CS6750 S18: Group 1

Project idea

- Business Model
  - Online Retail Management System
- Importance
  - Simplify and optimize tracking, management of and maintenance of online business
  - Allowing online sellers to have a statistical view of customers' consumption habits

User requirements

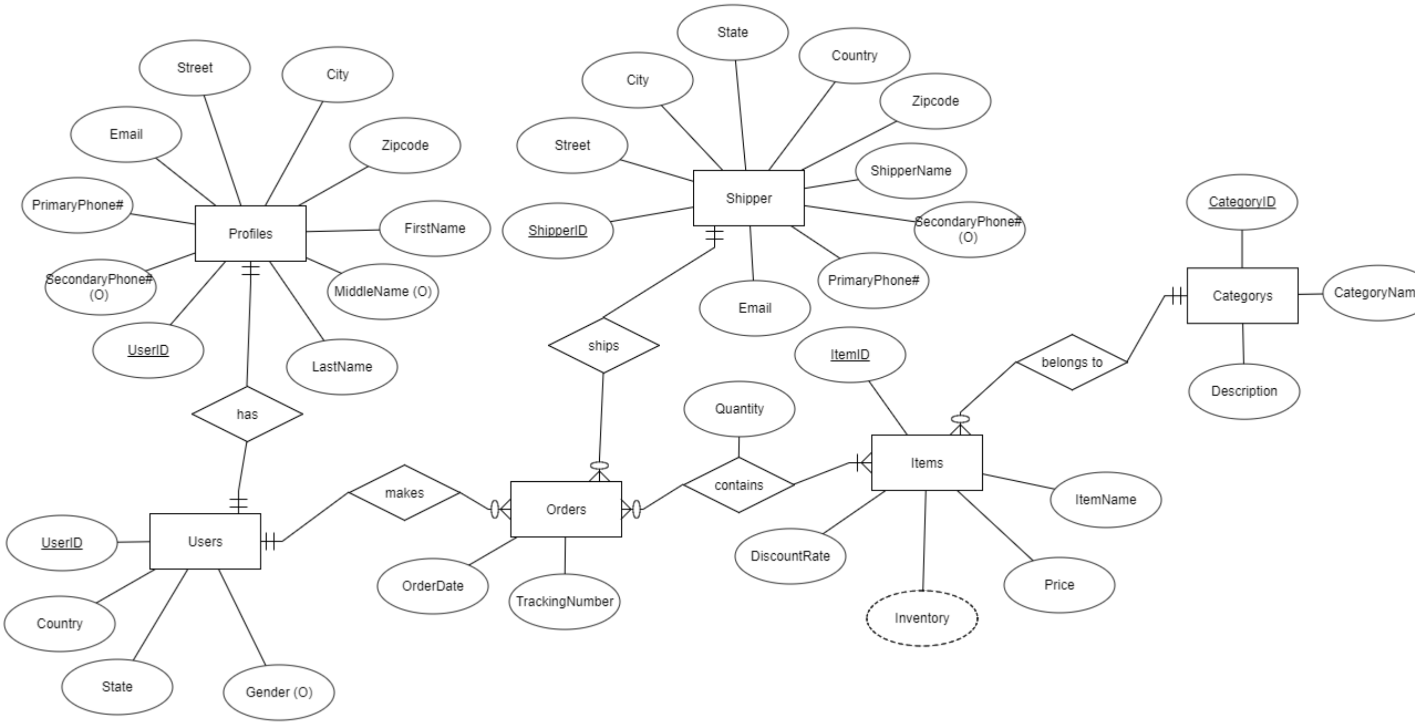
- Be able to update item inventory at the click of a button.
- Be able to see which items and categories are selling the most.
- Be able to make orders for users.
- Be able to see user order history.
- Be able to view records of all database tables.

Database tables and data sources

- Tables
  - Users
  - Profiles
  - Categories
  - Shippers
  - Items
  - Orders
  - OrderDetails
- Sources
  - We generated the data ourselves.

(see next page for more)

ERD



SQL queries

- Trigger for adding order details/updating inventory upon ordering an item:

```
BEGIN
   IF (NEW.quantity > (Select Inventory from Items where New.ItemID =
Items.ItemID)) THEN
                SIGNAL SQLSTATE '02000' SET MESSAGE_TEXT =
'Warning: No inventory left!';
        ELSE
                UPDATE  Items i set i.inventory = i.inventory - NEW.quantity
where i.ItemID = NEW.ItemID;
        END IF;
END
```

- Update inventory:

```
UPDATE Items SET Inventory = <inventory input> WHERE ItemID =
<itemID input>
```

- Add Item

```
INSERT INTO Items (ItemName, CategoryID, Price, DiscountRate,
Inventory) VALUES('$inputItemName','$item_category','$inputItemPrice',
'$inputItemDiscount','$inputItemInventory')
```

