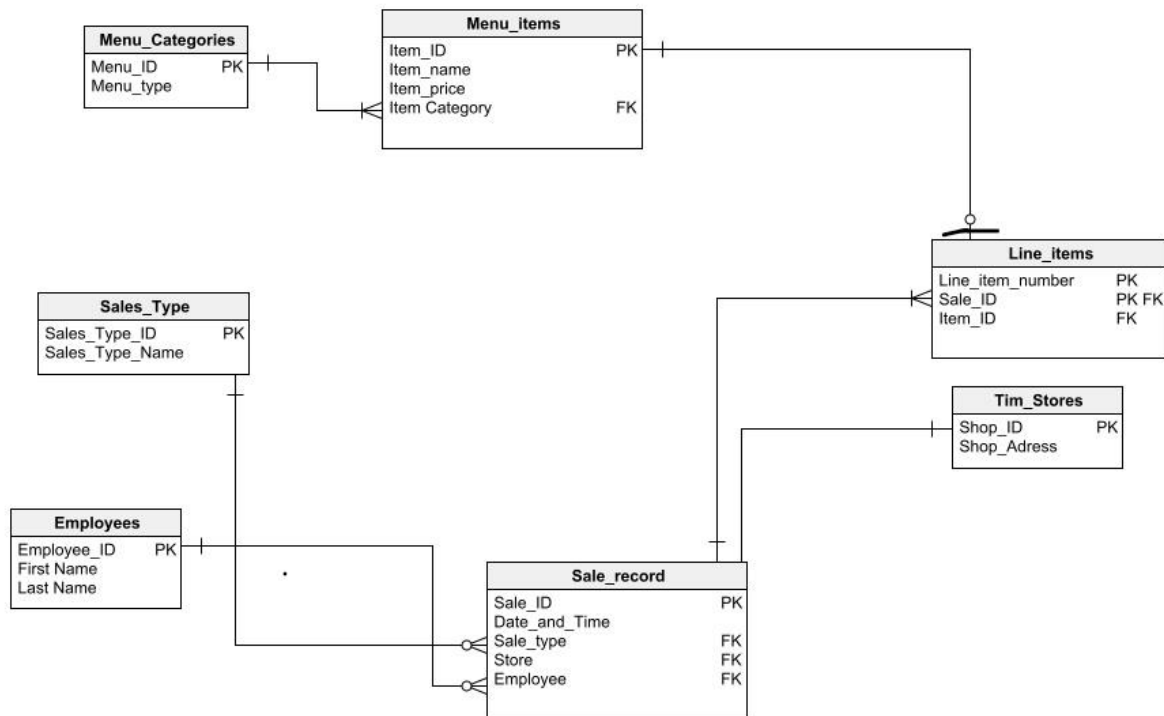


Assignment 4
CS1103

Student Name: Omar Sebri

Student ID : 3722350

Part A:

