CMPG 223_FINAL PROJECT DOCUMENT

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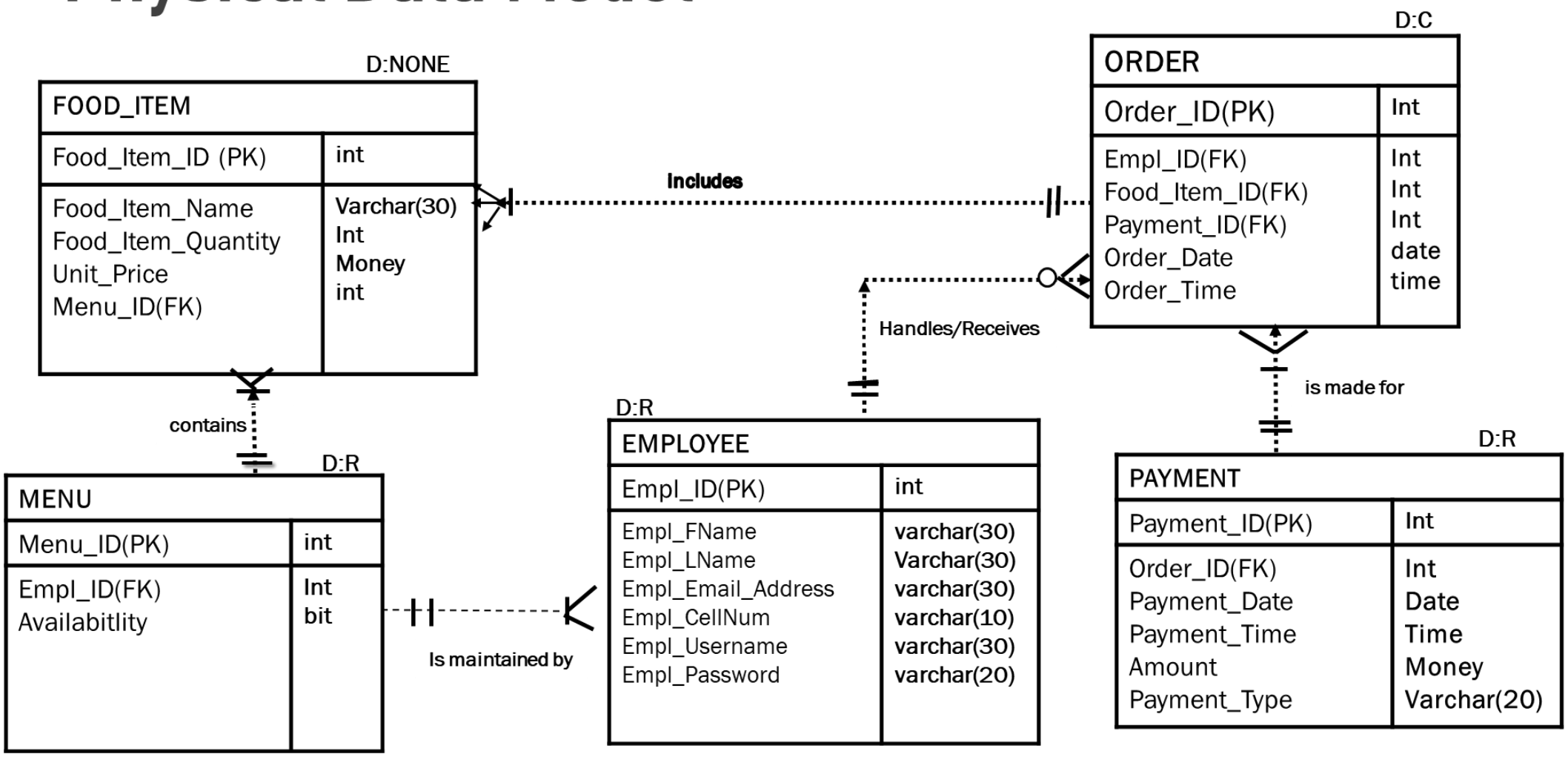
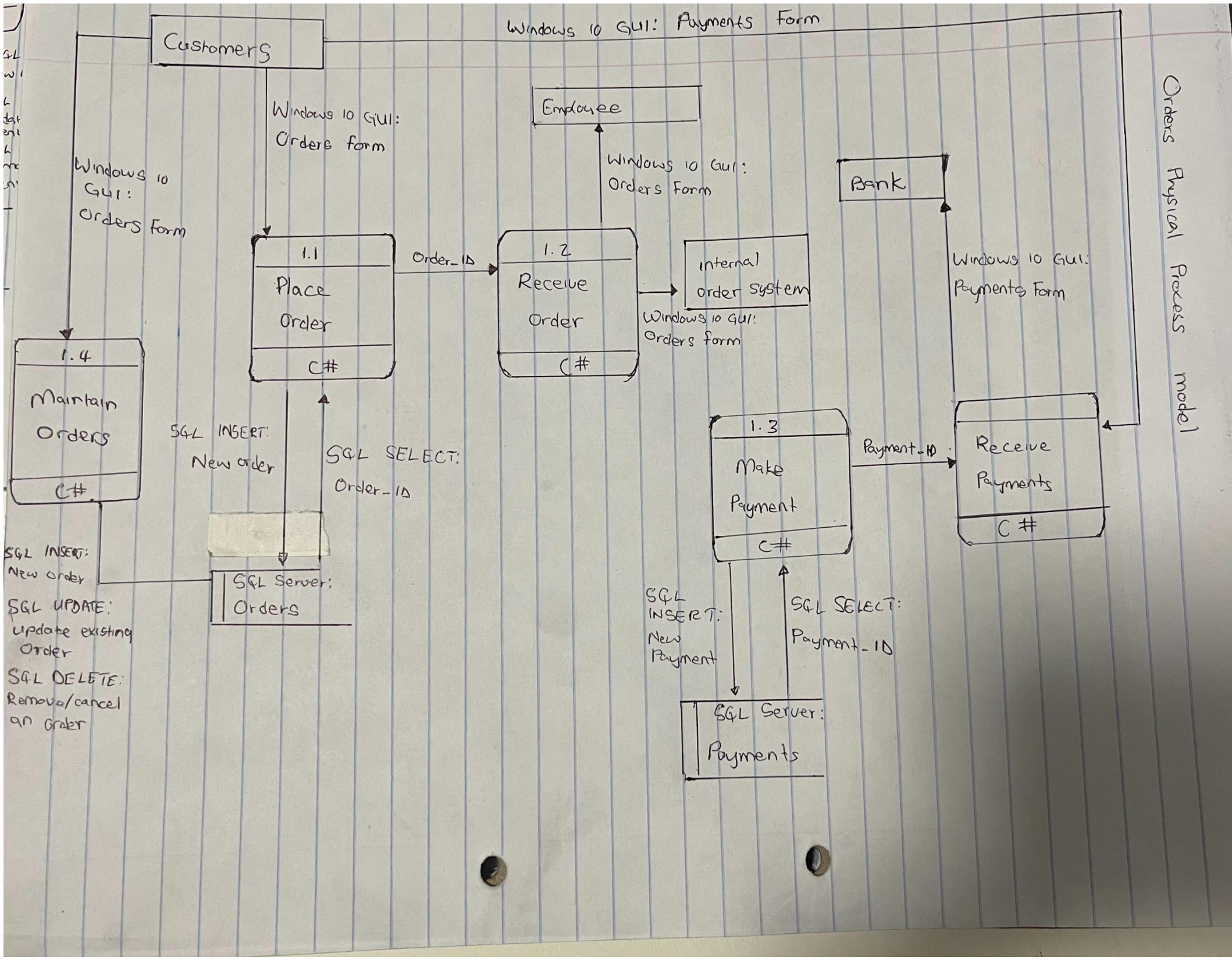
