$  |  $a - b$  |  $\leq 100$ .

## Scoring

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- You get 5050 ❤ points if you solve all test cases where:
  - $|a|, |b| \leq 10$   $100$  |  $a$  | , |  $b$  |  $\leq 10^{100}$
  - $a \leq b$
- You get 5050 ❤ points if you solve all test cases where:
  - $|a|, |b| \leq 10$   $100$  |  $a$  | , |  $b$  |  $\leq 10^{100}$
- You get 5050 ❤ points if you solve all test cases where:
  - $a \leq b$
- You get 5050 ❤ points if you solve all test cases.

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## Clarifications

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No clarifications have been made at this time.