## **Group Project Document – Part 3**

## **Grocery Store Chain Database**

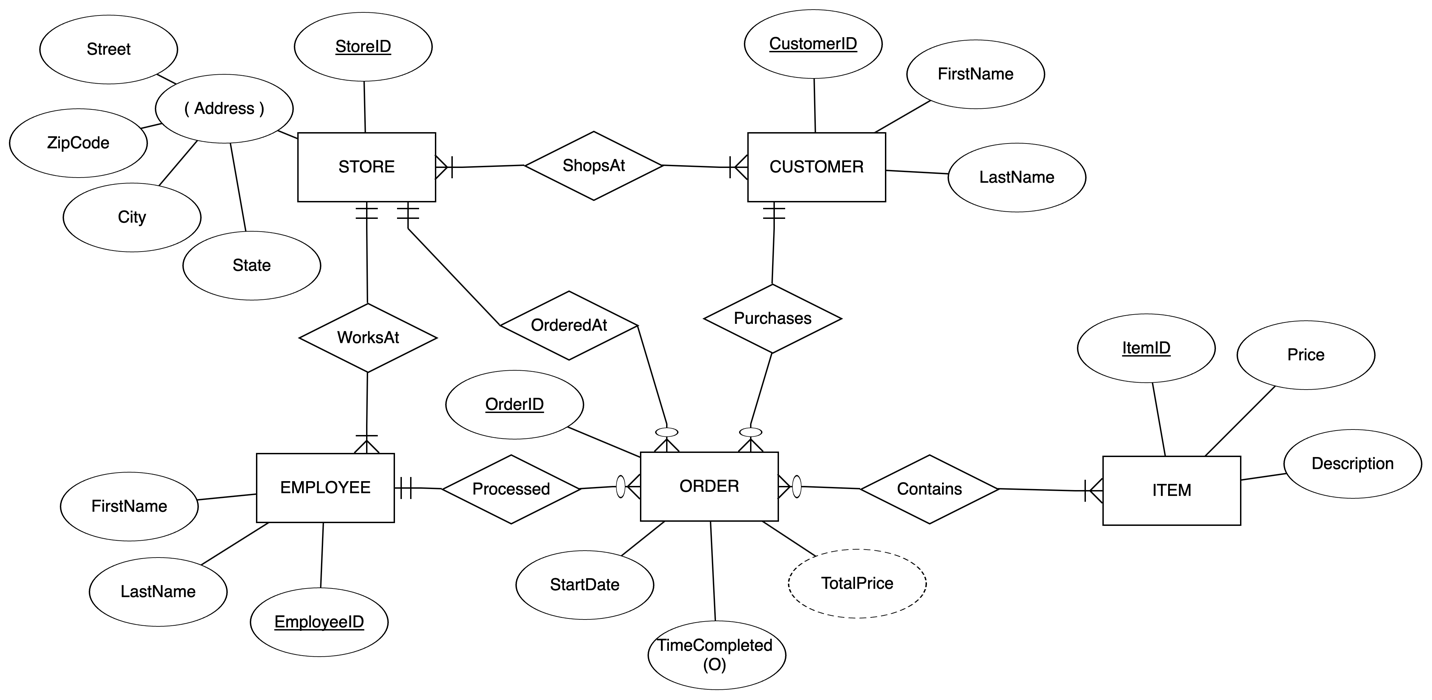
* **Project Part 02**
* **Team Number 02**
* **Team Members:**
  + Fuad Hassan
  + Omar Shakir
  + Tony Siu
  + Heron Ziegel
* **Database System Name:** **Grocery Store Chain Database**