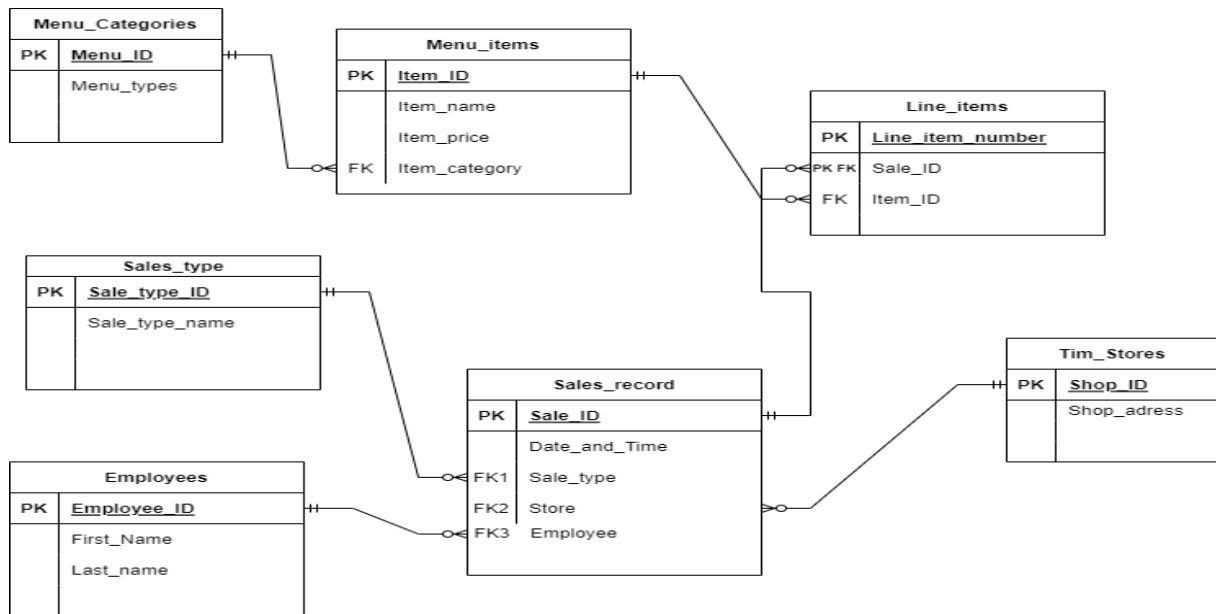


Part B:

I made mistakes defining relationships between entities:

I Chose one optional to many optional instead of choosing one mandatory to many optional.

View Diagram in the next page.



Part C:

Actions	Menu Category	Menu Items	Sales Type	Employee	Sales Record	Line items	Tim Store
Edit menu items	CR	CRUD					
Edit menu item categories	CRUR	RUD					
Edit Sale Types			CRUD		R		
Display a menu	R	R					
Complete a sale	R	R	R	R	CR	CR	R
Create a monthly sale report		R	R		R	R	R
Display Menu Items with the least Sales		R			R	R	
Edit Tim Stores							CRUD
Edit an ongoing Sale						CRUD	
Edit an employee				CRUD			

We added three actions:

- 1) Edit Tim Store : allows to add or delete/update a Tim store on the data base
- 2) Edit an ongoing sale: affect changes to the order (it must be done before payment)
- 3) Edit an employee: Add or remove an employee from the database or update the information of an employee

Part D:

```
CREATE TABLE Menu_categories(  
Menu_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
Menu_Types VARCHAR(50) NOT NULL);  
  
CREATE TABLE Menu_items(  
Item_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
Item_name VARCHAR(50) NOT NULL,  
Item_price DECIMAL(2,2) NOT NULL ,  
Item_category INT UNSIGNED NOT NULL,  
FOREIGN KEY(Item_category)  
REFERENCES Menu_categories(Menu_ID) );  
  
CREATE TABLE Tim_store(  
Shop_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
Shop_adress VARCHAR(50) NOT NULL );  
  
CREATE TABLE Sales_type(  
Sale_type_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
Sale_type VARCHAR(50) NOT NULL );  
  
CREATE TABLE Employees(  
Employee_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
First_name VARCHAR(50) NOT NULL,  
Last_name VARCHAR(50) NOT NULL );  
  
CREATE TABLE Sales_record(  
Sale_ID INT UNSIGNED NOT NULL PRIMARY KEY,  
Date_and_time DATETIME NOT NULL,  
Sale_type INT UNSIGNED NOT NULL,  
Store INT UNSIGNED NOT NULL,  
Employee INT UNSIGNED NOT NULL,  
FOREIGN KEY(Sale_type)  
REFERENCES Sales_type(Sale_type_ID),  
FOREIGN KEY(Store)  
REFERENCES Tim_store(Shop_ID),  
FOREIGN KEY(Employee)  
REFERENCES Employees(Employee_ID) );  
  
CREATE TABLE line_items(  
Line_item_ID INT UNSIGNED NOT NULL,  
Sale_ID INT UNSIGNED NOT NULL,  
Item_ID INT UNSIGNED NOT NULL,  
PRIMARY KEY (Line_item_id, Sale_ID),  
FOREIGN KEY (Sale_ID)  
REFERENCES Sales_record(Sale_ID),  
FOREIGN KEY (Item_ID)  
REFERENCES Menu_items(Item_ID) );
```

