

DMDD Report 3
ORDER FULFILMENT DATABASE MANAGEMENT SYSTEM
TEAM 5

Problem Statement:

As a leading online home goods retailer, Wayfair is facing significant challenges in managing its data manually. These challenges include inefficient tracking of customer orders and payments, difficulty in updating and retrieving supplier information, difficulty in managing product details and stock levels, and inaccurate tracking of customer information. To address these challenges and meet the expectations of its customers, Wayfair requires an effective online fulfilment database system that streamlines the order management process, ensures efficient and secure payment processing, and provides real-time visibility into supplier information, product details, and customer information.

Objectives:

1. Implement an efficient database system to easily store and retrieve customer and supplier information.
2. Introduce a tracking system for customer orders, payments, and order fulfilment status to speed up and streamline the order management process.
3. Automate the process of storing and retrieving product details and stock levels for real-time inventory management.
4. Implement a system for categorizing products and managing product categories.
5. Improve accuracy in storing and retrieving customer information to provide a better customer experience

Query:

```
--DISPLAY BEST SELLING CATEGORY IN EACH MONTH
with cte as (select c.category_name,
(to_char(o.date_of_purchase, 'Month') || ' ' || to_char(o.date_of_purchase, 'yyyy')) as mth,
extract(month from o.date_of_purchase) as month
from ofd_order_details od
join ofd_orders o on o.order_id = od.order_id
join ofd_products p on p.product_id = od.product_id
join ofd_category c on c.category_id = p.category_id),
cte2 as (
select distinct mth, month, category_name,
count(category_name) over (partition by month, category_name) as ct from cte),
cte3 as (
select mth, category_name, rank() over (partition by month order by ct desc) as rnk from cte2)
select mth as Month, category_name from cte3 where rnk = 1;
```

Description:

This report gives the best-selling category in each month allowing management to identify trends and patterns and plan for restocking products in these categories as and when the months approach.

```

1
2 with cte as (select c.category_name,
3 (to_char(o.date_of_purchase, 'Month') || ' ' || to_char(o.date_of_purchase, 'yyyy')) as mth,
4 extract(month from o.date_of_purchase) as month
5 from ofd_order_details od
6 join ofd_orders o on o.order_id = od.order_id
7 join ofd_products p on p.product_id = od.product_id
8 join ofd_category c on c.category_id = p.category_id),
9 cte2 as (
10 select distinct mth, month, category_name,
11 count(category_name) over (partition by month, category_name) as ct from cte),
12 cte3 as (
13 select mth, category_name, rank() over (partition by month order by ct desc) as rnk from cte2)
14 select mth as Month, category_name from cte3 where rnk = 1;
15
16

```

Script Output x

Query Result x

SQL | All Rows Fetched: 4 in 0.095 seconds

	MONTH	CATEGORY_NAME
1	January 2023	Home Appliances
2	February 2023	Bedding
3	March 2023	Bedding
4	April 2023	living room