### WEEK 2 DB ASSIGNMENT

### SQL Queries for Expense Tracker

#### Part 1: Basic Queries

**1.1 Retrieving All Expenses:**

SELECT \* FROM Expenses;

**1.2 Specific Columns:**

SELECT date, 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 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 category = 'Food';

**2.4 Combining Filters (OR):**

SELECT \* FROM Expenses

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

**2.5 Filtering with NOT:**

SELECT \* FROM Expenses

WHERE 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, category ASC;

#### Part 4: Database Upgrade

**4.1 Creating the "Income" Table:**

CREATE TABLE IF NOT EXISTS 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 Adding a New Column "category" to the "Income" Table:**

ALTER TABLE Income

ADD COLUMN category VARCHAR(50);

**4.3 Removing the "source" Column from the "Income" Table:**

ALTER TABLE Income

DROP COLUMN source;

**Dropping the "Income" Table:**

DROP TABLE IF EXISTS Income;