Experiment 2

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Aim: Implementation of dimension tables and fact tables of an electronic store's sales data

Star schema:

DDL Queries:

```
CREATE DATABASE dwm_exp2_star;
CREATE TABLE `sales` (
    time_id INT,
    item_id INT,
    location_id INT,
    branch_id INT,
    sale_id INT PRIMARY KEY AUTO_INCREMENT,
    total_items_sold INT,
    total_sale_amt INT,
    total_discount INT,
    FOREIGN KEY (`time_id`) REFERENCES `time`(`time_id`),
    FOREIGN KEY (`item_id`) REFERENCES `item`(`item_id`),
    FOREIGN KEY (`location_id`) REFERENCES `location`(`location_id`),
    FOREIGN KEY (`branch_id`) REFERENCES `branch`(`branch_id`)
);
CREATE TABLE `time` (
    time_id INT PRIMARY KEY AUTO_INCREMENT,
    day INT,
    month INT,
    year INT,
    quarter TINYINT
);
CREATE TABLE `item` (
    item_id INT PRIMARY KEY AUTO_INCREMENT,
    brand VARCHAR(50),
    name VARCHAR(50),
    category VARCHAR(50),
    price INT,
    discounted_price INT
);
```

```
CREATE TABLE `location` (
    location_id INT PRIMARY KEY AUTO_INCREMENT,
    country VARCHAR(50),
    state VARCHAR(50),
    city VARCHAR(50),
    district VARCHAR(50)
);

CREATE TABLE `branch` (
    branch_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100),
    address VARCHAR(100)
);
```

```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0355 seconds.)

CREATE TABLE `time` ( time_id INT PRIMARY KEY AUTO_INCREMENT, day INT, month INT, year INT, quarter TINYINT )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0407 seconds.)
CREATE TABLE 'item' ( item_id INT PRIMARY KEY AUTO_INCREMENT, brand VARCHAR(50), name VARCHAR(50), category VARCHAR(50), price INT, discounted_price
INT )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0607 seconds.)

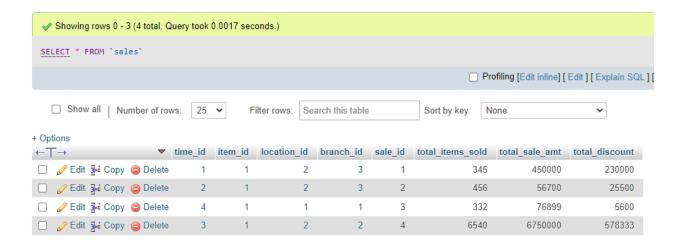
CREATE TABLE `location` ( location_id INT PRIMARY KEY AUTO_INCREMENT, country VARCHAR(50), state VARCHAR(50), city VARCHAR(50), district VARCHAR(50)
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0598 seconds.)
CREATE TABLE 'branch' ( branch_id INT PRIMARY KEY AUTO_INCREMENT, name INT, address VARCHAR(100) )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0429 seconds.)

CREATE TABLE `sales` ( time_id INT, item_id INT, location_id INT, branch_id INT, sale_id INT PRIMARY KEY AUTO_INCREMENT, total_items_sold INT,
total_sale_amt INT, total_discount INT, CONSTRAINT FK_SalesTime FOREIGN KEY ('time_id') REFERENCES 'time_id'), CONSTRAINT FK_SalesItem
FOREIGN KEY ('item_id') REFERENCES 'item'('item_id'), CONSTRAINT FK_SalesLocation FOREIGN KEY ('location_id') REFERENCES 'location'('location_id'),
CONSTRAINT FK_SalesBranch FOREIGN KEY (`branch_id`) REFERENCES `branch`(`branch_id`) )
```

