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COIS2240 Group 20
Final Report

## About the Project

The Point of Sales system that we created will allow users to input information via buttons to create an order list displayed in a table. It enables them to add as many items as they desire to the order. With the implementation of a database, we can store a certain amount of items and determine once a button is clicked, if that item is added to the list or not. The system is comprised of a combo Box containing 15 items, buttons to perform exit, delete, reset, total, and receipt functions, as well as a database to store items and orders. The total button displays the subtotal, tax amount, and final total. The receipt button opens a receipt pane with the order items and calculations of the total. This software is to be used by management and staff of a seafood restaurant which requires an inventory management sales system that allows there to be an input and tracking of item information. It enables them to take orders, perform calculations and provide guests with receipts.

## Description of Industry

The main target industry of this software is the restaurant industry. This software is to be used by management and staff of a restaurant which requires an inventory management sales system that allows there to be an input and tracking of item information. It enables them to take orders, perform calculations and provide guest with receipts.

## Project Retrospective

### Easiest to implement:
The easiest things to implement were adding items to the table using DB Browser for SQLite and creating an exit button to close the program.

### Most Difficult to implement:
Getting the database to link to the program was the most difficult part to implement. It was also difficult to get the items from the order table in the main window to print to the receipt pane and it took trying a couple of different methods to get it to work properly.

### Do anything different:
If we had more time we would try to implement a receipt record table that records the order and its total when the receipt button is pressed. We would also try to save more time by reading documentation before trying to implement code that we are unsure how to use properly.

**What have we learned:**

During the creation of this software we learned a lot about using JavaFX to create a GUI and about adding functionality to a program. The requirement to use git helped us better understand how to use github to integrate our code and helped us work together effectively. We also learned how to use local databases and how to connect them with the program. Figuring out which functions in the program we needed to have versus which functions we would like to have given more time helped us learn better project management that we can use in the future.
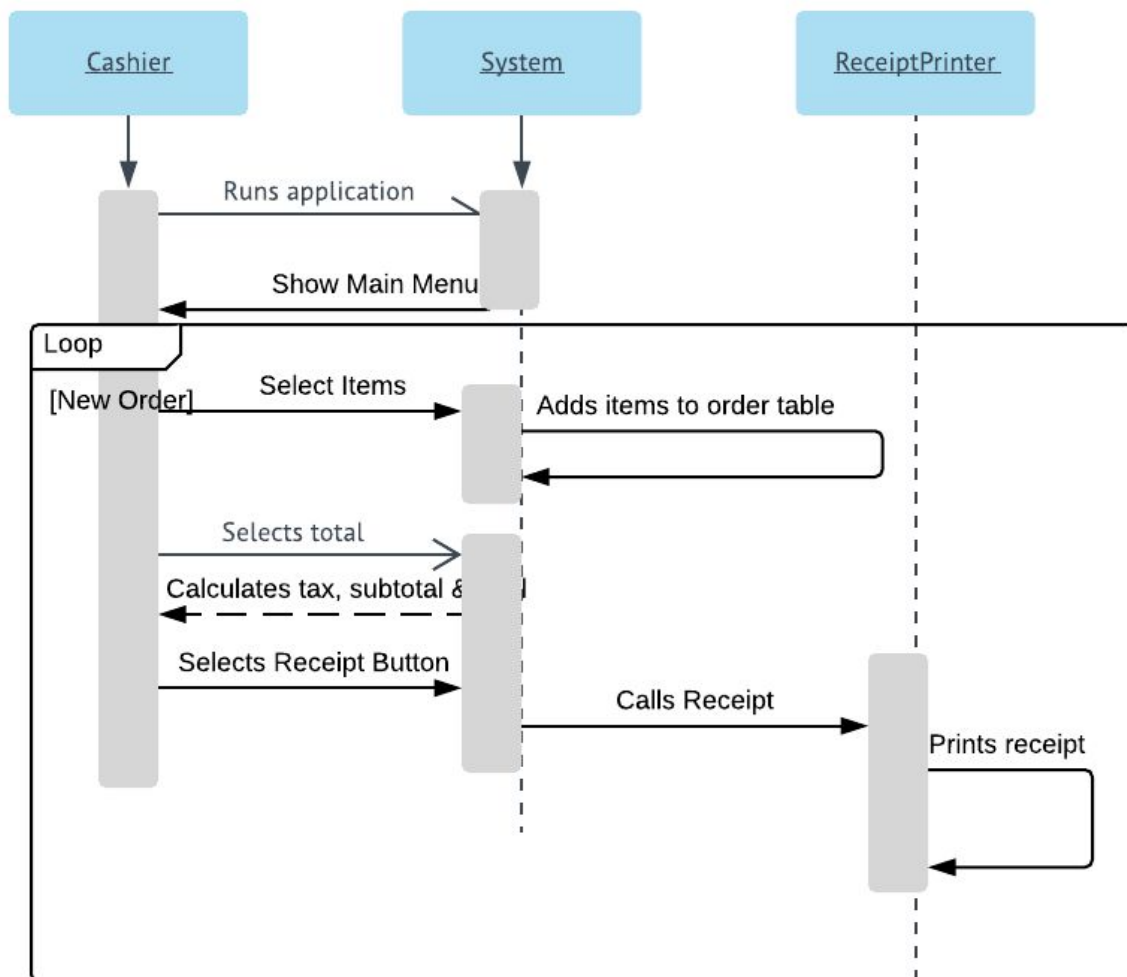
**UML Descriptions:**

