**Week 2 Assignment: Essential Data Retrieval & Filtering**

-- Create the Expenses table

CREATE TABLE IF NOT EXISTS Expenses (

expense\_id INT PRIMARY KEY AUTO\_INCREMENT,

amount DECIMAL(10,2) NOT NULL,

date DATE NOT NULL,

category VARCHAR(50) NOT NULL

);expenses

--select \* from expenses

--select amount, date, category from expenses

insert into expenses (expense\_id,amount,date,category)

values

insert into expenses (expense\_id,amount,date,category)

values

(1,23,'12-07-24','health'),

(2,27,'13-07-24','food'),

(3,13,'14-07-24','healh'),

(4,20,'15-07-24','recreation'),

(5,32,'13-07-24','saving'),

(6,15,'14-07-24','food'),

(7,17,'15-07-24','health'),

(8,45,'16-07-24','food'),

(9,40,'14-07-24','recreation'),

(10,28,'15-07-24','saving');

**Part 1: Retrieving Data**

**1.1 Retrieving all expenses**

SELECT \* FROM expenses;

**1.2 Specific column**

SELECT date, amount, category FROM expenses;

**1.3 Filtering by date range**

SELECT amount, date, FROM expenses

WHERE date >= '2012-01-01' AND date <= '2014-12-31';

**Part 2 Filtering with WHERE Clause**

**2.1 Filtering by category**

select \* from expenses

where category ='food'

**2.2 Filtering with Comparison Operators**

SELECT \* FROM expenses

WHERE amount >20;

**2.3 Combining filters (AND)**

SELECT \* from expenses

WHERE amount >20 AND category = ‘food’;

**2.4 Combining filters OR**

SELECT \* FROM expenses

WHERE category = 'health' OR category = 'saving';

**2.5 Filtering with NOT**

SELECT \* from expenses

WHERE Not category = 'health';

**Part 3 Sorting Retrieved Data**

**3.1 Sorting by Amount**

SELECT \* from expenses

ORDER BY amount

**3.2 Sorting by date and Category**

SELECT amount, date FROM expenses

ORDER BY amount desc, date asc;

**Part 4 Database Upgrade**

**4.1 SQL Commands**

CREATE TABLE `expense\_tracker`.`income` (

`income\_id` INT NOT NULL, AUTO\_INCREMENT

`amount` DECIMAL(10,2) NOT NULL,

`date` DATE NOT NULL,

`source` VARCHAR(50) NOT NULL,

PRIMARY KEY (`income\_id`));

**4.2 Adding New Column**

ALTER TABLE `expense\_tracker`.`income`

ADD COLUMN ‘category’ VARCHAR(50);

**4.3 Remove source column**

ALTER TABLE `expense\_tracker`.`income`

DROP COLUMN `source`;