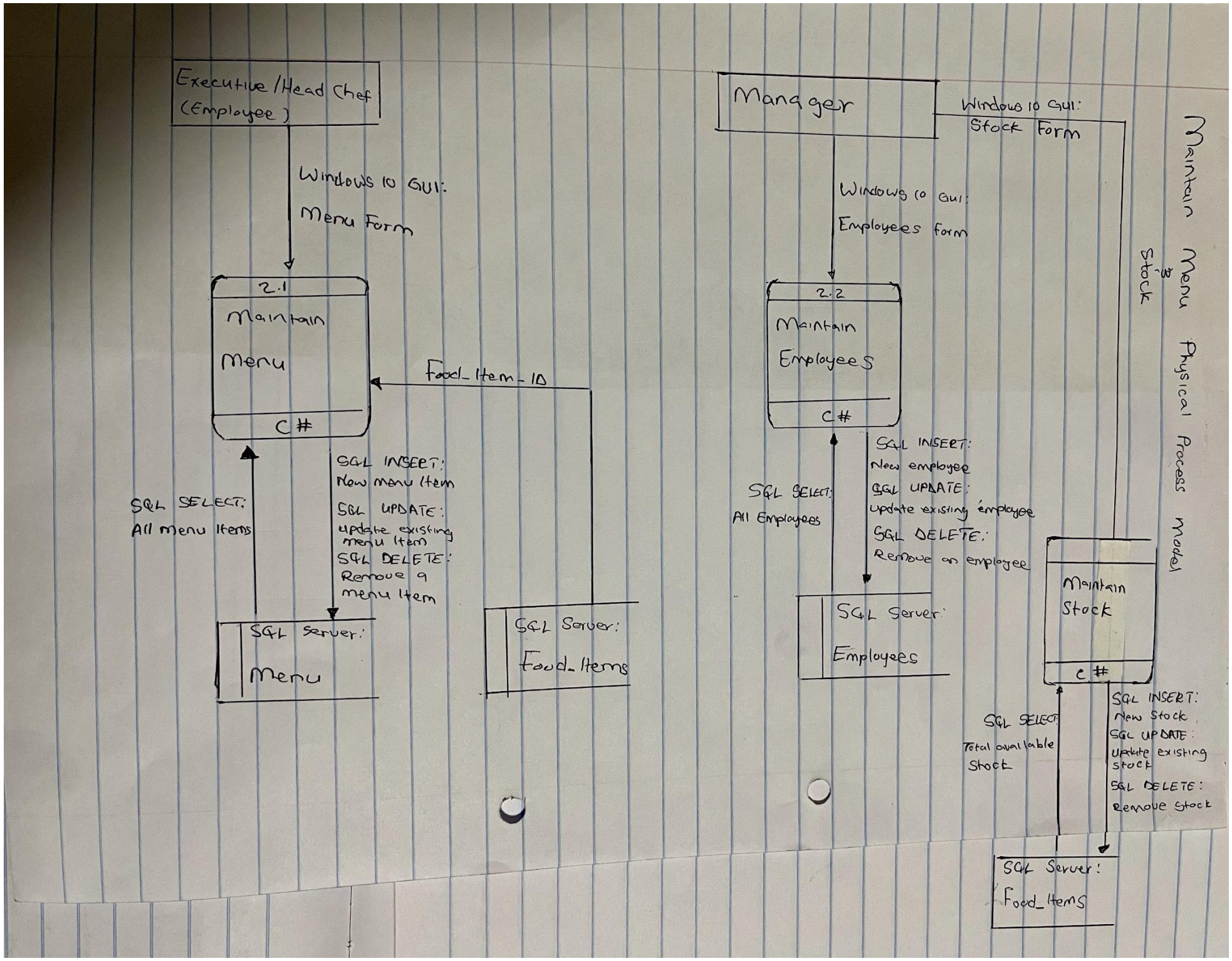
Physical Data Model