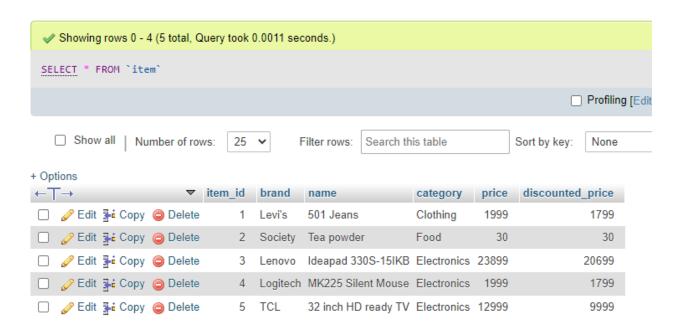
```
SELECT * FROM `sales`;
```

Result:



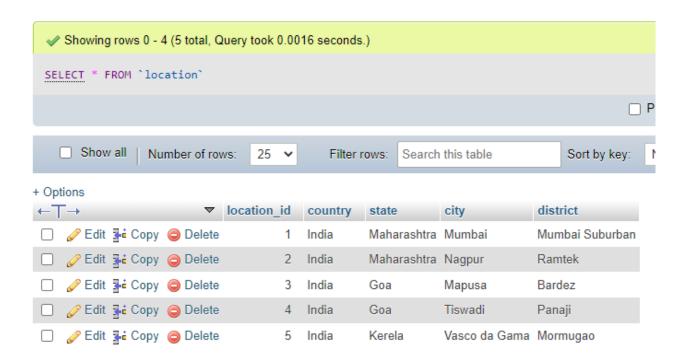
DQL Query:

SELECT * FROM `item`;



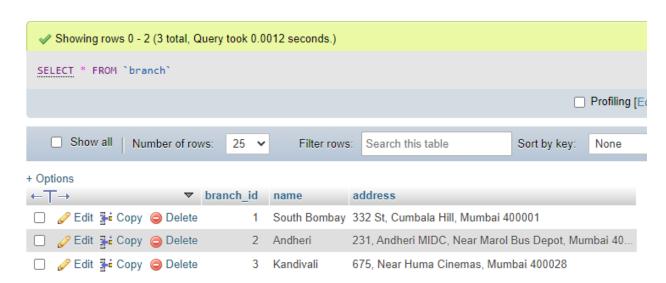
```
SELECT * FROM `location`;
```

Result:

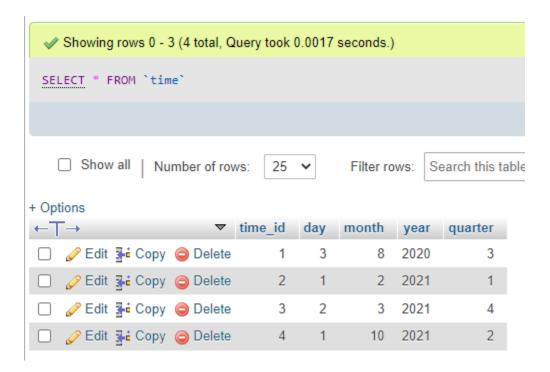


DQL Query:

```
SELECT * FROM `branch`;
```



```
SELECT * FROM `time`;
```



Snowflake schema:

DDL Queries:

```
CREATE DATABASE dwm_exp2_snowflake;
CREATE TABLE `sales` (
    time_id INT,
    item_id INT,
    location_id INT,
    branch_id INT,
    sale_id INT PRIMARY KEY AUTO_INCREMENT,
    total_items_sold INT,
    total_sale_amt INT,
    total_discount INT,
    FOREIGN KEY (`time_id`) REFERENCES `time`(`time_id`),
    FOREIGN KEY (`item_id`) REFERENCES `item`(`item_id`),
    FOREIGN KEY (`location_id`) REFERENCES `location`(`location_id`),
    FOREIGN KEY (`branch_id`) REFERENCES `branch`(`branch_id`)
);
CREATE TABLE `time` (
    time_id INT PRIMARY KEY AUTO_INCREMENT,
    day INT,
    month INT,
    year INT,
    quarter TINYINT
);
CREATE TABLE `brand` (
    brand_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100)
);
CREATE TABLE `category` (
    category_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100),
    code INT
);
```

```
CREATE TABLE `item` (
    item_id INT PRIMARY KEY AUTO_INCREMENT,
    brand_id INT,
    name VARCHAR(50),
    category_id INT,
    price INT,
    discounted_price INT,
    FOREIGN KEY (`category_id`) REFERENCES `category`(`category_id`),
    FOREIGN KEY (`brand_id`) REFERENCES `brand`(`brand_id`)
);
CREATE TABLE `country` (
    country_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(50),
    code INT
);
CREATE TABLE `location` (
    location_id INT PRIMARY KEY AUTO_INCREMENT,
    country_id INT,
    state VARCHAR(50),
    city VARCHAR(50),
    district VARCHAR(50),
    FOREIGN KEY (`country_id`) REFERENCES `country`(`country_id`)
);
CREATE TABLE `branch` (
    branch_id INT PRIMARY KEY AUTO_INCREMENT,
    name INT,
    address VARCHAR(100)
);
```

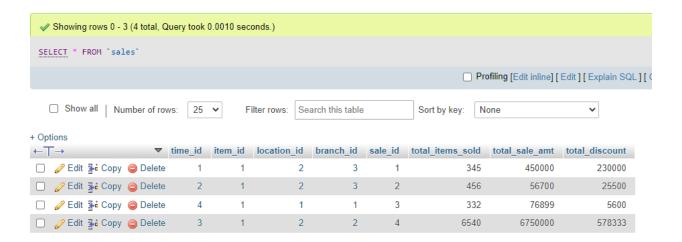
```
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0324 seconds.)
CREATE TABLE `time` ( time_id INT PRIMARY KEY AUTO_INCREMENT, day INT, month INT, year INT, quarter TINYINT )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0408 seconds.)
CREATE TABLE `brand` ( brand_id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(100) )
                                                                                                                                [Edit inline] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0308 seconds.)

CREATE TABLE `category` ( category_id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(100), code INT )
                                                                                                                                [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0357 seconds.)
CREATE TABLE `item` ( item_id INT PRIMARY KEY AUTO_INCREMENT, brand_id INT, name VARCHAR(50), category_id INT, price INT, discounted_price INT,
CONSTRAINT FK_ItemCategory FOREIGN KEY (`category_id`) REFERENCES `category`(`category_id`), CONSTRAINT FK_ItemBrand FOREIGN KEY (`brand_id`)
REFERENCES `brand`(`brand_id`) )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0300 seconds.)
CREATE TABLE `country` ( country_id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(50), code INT )
                                                                                                                                [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0299 seconds.)
CREATE TABLE `location` ( location_id INT PRIMARY KEY AUTO_INCREMENT, country_id INT, state VARCHAR(50), city VARCHAR(50), district VARCHAR(50),
CONSTRAINT FK_LocationCountry FOREIGN KEY (`country_id`) REFERENCES `country`(`country_id`) )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0301 seconds.)
CREATE TABLE 'branch' ( branch_id INT PRIMARY KEY AUTO_INCREMENT, name INT, address VARCHAR(100) )
                                                                                                                                [Edit inline] [ Edit ] [ Create PHP code ]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0482 seconds.)
CREATE TABLE 'sales' ( time_id INT, item_id INT, location_id INT, branch_id INT, sale_id INT PRIMARY KEY AUTO_INCREMENT, total_items_sold INT,
total_sale_amt INT, total_discount INT, CONSTRAINT FK_SalesTime FOREIGN KEY ('time_id') REFERENCES 'time'('time_id'), CONSTRAINT FK_SalesItem
FOREIGN KEY ('item_id') REFERENCES 'item'('item_id'), CONSTRAINT FK_SalesLocation FOREIGN KEY ('location_id') REFERENCES 'location'('location_id'),
CONSTRAINT FK_SalesBranch FOREIGN KEY (`branch_id`) REFERENCES `branch`(`branch_id`) )
                                                                                                                               [Edit inline] [ Edit ] [ Create PHP code ]
```

