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create table pan_table
(
    pan_filled text
);

-- select * from pan_table

with pan_uncleaned as
(
select
    pan_number,trim(coalesce(pan_number,'Unknown')) as pan_filled,
    row_number() over (partition by coalesce(pan_number,'Unknown') order by
coalesce(pan_number,'Unknown')) as rn
from pan_table
),

cleaned_pan as
(
select
    upper(pan_filled) as pan_filled
from pan_uncleaned
where rn=1 and length(pan_filled) >1
),

formatted_pan as
(
Select pan_filled,
case
    when pan_filled !~ '^[A-Z]{5}[0-9]{4}[A-Z]$' then 'Invalid Format'
    when
        substring(pan_filled, 1, 5) ~ '(.){1}' then 'Invalid – Adjacent alphabets repeat'
    when
        substring(pan_filled, 6, 4) ~ '(.){1}' then 'Invalid – Adjacent digits repeat'
    when
        (
            ascii(substr(pan_filled,2,1)) = ascii(substr(pan_filled,1,1)) + 1 AND
            ascii(substr(pan_filled,3,1)) = ascii(substr(pan_filled,2,1)) + 1 AND
            ascii(substr(pan_filled,4,1)) = ascii(substr(pan_filled,3,1)) + 1 AND
            ascii(substr(pan_filled,5,1)) = ascii(substr(pan_filled,4,1)) + 1
        ) THEN 'Invalid – Sequential alphabets'
)

```

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WHEN
(
    cast(substr(pan_filled,7,1) AS int) = cast(substr(pan_filled,6,1) AS int) + 1 AND
    cast(substr(pan_filled,8,1) AS int) = cast(substr(pan_filled,7,1) AS int) + 1 AND
    cast(substr(pan_filled,9,1) AS int) = cast(substr(pan_filled,8,1) AS int) + 1
) THEN 'Invalid – Sequential digits'
ELSE 'Valid PAN'
END AS pan_validation_result
FROM cleaned_pan
)

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select
(select count(*) from pan_table) as total_record,
sum(case when pan_validation_result = 'Valid PAN' then 1 end) as total_valid_pans,
sum(case when pan_validation_result <> 'Valid PAN' then 1 end) as total_invalid_pans
from formatted_pan

```

Data Output Messages Notifications

	total_record bigint	total_valid_pans bigint	total_invalid_pans bigint
1	10000	3186	5840