**WEEK TWO ASSIGNMENT**

**Filtering (Focus on Expense Tracker Data)**

**PART 1: Retrieving Data with SELECT**

**1.1 Retrieving All Expenses:**

USE expense\_tracker;

SELECT \* FROM expenses;

**1.2 Specific Columns:**

USE expense\_tracker;

SELECT amount, category, date FROM expenses ORDER BY category, date;

**1.3 Filtering by Date Range:**

USE expense\_tracker;

SELECT date, category, amount

FROM expenses

WHERE date BETWEEN '2021-01-01' AND '2024-12-15'

ORDER BY date;

**PART: Filtering with WHERE Clause**

**2.1 Filtering by Category:**

USE expense\_tracker;

SELECT date, category, amount

FROM expenses

WHERE category = 'Entertainment'

ORDER BY date;

**2.2 Filtering with Comparison Operators:**

USE expense\_tracker;

SELECT date, category, amount

FROM expenses

WHERE amount > 50

ORDER BY amount ASC;

**2.3 Combining Filters (AND):**

USE expense\_tracker;

SELECT date, category, amount

FROM expenses

WHERE amount > 75 AND category = 'Food';

**2.4 Combining Filters (OR):**

SELECT date, category, amount

FROM expenses

WHERE category = 'Transportation' OR category = 'Groceries'

ORDER BY date;

**2.5 Filtering with NOT:**

USE expense\_tracker;

SELECT date, category, amount

FROM expenses

WHERE category <> 'Rent';

**Part 3: Sorting Retrieved Data**

**3.1 Sorting by Amount:**

USE expense\_tracker;

SELECT \* FROM expenses

ORDER BY amount DESC;

**3.2 Sorting by Date and Category:**

USE expense\_tracker;

SELECT \* FROM expenses

ORDER BY date DESC, category ASC;

**Part 4: Database Upgrade:**

**4.1 Write SQL commands to achieve the following:**

**Create a table;**

USE expense\_tracker;

CREATE TABLE income(

income\_id INT PRIMARY KEY auto\_increment,

amount DECIMAL(10, 2) NOT NULL,

date DATE NOT NULL,

source VARCHAR(50) NOT NULL

);

**4.2 After creating the "Income" table, you realize you also want to track the income category "source" (e.g., "Salary," "Freelance Work").**

USE expense\_tracker;

ALTER TABLE income

ADD COLUMN category\_source VARCHAR(50);

**4.3 Let's say you decide tracking the income source isn't necessary for now.**

USE expense\_tracker;

ALTER TABLE income

DROP COLUMN category\_source;

**Imagine you no longer need the "Income" table entirely. Experiment how to Use DROP TABLE to permanently remove it from your database.**

USE expense\_tracker;

DROP TABLE income;