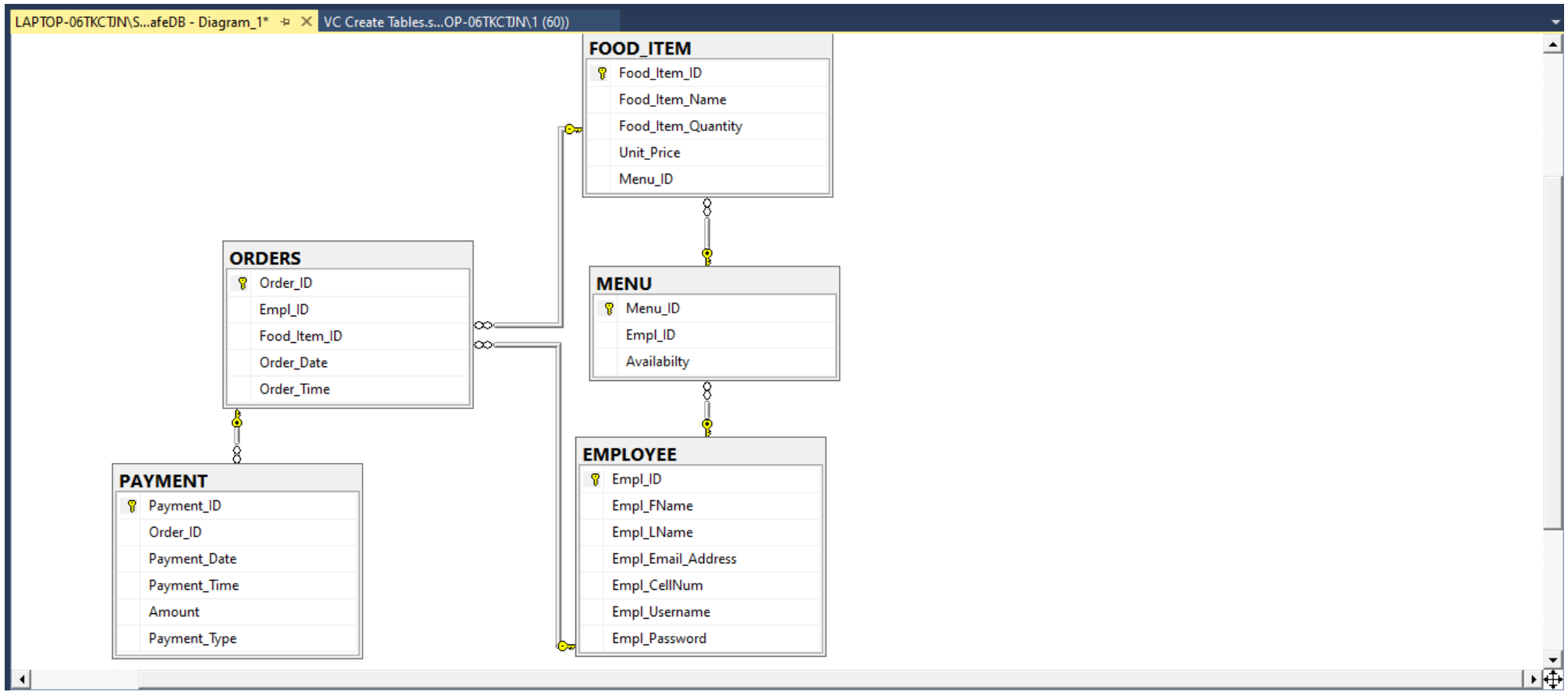
2.Physical Process Model



Maintain Menu Physical Process Model



3.Database Schema



4. SQL Statements Used:

Creating the database:

```
DROP DATABASE IF EXISTS VarsityCafeDB;
GO
CREATE DATABASE VarsityCafeDB;
GO
```

Creating the tables:

```
USE VarsityCafeDB
GO


CREATE TABLE EMPLOYEE
(
	Empl_ID int IDENTITY(1,1) PRIMARY KEY,
	Empl_FName varchar(30),
	Empl_LName varchar(30),
	Empl_Email_Address varchar(30),
	Empl_CellNum varchar(10),
	Empl_Username varchar(30),
	Empl_Password varchar(10)
);

CREATE TABLE MENU
(
	Menu_ID int IDENTITY(1,1) PRIMARY KEY,
	Empl_ID int FOREIGN KEY REFERENCES EMPLOYEE(Empl_ID),
	Availabilty bit
);

CREATE TABLE FOOD_ITEM
(
	Food_Item_ID int IDENTITY(1,1) PRIMARY KEY,
	Food_Item_Name varchar(30),
	Food_Item_Quantity int,
	Unit_Price money,
	Menu_ID int FOREIGN KEY REFERENCES MENU(Menu_ID)
);

CREATE TABLE ORDERS
(
	Order_ID int IDENTITY(1,1) PRIMARY KEY,
	Empl_ID int FOREIGN KEY REFERENCES EMPLOYEE(Empl_ID),
	Food_Item_ID int FOREIGN KEY REFERENCES FOOD_ITEM(Food_Item_ID),
	Order_Date date,
	Order_Time time
);

CREATE TABLE PAYMENT
(
	Payment_ID int IDENTITY(1,1) PRIMARY KEY,
	Order_ID int FOREIGN KEY REFERENCES ORDERS(Order_ID),
	Payment_Date date,
	Payment_Time time,
	Amount money,
	Payment_Type varchar(10)
);
```

Maintaining Tables

INSERT INTO employee

VALUES (FName, LName, idNo, email, cellNo, username, password);

INSERT INTO food_Item

VALUES (Food_Item_Name, Food_Item_Quantity, Unit_Price);

DELETE FROM Food_Item

WHERE Food_Item_ID=selectedRecord;

DELETE FROM employee

WHERE employee_ID=selectedRecord;

UPDATE employee

SET FName= txtFName, LName= txtLName, idNo= txtidNo, email= txtEmail, cellNo= txtcellNo, username=txtUsername, password=txtPassword;

Querying database

SELECT * FROM orders

WHERE Order_date>=selectedDate && Order_date<= selectedDate

ORDER BY date;