Class Diagram – by: Micheala

This class diagram explains that the POS system will feature a database that stores items. It shows a product and the amount it costs during the order process. It also demonstrates product identification and amount which is calculated and shown at the end of the sale by a receipt.
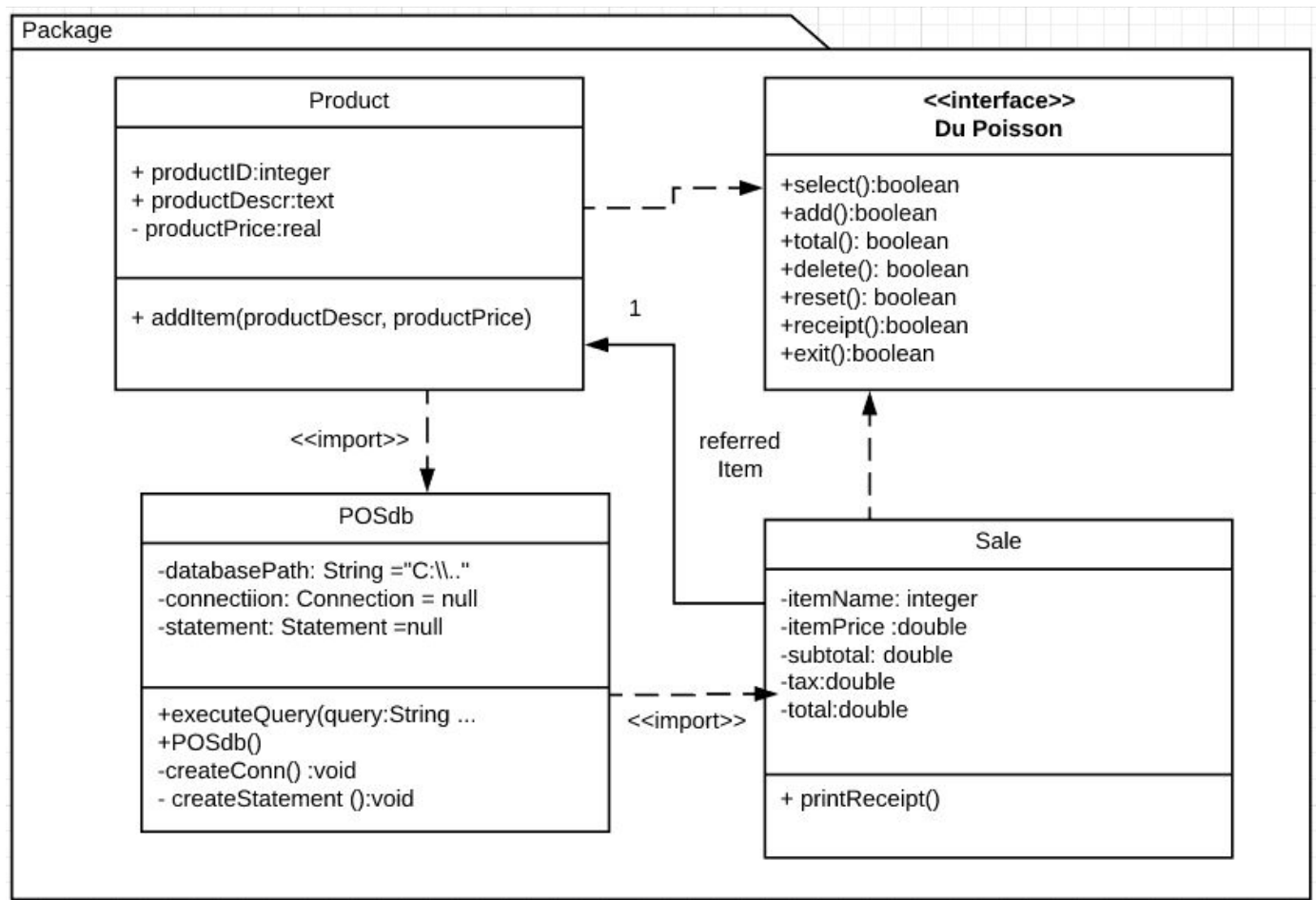
Sequence Diagram – by: Stednisha

