



**School of Information, Computer and Communications Technology  
Sirindhorn International Institute of Technology  
Thammasat University**

**CSS325 Database System  
Midterm Project Report**

**EATERIO: Canteen Food Ordering System**



**Presented by  
SeriousEater Group**

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**Digital Engineering (DE) Curriculum  
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## **Abstract**

The EATERIO project is a food ordering and canteen management system. This system is created based on the case scenario at the SIIT Bangkadi campus canteen. This project is inspired by problems that SIIT students are currently facing at the canteen such as too crowded space for food ordering, not enough time, and not enough ingredients prepared by food shops in a day and more. This project can be split into 2 main groups of users, customers and food shop owners. Customers can browse through shops and offerings, place or pre-order their order, see their history, and order status updates. Shop owners can manage their shop and menu offers, update their received order state, and view the revenue report. This report is provided with the context diagram, data flow diagram, and ER diagram, functional design, mock-up of user interfaces, implementation of the database management system, stored procedures, and conclusion of the project.

## **Section 1**

### **Introduction**

EATERIO, formerly named as BKDEatery, is a food ordering and management system for canteens. This system is built based on the situation currently happening in the canteen of SIIT Bangkradi Campus, but the system is created in a way that can be implemented in any canteen or any campus.

Normally when SIIT students order food for their lunch, they all queued up in front of the food shop and order their menus one by one. But, this has proved to cause many problems. The first problem is that the canteen is too crowded due to the number of students using it at lunchtime simultaneously. The lunch break is approximately 1 hour which is too short for all students to order food and have lunch at the same time. Another problem is food shop owner does not have enough ingredients to satisfy all student orders. Sometimes they cannot prepare some menu on that day but the student would not know until they order it.

We decided to create the EATERIO system to address the problem. We have 2 groups of users, customers and shop owners. Customers can browse through all available menus offered from all shops in the canteen and place their food order. It can be either ordered on the same day or pre-order food for the next day. Customers can also look back on their order history as well as the update of their order status. They might also cancel their order 3 hours before the specified pick-up time. Shop owners can manage their offering menus and general information about their shop. They can also change their pricing and availability. If it is set to not available, that particular menu cannot be ordered for that day. Shop owners can also update customer orders of their shop. At the end of the day, shop owners can take a look at their revenue reports. Both customers and shop owners can register and edit their accounts.

