[CS 11] Prac 0i – Problem 9 from Outer Space

oj.dcs.upd.edu.ph/problem/cs11prac0i

Submit solution
My submissions
Points: 100 (partial)

Time limit: 4.0s

Memory limit: 1G

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Problem type

Allowed languages

~~NONE~~, py3

Problem Statement

Everyone knows the divisibility-by-99 test; a number is divisible by 99 if and only if its sum of digits is divisible by 99. But do you know why it works? In fact, it has to do with the fact that $10 \equiv 1$ modulo 99:

$$\sum_i d_i 10^i \equiv \sum_i d_i 1^i = \sum_i d_i .$$

Given an integer n, compute the sum of its digits.

Task Details

Your task is to implement a function called `digital_sum`. This function has a single parameter `n`, an `int`, whose meaning is described in the problem statement.

The function must return an `int` denoting the sum of digits of `n`.

For this problem, recursion is allowed.

Example Calls

Example Function Call

Copy

```
digital_sum(1234567890)
```

Example Return Value

Copy

```
45
```

Constraints

When the program is run:

- The function `digital_sum` will be called at most 2,0002,000 times.
- In each function call, $0 \leq n < 102000 \leq n < 10^{200}$.

Scoring

You get 100100 ❤️ points if you solve all test cases correctly.
Report an issue

Clarifications

No clarifications have been made at this time.