**Assignment 2**

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**Part A:** Non-technical textual description of the business problem from markdb

Question: **Find the most sold product subcategory in the year 2009 for each month.**

**Part B:** Tabular representation of the final output

Output:

Month Product Sub Category

|  |  |
| --- | --- |
| 1 | PAPER |
| 2 | OFFICE FURNISHINGS |
| 3 | OFFICE FURNISHINGS |
| 4 | PAPER |
| 5 | OFFICE FURNISHINGS |
| 6 | PAPER |
| 7 | TELEPHONES AND COMMUNICATION |
| 8 | BINDERS AND BINDER ACCESSORIES |
| 9 | PENS & ART SUPPLIES |
| 10 | PAPER |
| 11 | TELEPHONES AND COMMUNICATION |
| 12 | PAPER |

**Part C:** SQL query that produces the necessary output as per the table in PART B above

Query:

WITH cte1 AS (

SELECT MONTH(do.order\_date) AS month, fs.prod\_id, COUNT(\*) AS no\_of\_prod\_sales FROM fact\_sales fs NATURAL JOIN dim\_order do WHERE YEAR(do.order\_date) = 2009 GROUP BY MONTH(do.order\_date), fs.prod\_id

),

cte2 AS (

SELECT month, prod\_id, ROW\_NUMBER() OVER (PARTITION BY month ORDER BY COUNT(\*) DESC) AS rn FROM cte1 GROUP BY month, prod\_id

)

SELECT cte2.month, dp.product\_sub\_category FROM cte2 JOIN dim\_prod dp ON cte2.prod\_id = dp.prod\_id WHERE cte2.rn = 1;