5. Reports

Example of weekly report for employees' attendance

	week_starts_on	name	sunday	monday	tuesday	wednesday	thursday	friday	saturday	sunday1
1	2015-12-16	Collin Sia	0	0	0	0.5	0	0	0	0
2	2015-12-16	Collin Sia	0	0	0	1	0	0	0	0
3	2015-12-17	Collin Sia	0	0	0	0.5	0	0	0	0
4	2015-12-20	Adela Martineau	0	1	0	0	0	0	0	0
5	2015-12-20	Adela Martineau	0	2	9.5	7.75	0	0	0	0
6	2015-12-20	Adela Martineau	0	5	1	0.25	0	0	0	0
7	2015-12-20	Adrienne Denis	0	0	0	0	8	8	0	0
8	2015-12-20	Adrienne Denis	0	0	0	4	0	0	0	0
9	2015-12-20	Adrienne Denis	0	0	8	0	0	0	0	0
10	2015-12-20	Adrienne Denis	0	8	0	0	0	0	0	0
11	2015-12-20	Ai Farfan	0	0	0	0	0	8	0	0
12	2015-12-20	Ai Farfan	0	0	0	0	8	0	0	0

Example of reports for daily orders (sales made)

Sales_Order_ID	Line_Num	Item_ID	Quantity	Sales_Price	Total_Price
1001	1	WC46	1	$2,699.00	2699
1001	2	WC46BLADE	1	$179.00	179
1002	1	HM130MAX	1	$4,299.00	4299
1003	1	HM122	1	$2,299.00	2299
1003	2	HOOK	1	$99.00	99
1003	3	TONG	1	$399.00	399
1004	1	WC46	1	$2,699.00	2699
1004	2	WC46BLADE	1	$179.00	179
1005	1	WG24	1	$2,299.00	2299
1006	1	WG28	1	$2,899.00	2899
1006	2	WGTEETH	1	$99.00	99
1007	1	HM126	1	$3,099.00	3099
1008	1	WC68	1	$2,699.00	2699
1009	1	WG28	1	$2,899.00	2899
1009	2	WGTEETH	1	$99.00	99
1010	1	WC46BELT	1	$15.00	15
1011	1	WC68	1	$2,899.00	2899

6. User Manual

1.Digital screen: Full HD (1920x1080)

2.Electrical substation (260 W)

3.The kiosk enclosure

4.bill collector

5.card reader

6.Built-in barcode scanner (RT220) on one side

7.4GB RAM, Windows 10 Pro, 80GB SSD

Additional guide:

The system I have designed will serve as a multi-functional self-service kiosk. It is basically a software integrated with pieces of software (physical parts) that allows customers to order food and drinks by tapping the menu items on a screen instead of speaking to a person behind a counter (which speeds up the food ordering process in restaurants) and also serves as a management information system (MIS) which employees can use to register their details in the business as well as for the manager to request certain daily and monthly reports. Some of the benefits (for both customers as well as the business owner and stakeholders as a whole) that the installation of this self-service kiosk system are:

- The ques they have to stand in are shorter and move quicker
- The customers have more control of their orders and can customize them more easily
- There are high chances that there'll be less complaints from customers regarding their order(s)' accuracies and how long they have to stand in ques
- Menu updates are easily actioned
- This system can be integrated with the restaurant's existing POS system

The presentation of the system and how to use it:

1. This is a touch-screen self-service ordering system machine.
2. Pressing the "ORDER HERE" button takes you to the main menu section where the menu items are categorized. Selecting any one of these menu category items takes you to the sub-menus of the respective menu category.
3. The sub-menus appear as a smooth flow that guides the customer to fill their digital cart.
4. When the customer has filled their cart and are ready to order, there is a button that guides them to the payment section where they'll further choose whether they want to make digital/ card payment or they prefer making a cash payment upon the collection of their order.

Further additional guide (Exclusively for internal stakeholders)

5. The user can choose to either register or log into the systems internal operations where they'll choose between the options offered: menu options, or orders options or request reports.
6. Menu options facilitates the process of maintaining the menu: add menu item/ update existing menu item/ delete menu item.
7. Orders options facilitates the process of maintaining orders: update an existing order/ delete an order
8. Request Reports options facilitates the process of viewing the summary of how certain business operations have been going through recorded reports.
9. The user will be presented will the result of their respective selection of one of the options that will be presented by them

7. Detail Diary

I was unfortunate to not have a group for this project, therefore I am the only member of my group and as a result, I had to suffer the consequences of having to investing 5 time as much time and energy as everyone else who had a group. It took me approximately 137 hours to complete this project (including the phases I did during the first semester- CMPG 213). I had to invest a few hours of each and everyday in order to make sure I stay up to date and not miss my deadlines I had for the submission of each phase.

The time it took for me to complete each phase in total is:

- Phase 1(Project Proposal): 22 hours
- Phase 2(Requirements document): 28 hours
- Phase 3(Analysis document): 25 hours
- Phase 4(Physical design and final document):12 hours
- Implementation (coding and database design): 50 hours

It was honestly hard through the whole project alone, but I am relieved that I managed to make it to the end. I never would have imagined this far all by myself in the first semester.