**Part 1:**

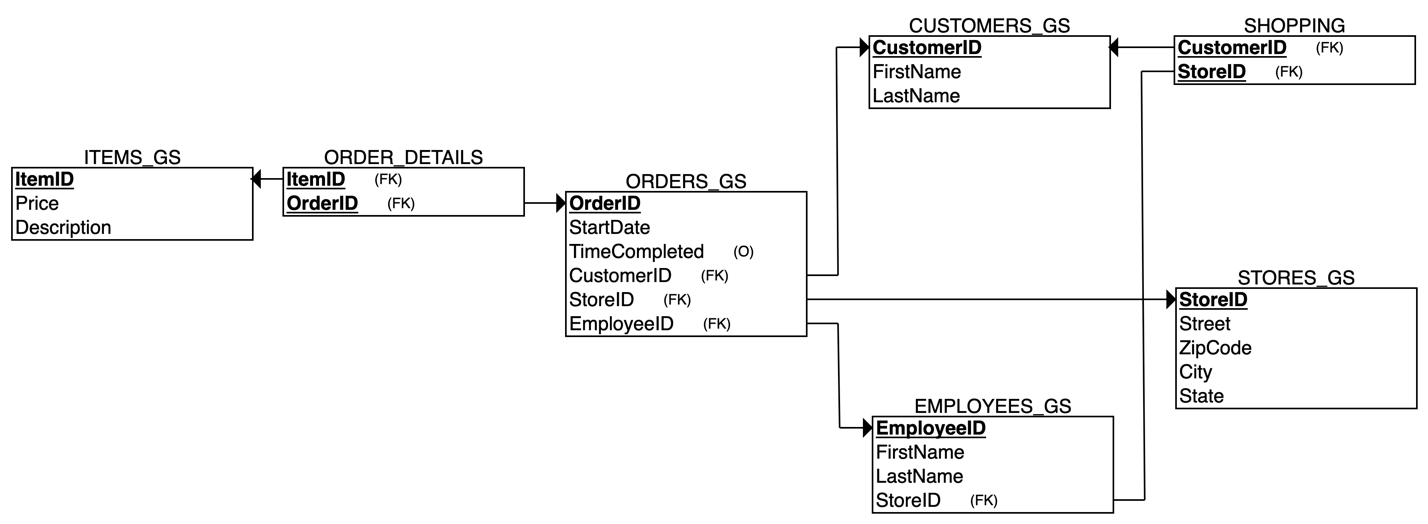
## Requirements:

* Each **Employee** has a EmployeeID (unique), a FirstName and a LastName.
* Each **Customer** has a CustomerID (unique), a FirstName and a LastName.
* Each **Item** has a ItemID (unique), Price, Description.
* Each **Order** has a unique OrderID, a PurchaseDate, and may have a TimeCompleted or might not be completed yet. Each Order also has a TotalPrice, which is calculated based on the price of every Item in that Order.
* Each **Store** has a unique StoreID, and an Address made up of a Street, City, State and ZipCode.
* Each Employee works at exactly one Store, but each Store has at least one and can have many Employees.
* Each Order contains multiple Items and at least one, and each Item can be in multiple Orders or none.
* Each Employee processes zero or more orders. And Each Order much be processed by one Employee.
* Each Customer can have multiple Orders but doesn’t need to have any Orders. Each Order belongs to exactly one Customer.
* Each Customer can visit many stores and must visit at least one. Each Store can have multiple customers or at least one.
* Each Order is created at exactly one Store, and each Store has anywhere from no Orders to many.

## **ER diagram –** : Grocery Store Chain Database



**Relational schema diagram** -: Grocery Store Chain Database



**SQL** -: Grocery Store Chain Database

-- Dropping all table before inserting

DROP TABLE ORDERS\_DETAILS\_GS;

DROP TABLE ORDERS\_GS;

DROP TABLE ITEMS\_GS;

DROP TABLE EMPLOYEES\_GS;

DROP TABLE SHOPPING\_GS;

DROP TABLE STORES\_GS;

DROP TABLE CUSTOMERS\_GS;

-- STORES\_GS

CREATE TABLE STORES\_GS (

StoreID INT NOT NULL,

Street VARCHAR(50) NOT NULL,

ZipCode INT NOT NULL,

City VARCHAR(50) NOT NULL,

State CHAR(2) NOT NULL,

PRIMARY KEY (StoreID)

);

insert into STORES\_GS (StoreID, Street, ZipCode, City, State)

values (1, 'Maple', '20057', 'Washington', 'DC');

insert into STORES\_GS (StoreID, Street, ZipCode, City, State)

values (2, 'Marquette', '66286', 'Shawnee Mission', 'KS');

insert into STORES\_GS (StoreID, Street, ZipCode, City, State)

values (3, 'Forest', '45403', 'Dayton', 'OH');

-- EMPLOYEES\_GS

CREATE TABLE EMPLOYEES\_GS (

EmployeeID INT NOT NULL,

FirstName VARCHAR2(50) NOT NULL,

LastName VARCHAR2(50) NOT NULL,

StoreID INT NOT NULL,

PRIMARY KEY (EmployeeID),

FOREIGN KEY (StoreID) REFERENCES STORES\_GS(StoreID)

);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (1, 'Pascale', 'Woodard', 2);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (2, 'Garret', 'Blunsum', 2);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (3, 'Salomi', 'Barok', 1);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (4, 'Etan', 'Abad', 2);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (5, 'Bernarr', 'Davidescu', 3);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (6, 'Maritsa', 'Brittian', 3);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (7, 'Meriel', 'Ralling', 3);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (8, 'Ruddy', 'Clay', 1);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (9, 'Jyoti', 'Simanek', 3);

insert into EMPLOYEES\_GS (EmployeeID, FirstName, LastName, StoreID)

values (10, 'Althea', 'Housecroft', 1);