The sequence diagram shows that once the application is ran. The user then selects items from the main menu shown. The system adds selected items to the order table, once user is done they can select total to calculate the tax, subtotal and total of the items. Receipt button is then selected which prompts the system to call the receipt pane and prints a receipt.  A loop is implemented to start a new order(represent the reset button of the application).

| Cashier | System | ReceiptPrinter |
|---------|--------|----------------|

Runs application

Show Main Menu

Loop

[New Order]  Select Items  →  Adds items to order table

Selects total

Calculates tax, subtotal &

Selects Receipt Button  →  Calls Receipt  →  Prints receipt

State Chart Diagram – by: Jason

The state diagram begins by generating the database of items. Items are then added to
cart and either totalled or deleted. If modified then more items can be added
or dropped. However, if total is selected, then the items are calculated with
tax and a receipt is printed
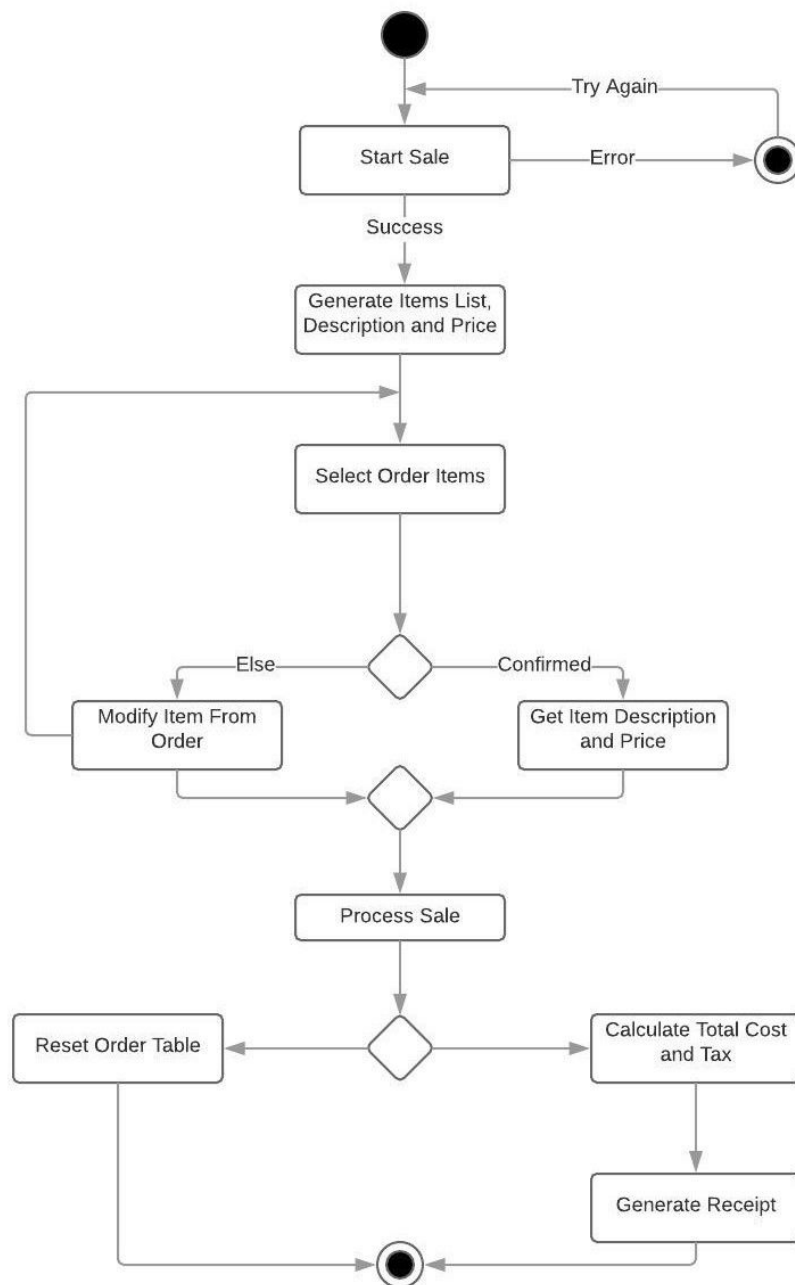
Activity Diagram – by: Maggie

The activity diagram begins with the sale. Once the item is selected and added to the order, the description and price of the item is retrieved from the database. The user may choose to delete and item from the order, reset the order, or calculate the total. Once the total is calculated a receipt may be printed.