Part E:

```
INSERT into sales_type VALUES(1, 'In store');  
INSERT into sales_type VALUES(2, 'Drive thru');  
INSERT into sales_type VALUES(3, 'Online-Pick up');  
INSERT into sales_type VALUES(4, 'Online-Delivery');  
INSERT into sales_type VALUES(5, 'Phone In-Delivery');
```

```

INSERT INTO menu_categories VALUES(11,'Hot Beverage');
INSERT INTO menu_categories VALUES(12,'Cold Beverage');
INSERT INTO menu_categories VALUES(13,'Handcrafted Sandwich');
INSERT INTO menu_categories VALUES(14,'Bakery Fresh');

INSERT INTO tim_store VALUES(101, '612 King St');
INSERT INTO tim_store VALUES(102, '534 Union St');
INSERT INTO tim_store VALUES(103, '290 Main St');
INSERT INTO tim_store VALUES(104, '375 Smythe St');

INSERT INTO menu_items VALUES(1, 'Coffee (Original Blend, Dark Roast or
Decaf)      Small', 1.59, 11);
INSERT INTO menu_items VALUES(2, 'Coffee (Original Blend, Dark Roast or
Decaf)      Medium', 1.79, 11);
INSERT INTO menu_items VALUES(3, 'Coffee (Original Blend, Dark Roast or
Decaf)      Large', 1.99, 11);
INSERT INTO menu_items VALUES(4, 'Iced Coffee (Original or Dark Roast)
Small', 1.99, 12);
INSERT INTO menu_items VALUES(5, 'Iced Coffee (Original or Dark Roast)
Medium', 2.29, 12);
INSERT INTO menu_items VALUES(6, 'Iced Coffee (Original or Dark Roast)
Large', 2.79, 12);
INSERT INTO menu_items VALUES(7, 'California Turkey', 6.49, 13);
INSERT INTO menu_items VALUES(8, 'Turkey Bacon Club', 6.49, 13);
INSERT INTO menu_items VALUES(9, 'Avocado BLT', 5.49, 13);

INSERT INTO employees VALUES(1000, 'Caleb', 'Charles');
INSERT INTO employees VALUES(1001, 'Walter', 'White');
INSERT INTO employees VALUES(1002, 'Linda', 'Steve');
INSERT INTO employees VALUES(1003, 'Leonardo', 'Gates');

INSERT INTO sales_record VALUES(10001, '2022-03-08 15:00',1,101,1002);
INSERT INTO sales_record VALUES(10002, '2022-03-08 10:00',3,103,1001);

INSERT INTO line_items VALUES(1,10001,4);
INSERT INTO line_items VALUES(1,10002,7);
INSERT INTO line_items VALUES(2,10002,5);
INSERT INTO line_items VALUES(3,10002,6);

```

Menu_ID	Menu_Types
11	Hot Beverage
12	Cold Beverage
13	Handcrafted Sandwich
14	Bakery Fresh

Item_ID	Item_name	Item_price	Item_category
1	Coffee (Original Blend, Dark Roast or Decaf)Small	1,59	11
2	Coffee (Original Blend, Dark Roast or Decaf)Medium	1,79	11
3	Coffee (Original Blend, Dark Roast or Decaf)Large	1,99	11
4	Iced Coffee (Original or Dark Roast)Small	1,99	12
5	Iced Coffee (Original or Dark Roast)Medium	2,29	12
6	Iced Coffee (Original or Dark Roast)Large	2,79	12
7	California Turkey	6,49	13
8	Turkey Bacon Club	6,49	13
9	Avocado BLT	5,49	13

Sale_type_ID	Sale_type	Shop_ID	Shop_address
1	In store	101	612 King St
2	Drive thru	102	534 Union St
3	Online-Pick up	103	290 Main St
4	Online-Delivery	104	375 Smythe St
5	Phone In-Delivery		

Employee_ID	First_name	Last_name
1 000	Caleb	Charles
1 001	Walter	White
1 002	Linda	Steve
1 003	Leonardo	Gates

Sale_ID	Date_and_time	Sale_type	Store	Employee
10 001	2022-03-08 15:00:00	1	101	1 002
10 002	2022-03-08 10:00:00	3	103	1 001

Line_item_ID	Sale_ID	Item_ID
1	10 001	4
4	10 002	5
3	10 002	6
1	10 002	7