PART 1; RETRIEVING ALL DATA WITH SELECT

**1.1 Retrieving All Expenses:**

SELECT \* FROM Expenses;

**1.2 Specific Columns:**

SELECT Date, Expense\_Category, Amount FROM Expenses;

**1.3 Filtering by Date Range:**

SELECT \* FROM Expenses

WHERE Date BETWEEN '2021-01-01' AND '2024-12-15';

PART 2; Filtering with WHERE Clause

**2.1 Filtering by Category:**

SELECT \* FROM Expenses

WHERE Expense\_Category = 'Entertainment';

**2.2 Filtering with Comparison Operators:**

SELECT \* FROM Expenses

WHERE Amount > 50;

**2.3 Combining Filters (AND):**

SELECT \* FROM Expenses

WHERE Amount > 75 AND Expense\_Category = 'Food';

**2.4 Combining Filters (OR):**

SELECT \* FROM Expenses

WHERE Expense\_Category = 'Transportation' OR Expense\_Category = 'Groceries';

**2.5 Filtering with NOT:**

SELECT \* FROM Expenses

WHERE Expense\_Category != 'Rent';

PART 3; Sorting Retrieved Data

**3.1 Sorting by Amount:**

SELECT \* FROM Expenses

ORDER BY Amount DESC;

**3.2 Sorting by Date and Category:**

SELECT \* FROM Expenses

ORDER BY Date DESC, Expense\_Category ASC;

PART 4; Database Upgrade

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

* We don't have a table for income yet. Create a table named "Income"

CREATE TABLE Income (

income\_id INT AUTO\_INCREMENT PRIMARY KEY,

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 ALTER TABLE to add a new column named "category" of type VARCHAR(50).**

ALTER TABLE Income

ADD COLUMN category VARCHAR(50);

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

* Use ALTER TABLE again to remove the "source" column from the "Income" table.

ALTER TABLE Income

DROP COLUMN source;

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

DROP TABLE Income;