**Part 1: Retrieving data with SELECT**

**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 date, category, amount

FROM Expenses

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

**Part 2: Filtering with WHERE clause**

**2.1 Filtering by category**

SELECT date, category, amount

FROM Expenses

WHERE category = 'Entertainment';

**2.2 Filtering with comparison operators**

SELECT date, category, amount

FROM Expenses

WHERE amount > 50;

**2.3 Combining filters ‘AND’**

SELECT date, category, amount

FROM Expenses

WHERE amount > 20 AND category = 'Entertainment';

**2.4 Combining filters ‘OR’**

SELECT date, category, amount

FROM Expenses

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

**2.5 Filtering with ‘NOT’**

SELECT date, category, amount

FROM Expenses

WHERE category !=’Transportation’

**Part 3: Sorting retrieved data**

**3.1 Sorting by amount**

SELECT date, category, amount

FROM Expenses

ORDER BY amount DESC;

**3.2 Sorting by date and category**

SELECT date, category, amount

FROM Expenses

ORDER BY date DESC, category ASC;

**Part 4: Database Upgrade**

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

**Create income table**

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 income table, you realize you also want to track the income category “source”**

ALTER TABLE Income

ADD category VARCHAR(50);

**4.3 Let’s say you decided 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;

**Drop the income table**

DROP TABLE Income;