-- CUSTOMERS\_GS

CREATE TABLE CUSTOMERS\_GS (

CustomerID INT NOT NULL,

FirstName VARCHAR(50) NOT NULL,

LastName VARCHAR(50) NOT NULL,

PRIMARY KEY (CustomerID)

);

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (1, 'Twila', 'O''Sherrin');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (2, 'Natka', 'McGaughay');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (3, 'Boot', 'Cino');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (4, 'Sharline', 'Creagh');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (5, 'Astrid', 'Mcall');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (6, 'Gilberte', 'Nairn');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (7, 'Kirk', 'Maffini');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (8, 'Demetrius', 'Prigg');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (9, 'Dulsea', 'Latta');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (10, 'Penni', 'Harper');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (11, 'Bellina', 'Koenen');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (12, 'Catlee', 'Backman');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (13, 'Terra', 'St Ledger');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (14, 'Yoshiko', 'Briston');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (15, 'Caresa', 'Gisbey');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (16, 'Maurizio', 'Buffham');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (17, 'Cos', 'Basire');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (18, 'Irwin', 'Beaton');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (19, 'Nelli', 'Morcomb');

insert into CUSTOMERS\_GS (CustomerID, FirstName, LastName)

values (20, 'Fallon', 'Gomby');

-- SHOPPING\_GS

CREATE TABLE SHOPPING\_GS (

CustomerID INT NOT NULL,

StoreID INT NOT NULL,

PRIMARY KEY (CustomerID, StoreID),

FOREIGN KEY (CustomerID) REFERENCES CUSTOMERS\_GS(CustomerID),

FOREIGN KEY (StoreID) REFERENCES STORES\_GS(StoreID)

);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (1, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (2, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (3, 3);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (4, 3);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (5, 3);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (6, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (7, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (8, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (9, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (10, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (11, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (12, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (13, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (14, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (15, 3);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (16, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (17, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (18, 2);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (19, 1);

insert into SHOPPING\_GS (CustomerID, StoreID)

values (20, 1);

-- ITEMS\_GS

CREATE TABLE ITEMS\_GS (

ItemID INT NOT NULL,

Price DECIMAL(10, 2) NOT NULL,

Description VARCHAR(255),

PRIMARY KEY (ItemID)

);

insert into ITEMS\_GS (ItemID, Price, Description)

values (1, 45.35, 'Sambuca - Opal Nera');

insert into ITEMS\_GS (ItemID, Price, Description)

values (2, 5.56, 'Lotus Root');

insert into ITEMS\_GS (ItemID, Price, Description)

values (3, 8.95, 'Sauce - Soya, Light');

insert into ITEMS\_GS (ItemID, Price, Description)

values (4, 1.61, 'Bread - Roll, Canadian Dinner');

insert into ITEMS\_GS (ItemID, Price, Description)

values (5, 30.06, 'Melon - Honey Dew');

insert into ITEMS\_GS (ItemID, Price, Description)

values (6, 9.54, 'Dates');

insert into ITEMS\_GS (ItemID, Price, Description)

values (7, 9.91, 'Steampan Lid');

insert into ITEMS\_GS (ItemID, Price, Description)

values (8, 29.24, 'Langers - Cranberry Cocktail');

insert into ITEMS\_GS (ItemID, Price, Description)

values (9, 29.16, 'Asparagus - Green, Fresh');

insert into ITEMS\_GS (ItemID, Price, Description)

values (10, 30.0, 'Pasta - Spaghetti, Dry');

insert into ITEMS\_GS (ItemID, Price, Description)

values (11, 29.56, 'Cornish Hen');

insert into ITEMS\_GS (ItemID, Price, Description)

values (12, 1.22, 'Ostrich - Prime Cut');

insert into ITEMS\_GS (ItemID, Price, Description)

values (13, 8.81, 'Tart - Lemon');

insert into ITEMS\_GS (ItemID, Price, Description)

values (14, 14.75, 'Pasta - Lasagna Noodle, Frozen');

insert into ITEMS\_GS (ItemID, Price, Description)

values (15, 7.76, 'Anisette - Mcguiness');

insert into ITEMS\_GS (ItemID, Price, Description)

values (16, 17.37, 'Venison - Striploin');

insert into ITEMS\_GS (ItemID, Price, Description)

values (17, 7.57, 'Juice - V8, Tomato');

insert into ITEMS\_GS (ItemID, Price, Description)

values (18, 37.03, 'Ice Cream - Super Sandwich');

insert into ITEMS\_GS (ItemID, Price, Description)

values (19, 3.26, 'Ocean Spray - Ruby Red');

insert into ITEMS\_GS (ItemID, Price, Description)

values (20, 30.65, 'Cheese - Goat');