- Add Order

```
INSERT INTO Orders (UserID, ShipperID, OrderDate, TrackingNumber)
VALUES('$user_name','$shipper_name','$OrderDate', '$tracking_number')
```

- Add OrderDetail

```
INSERT INTO OrderDetails VALUES('$OrderID','$item_name',
'$inputOrderQuantity')
```

- Delete Order (if trigger sends warning message)

  ```
  DELETE FROM Orders WHERE OrderID = <OrderID>
  ```

- View User Order history:

```
Select Username, ItemName, Price, Quantity, OrderDate FROM (SELECT
Username, ItemName, Price, Quantity, OrderDate FROM Users u LEFT
JOIN Orders o ON u.UserID = o.UserID LEFT JOIN OrderDetails od ON
o.OrderID = od.OrderID LEFT JOIN Items i ON od.ItemID = i.ItemID) t
WHERE Username = <username input>;
```

- View most popular categories:

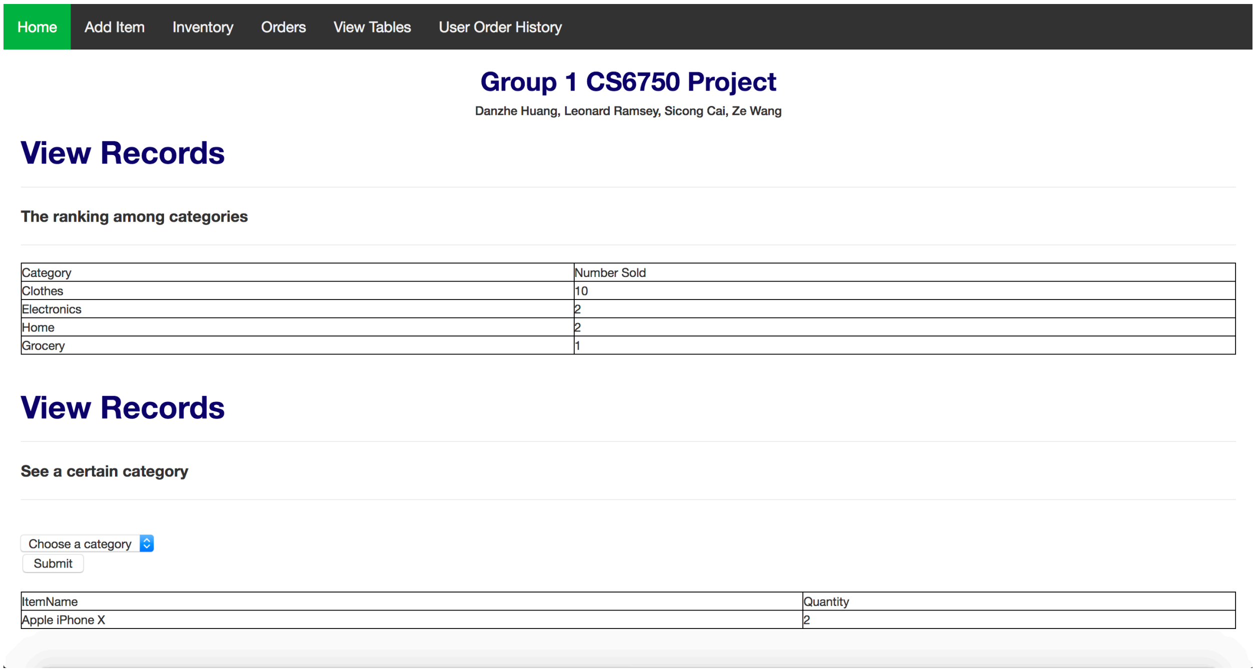
```
Select c.CategoryName, SUM(b.Quantity) from Items a
left join  OrderDetails b
on a.ItemId = b.ItemID
left join Categories c
on a.CategoryID = c.CategoryID
Group by c.CategoryName
Order by SUM(b.Quantity) DESC;
```

- View most popular items:

```
Select b.CategoryName, a.ItemName, SUM(c.Quantity) from Items a inner
join Categories b
on a.CategoryID = b.CategoryID
inner join OrderDetails c
on a.ItemID = c.ItemID
where b.CategoryName = <category input>
GROUP BY a.ItemName
Order by c.Quantity DESC
```

Sample results

The website is fast, simple, and has several simple/complex database functions. A screenshot of the homepage is below, and for more, see the two links under “Application interface”.



Group 1 CS6750 Project

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View Records

The ranking among categories

Category	Number Sold
Clothes	10
Electronics	2
Home	2
Grocery	1

View Records

See a certain category

ItemName	Quantity
Apple iPhone X	2

Tools for your interface implementation,

HTML/CSS/PHP

Application interface.

Source code: https://github.com/leonardramsey/cs6750_g1

Application: http://plato.cs.virginia.edu/~lr3hj/index_g1.php