Second: Write queries that directly answer predetermined questions from a business stakeholder

Launch MySQL server, I have used XAMPP localhost.

Step1: Create database "fetch_reards":

Step2: Creation of Tables:

Users:

CPGs table:

```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)
CREATE TABLE CPGs ( cpg_id VARCHAR(255) PRIMARY KEY, -- MongoDB ObjectID converted to string name VARCHAR(255) );
[Edit inline] [Edit] [ Create PHP code ]
```

Brands table:

```
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

CREATE TABLE Brands ( brand_id VARCHAR(255) PRIMARY KEY, -- MongoDB ObjectID converted to string bar_Code VARCHAR(255), brand_Code VARCHAR(255), category VARCHAR(255), category_Code VARCHAR(255), name VARCHAR(255), top_Brand BOOLEAN, cpg_id VARCHAR(255), -- Foreign key to CPGs table FOREIGN KEY (cpg_id) REFERENCES CPGs(cpg_id));

[Edit inline] [Edit] [Create PHP code]
```

Receipts table:

```
WySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

CREATE TABLE Receipts ( receipt_id VARCHAR(255) PRIMARY KEY, -- MongoDB ObjectID converted to string bonus_Points_Earned INT, bonusPoints_Earned_Reason TEXT, create_Date DATETIME, date_Scanned DATETIME, finished_Date DATETIME, modify_Date DATETIME, points_Awarded_Date DATETIME, points_Earned DECIMAL(10, 2), purchase_Date DATETIME, purchased_Item_Count INT, rewards_Receipt_Status VARCHAR(255), total_Spent DECIMAL(10, 2), user_Id VARCHAR(255), -- Foreign key to Users table FOREIGN KEY (user_Id) REFERENCES Users(user_id) );

[Edit inline] [Edit] [Create PHP code]
```

ReceiptItems table:

```
WMSQL returned an empty result set (i.e. zero rows) (Query took 0.0003 seconds.)

CREATE TABLE ReceiptItems ( receipt_item_id VARCHAR(255) PRIMARY KEY, -- MongoOB ObjectID converted to string receipt_id VARCHAR(255), -- Foreign key to Receipts table barcode VARCHAR(255), -- Foreign key to Brands table description TEXT, final_Price DECIMAL(10, 2), item_Price DECIMAL(10, 2), quantity_Purchased INT, needs_Fetch_Review BOOLEAN, partner_Item_id VARCHAR(255), prevent_Target_Gap_Points BOOLEAN, user_Flagged_Barcode VARCHAR(255), user_flagged_Description TEXT, user_flagged_Description TEXT, user_flagged_Description TEXT, user_flagged_Description TEXT, user_flagged_Price DECIMAL(10, 2), user_flagged_Quantity INT, points_Not_Awarded_Reason TEXT, points_Payer_id VARCHAR(255), rewards_Group TEXT, rewards_Product_Partner_id VARCHAR(255), FOREIGN KEY (receipt_id) REFERENCES Receipts(receipt_id), FOREIGN KEY (barcode) REFERENCES Brands(bar_Code));

[Edit inline] [Edit] [Create PHP code]
```

Step3: Import data from CSV files (user_normalized.csv, brands_normalized.csv, cpgs_normalized.csv, receipts normalized.csv, receipt items normalized.csv) using "Import" feature of MySQL.

Step4: Write SQL queries against your new structured relational data model

Note: For queries involving data related to a specific month, such as the most recent month or the past six months, the current date has been considered as 'March 1, 2021'. This is because, after converting the MongoDB milliseconds timestamp to a datetime format from the given JSON files, the latest recorded data falls within March 2021.

 When considering average spend from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?



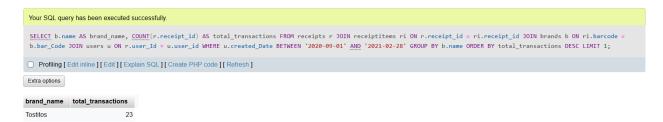
 When considering total number of items purchased from receipts with 'rewardsReceiptStatus' of 'Accepted' or 'Rejected', which is greater?



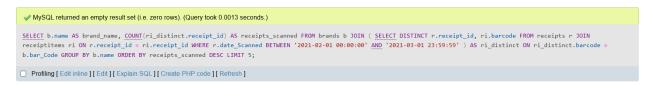
Which brand has the most spend among users who were created within the past 6 months?



Which brand has the most transactions among users who were created within the past 6 months?



• What are the top 5 brands by receipts scanned for most recent month?



• How does the ranking of the top 5 brands by receipts scanned for the recent month compare to the ranking for the previous month?