-- ORDERS\_GS

CREATE TABLE ORDERS\_GS (

OrderID INT NOT NULL,

StartDate DATE NOT NULL,

TimeCompleted DATE NULL,

CustomerID INT NOT NULL,

StoreID INT NOT NULL,

EmployeeID INT NOT NULL,

PRIMARY KEY (OrderID),

FOREIGN KEY (CustomerID) REFERENCES CUSTOMERS\_GS(CustomerID),

FOREIGN KEY (StoreID) REFERENCES STORES\_GS(StoreID),

FOREIGN KEY (EmployeeID) REFERENCES EMPLOYEES\_GS(EmployeeID)

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

1,

TO\_DATE('2024-04-20', 'YYYY-MM-DD'),

NULL,

1,

1,

2

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

2,

TO\_DATE('2024-04-20', 'YYYY-MM-DD'),

NULL,

2,

2,

1

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

3,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('15:30:00', 'HH24:MI:SS'),

3,

3,

5

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

4,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('16:30:00', 'HH24:MI:SS'),

4,

3,

9

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

5,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('16:30:00', 'HH24:MI:SS'),

5,

3,

5

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

6,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('16:35:00', 'HH24:MI:SS'),

6,

1,

10

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

7,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('16:35:00', 'HH24:MI:SS'),

7,

1,

8

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

8,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('16:40:00', 'HH24:MI:SS'),

8,

2,

2

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

9,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('17:30:00', 'HH24:MI:SS'),

9,

2,

3

);

insert into ORDERS\_GS (

OrderID,

StartDate,

TimeCompleted,

CustomerID,

StoreID,

EmployeeID

)

values (

10,

TO\_DATE('2024-04-21', 'YYYY-MM-DD'),

TO\_DATE('10:30:00', 'HH24:MI:SS'),

10,

1,

3

);

-- ORDERS\_DETAILS\_GS

CREATE TABLE ORDERS\_DETAILS\_GS (

ItemID INT NOT NULL,

OrderID INT NOT NULL,

PRIMARY KEY (ItemID, OrderID),

FOREIGN KEY (ItemID) REFERENCES ITEMS\_GS(ItemID),

FOREIGN KEY (OrderID) REFERENCES ORDERS\_GS(OrderID)

);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 1);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (2, 2);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (3, 3);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (4, 4);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 5);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 2);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 3);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 4);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 5);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (3, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (2, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (1, 10);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (2, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (6, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (7, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (8, 6);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (10, 7);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 7);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (6, 7);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (7, 7);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (8, 7);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (9, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (6, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (7, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (8, 8);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (3, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (6, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (7, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (8, 9);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (9, 10);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (5, 10);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (6, 10);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (7, 10);

insert into ORDERS\_DETAILS\_GS (ItemID, OrderID)

values (8, 10);

**Example q**

-- 1. gets the total cost per order

SELECT ORDERS\_GS.CustomerID,

ORDERS\_GS.OrderID,

CUSTOMERS\_GS.FirstName,

CUSTOMERS\_GS.LastName,

SUM(ITEMS\_GS.Price) AS TotalItemCost

FROM ORDERS\_GS

JOIN CUSTOMERS\_GS ON ORDERS\_GS.CustomerID = CUSTOMERS\_GS.CustomerID

JOIN ORDERS\_DETAILS\_GS ON ORDERS\_GS.OrderID = ORDERS\_DETAILS\_GS.OrderID

JOIN ITEMS\_GS ON ORDERS\_DETAILS\_GS.ItemID = ITEMS\_GS.ItemID

GROUP BY ORDERS\_GS.CustomerID,

ORDERS\_GS.OrderID,

CUSTOMERS\_GS.FirstName,

CUSTOMERS\_GS.LastName;

-- 2. Shows the Order and its start and end time

SELECT o.orderid,

o.startdate,

o.TIMECOMPLETED

from ORDERS\_GS o

inner join CUSTOMERS\_GS c on o.CustomerID = c.CustomerID;

**Tasks Distribution** -: Grocery Store Chain Database

|  |  |
| --- | --- |
| Requirement | Heron, and 3 of us reviewed and edited |
| ERD | Heron, Fuad, Tony, Omar |
| Schema | We all did it together |
| SQL | Fuad, Omar, Tony |
| Summation and writing | Fuad |