95_Find Products with Valid Serial Numbers Easy - Solution

Source - https://leetcode.com/problems/find-products-with-valid-serial-numbers/description/

Running Notes:

Write a solution to find all products whose description **contains a valid serial number** pattern. A valid serial number follows these rules:

- It starts with the letters **SN** (case-sensitive).
- Followed by exactly `4` digits.
- It must have a hyphen (-) **followed by exactly** `4` digits.
- The serial number must be within the description (it may not necessarily start at the beginning).

```
-- Write your PostgreSQL query statement below
SELECT *
FROM products
WHERE Description ~ '\mSN\d{4}-\d{4}\M'
ORDER BY product_id
```

Notes:

🔶 `~` operator

- This is the **PostgreSQL regex match** operator.
- It checks if the value on the left (here: `Description`) **matches the pattern** on the right.

🔶 The Regex Pattern: `\mSN\d{4}-\d{4}\M`

This is the part doing all the heavy lifting.

🔷 `\m` and `\M` : PostgreSQL's Word Boundaries

- `\m` : **start of word**

- `\M` : **end of word**

These are PostgreSQL-specific and work only in its regex engine (not in all programming languages).

They help you make sure you're matching the **whole word**, not just part of it.

Example:

Text	Pattern	Match?
SN1234-5678	\mSN\d{4}-\d{4}\M	✅ Yes
SN1234-56789	\mSN\d{4}-\d{4}\M	❌ No
ThisSN1234-5678word	\mSN\d{4}-\d{4}\M	❌ No
some SN1234-5678 thing	\mSN\d{4}-\d{4}\M	✅ Yes

So it only matches **complete and isolated patterns**, like full serial numbers.

🔷 `SN\d{4}-\d{4}`

This part is a regular expression for the serial number:

- `SN` : literal string

- `\d{4}` : exactly 4 digits

- : hyphen

- `\d{4}` : exactly 4 more digits

So this pattern matches things like: `SN1234-5678`

Written By,
Harshee Pitroda