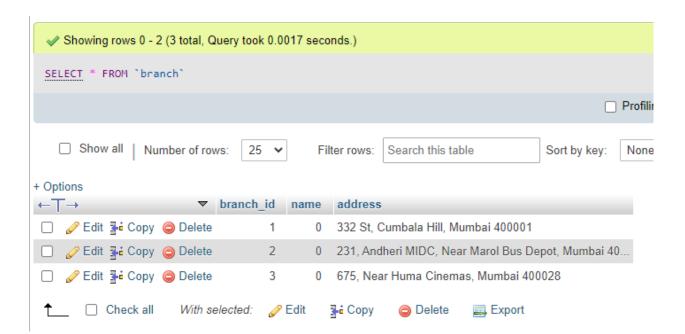
```
SELECT * FROM `sales`;
```

Result:



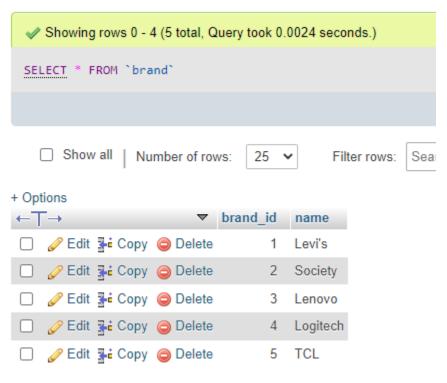
DQL Query:

SELECT * FROM `branch`;



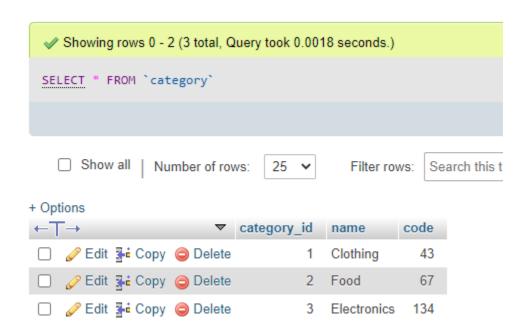
```
SELECT * FROM `brand`;
```

Result:



DQL Query:

SELECT * FROM `category`;

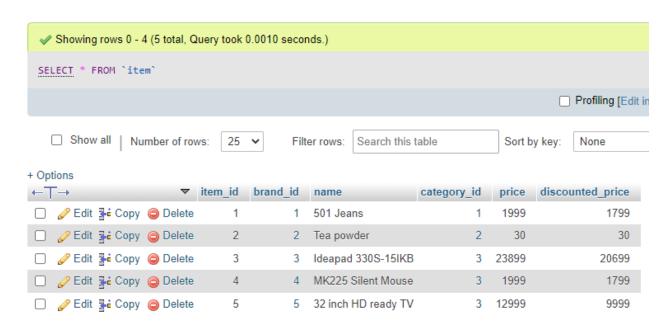


```
SELECT * FROM `country`;
```

Result:

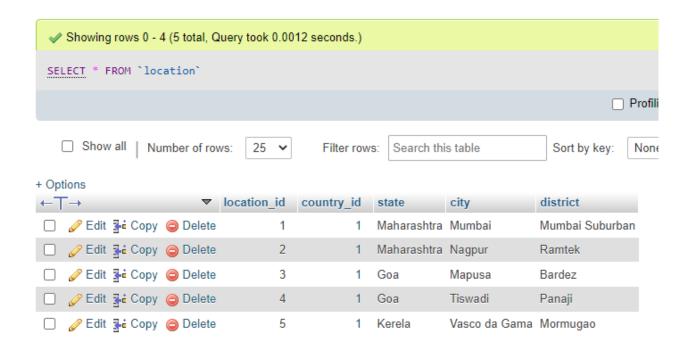


DQL Query:



```
SELECT * FROM `location`;
```

Result:



DQL Query:

SELECT * FROM `time`;

