**Assignment 2**

Roll No: MT2024064

Name: Jaimin Jadvani

**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 ORDER BY month ASC, no\_of\_prod\_sales desc

),

cte2 as (

select tc.month, first\_value(prod\_id) over(partition by month) as product\_id from cte1 tc

),

cte3 as (

select \* from cte2 GROUP BY month, product\_id

)

select tc3.month, dp.product\_sub\_category FROM cte3 tc3 JOIN dim\_prod dp ON tc3.product\_id = dp.prod\_id;