Power BI Task

Total Marks: 30

You are provided with a dataset containing Coffee Sales data. Your goal is to transform, clean the data and create a data model.

Import Data

- Load the provided **Coffee Shop Sales** into Power BI.

Marks: 8

Data Transformation:

- Check Column names, data types, missing, and error values. (If any)
- Split the dataset into smaller tables to normalize the data:
    - **Transactions:**
      `transaction_id`, `transaction_date`, `transaction_time`, `transaction_qty`, `store_id`, `product_id`.
    - **Stores:**
      `store_id`, `store_location`.
    - **Products:**
      `product_id`, `unit_price`, `product_category`, `product_type`, `product_detail`.
    - Make sure to remove duplicates from each table.

Marks: 10

Data Modeling

- Identify Fact and Dimension Tables.
- Create Relationships between tables.
- Identify the schema.

Marks: 12

Power Query Analysis

Perform the following tasks:

1. **Create a column for Sales**
    - Merge column ”Unit price” from “products” to the “Transaction” table.
    - Create a custom column: Sales = unit price x transaction_qty.

2. **Conditional column:**
    - Create a conditional column **Is High Quantity**:
      If `transaction_qty` > 4, return **"Yes"**, otherwise **"No"**.

3. **Parameters:**
    - Calculate the given and store them as parameters:
        i. Calculate **Total Sales**: Sum of `Total Sales`.
        ii. Calculate **Average Transaction Quantity**: Average of `transaction_qty`.

4. **Filter based on parameters:**
    - Create a duplicate of the Transactions Table.
    - Filter the transactions with a quantity greater than the parameter “ Average transaction quantity”.

5. **Sales Based on Location:**
    - Merge Sales from “Transaction Table” to “Store” and show the aggregated value “Sum of Sales”.

6. **Count of Products in each product Category:**
    - Create a duplicate of “Products”. Apply **GroupBY** to count products in each category. Rename this table as “Product summary”