Part 1: Retrieving Data with SELECT

1.1 Retrieving All Expenses

Write an SQL query to retrieve all data points (columns) from the "Expenses" table.

SELECT *FROM Expenses;

1.2 Specific Columns

Modify your query to select only specific columns relevant to your analysis.

SELECT Date,Category,Amount FROM Expenses;

1.3 Filtering by Date Range

Write a query to retrieve expenses charged between a specific 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

Write a query to find all expenses belonging to a specific category.

SELECT * FROM Expenses
WHERE Category = 'Entertainment';

2.2 Filtering with Comparison Operators

Find expenses with an amount greater than a certain value.

SELECT * FROM Expenses;
WHERE Amount > 50;

2.3 Combining Filters (AND)

Refine your query to find expenses that meet multiple criteria.

SELECT * FROM Expenses
WHERE Amount >75 AND Category = 'Entertainment';

2.4 Combining Filters (OR)

Modify your query to find expenses belonging to one category or another.

```
SELECT * FROM Expenses
WHERE category = 'Transportation' OR category = 'Groceries';
```

2.5 Filtering with NOT

Write a query to display expenses unrelated to a specific category.

```
SELECT * FROM Expenses
WHERE category != 'Rent';
```

Part 3: Sorting Retrieved Data

3.1 Sorting by Amount

Write a query to display all expenses sorted by amount in descending order.

```
SELECT * FROM Expenses
ORDER BY amount DESC;
```

3.2 Sorting by Date and Category

Modify your query to sort expenses based on multiple columns.

```
SELECT * FROM Expenses
ORDER BY date DESC, category ASC;
```

Part 4: Database Upgrade

4.1 Create "Income" Table

Write SQL commands to 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 Add a Column to "Income" Table

Use ALTER TABLE to add a new column named "category".

```
ALTER TABLE Income
ADD category VARCHAR(50);
```

4.3 Remove the "source" Column

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

```
ALTER TABLE Income
DROP COLUMN source;
```

4.4 Drop the "Income" Table

Use DROP TABLE to permanently remove the "Income" table

```
DROP TABLE Income;
```