Data Warehouse Project - Part 1

1. Tables

A. Dimensional Tables

Dim_Date(date_key, date, day_of_week, month, quarter, year)

Dim_Staff(staff_key, staff_id, first_name, last_name, email)

Dim_Film(film_key, film_id, title, release_year, rental_duration, rental_rate, replacement_cost, rating, length)

Dim_Store(store_key, store_id, address_id)

Dim_Rent(rent_key, rental_id, inventory_id, customer_id, rental_date, return_date)

B. Fact Tables

Fact_Monthly_Payment(date_key, staff_key, rent_key, payment_amount, payment_count)

Fact_Daily_Inventory(date_key, film_key, store_key, inventory_count)

2. Which Schema is better?

For both fact tables (Fact_Monthly_Payment and Fact_Daily_Inventory), the **Star Schema** is the most suitable design.

In **Monthly_Payemnt** it directly joins with Dim_Date, Dim_Staff, and Dim_Rent. This gives faster queries with less joins.

In **Daily_Inventory,** direct joins to Dim_Date, Dim_Film, and Dim_Store enable fast filtering and aggregation on fields like: date, film, and store

The snowflake is going to give worse querying speeds, since it normalizes more than star schema.