## Section 2

### Diagrams and Designs

#### ER Diagram

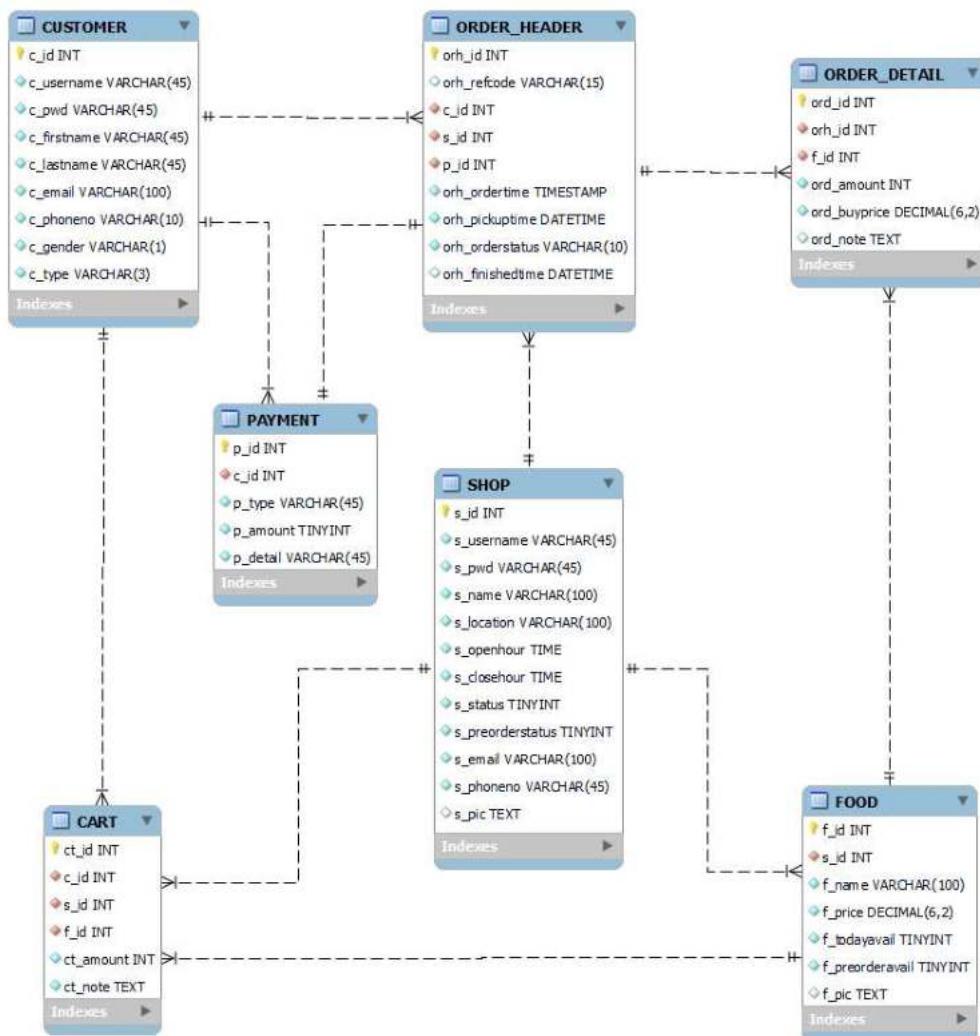


Figure 1: Entity-Relationship of EATERIO database

	c_id	c_username	c_pwd	c_firstname	c_lastname	c_email	c_gender	c_type
<small>Click the drop-down arrow to toggle column's visibility.</small>								
<input type="checkbox"/>	2	6222780668	6222780668	Sirada	Chaisawat	6222780668@g.silt.tu.ac.th	F	STD
<input type="checkbox"/>	3	6222780569	6222780569	Thanakit	Lerttomolsakul	6222780569@g.silt.tu.ac.th	M	STD
<input type="checkbox"/>	4	BKD_Admin01	12345678	Admin	Bangkradi	admin_dummy@email.com	M	ADM
<input type="checkbox"/>	11	someone	someonee	someone	someone	someone@email.com	N	GUE
<input type="checkbox"/>	16	6222780379	6222780379	Paphana	Yiwiw	6222780379@g.silt.tu.ac.th	M	STD
<input type="checkbox"/>	19	iamguest	iamguest	Guest01	Guest01	guest@gmail.com	M	GUE
<input type="checkbox"/>	20	johndoe	johndoe	John	Doey	john@gmail.com	F	STF
<input type="checkbox"/>	21	customer	12345678	Customer	Bangkradi	email@gmail.com	F	GUE

Figure 2: Customer table in EATERIO database

	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	s_id	s_username	s_pwd	s_name	s_location	s_openhour	s_closehour	s_status	s_preorderStatus	s_email	s_phoneno	s_pic
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	1	shop001	12345678	ร้านอาหาร ตามสั่ง	Unit #2	07:30:00	14:30:00	1	1	shop001@email.com	0900001234	shop1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	2	shop002	12345678	ร้านอาหาร แมก	Unit #1	08:00:00	17:30:00	1	1	shop002@email.com	0900000002	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	3	shop003	qwertyui	The Noodle Shop	Unit #3	08:30:00	16:00:00	1	1	shop003@email.com	0901234567	shop3.jpg

Figure 3: Shop table in EATERIO database

	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	f_id	s_id	f_name	f_price	f_todayavail	f_preorderavail	f_pic
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	1	1	ข้าวกล้วยน้ำเงิน	40.00	1	0	1_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	2	1	ข้าวผัดกุ้ง	55.00	1	1	2_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	3	1	ผัดซีอิ๊ว	40.00	1	1	3_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	4	1	ข้าวไข่เจียว	30.00	1	1	4_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	5	1	ข้าวหมูกระทะ	35.00	1	1	5_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	6	1	มาม่าเผ็ดไชย	35.00	1	1	6_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	7	1	ข้าวผัดไข่	35.00	1	1	7_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	8	1	ผัดพริกหนัง	40.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	9	1	ข้าวกล้วยไก่	40.00	1	1	9_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	10	1	ข้าวไก่ทอด	40.00	1	1	10_1.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	11	2	ข้าวไข่พะโล้	30.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	12	2	ข้าวผัดจิตราภรณ์สัน	30.00	1	1	12_2.jpeg
	<input checked="" type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	13	2	ข้าวผัดเผาไก่	30.00	1	1	13_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	14	2	ข้าวมันไก่	35.00	1	1	14_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	15	2	ข้าวราดผัดเผ็ด	30.00	1	1	15_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	16	2	ข้าวผัดกระเทียมสัน	30.00	1	1	16_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	17	2	ข้าวนุ่มน้ำเผา	30.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	18	2	ข้าวผัดเผาผัดกระเพื่อง	30.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	19	2	ข้าวไข่ตุ๋น	30.00	1	1	19_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	20	2	ข้าวไข่ดาว	25.00	1	1	20_2.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	21	3	ก๋วยเตี๋ยวเนื้อไก่	35.00	1	1	21_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	22	3	นา闷หมูแดง	30.00	1	1	22_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	23	3	ก๋วยเตี๋ยวหมูป่า	35.00	1	1	23_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	24	3	ก๋วยเตี๋ยวอีสานภาค Isaan	35.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	25	3	ก๋วยเตี๋ยวหมูเผา	35.00	1	1	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	26	3	ก๋วยเตี๋ยวหมูเผาเผา	35.00	1	1	26_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	27	3	เกาเหลาหมูตุ๋น	40.00	1	0	NULL
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	28	3	ก๋วยเตี๋ยวหมูตุ๋น	40.00	1	1	28_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	29	3	ข้าวเปลัว	10.00	1	1	29_3.jpeg
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	30	3	เล้ง	40.00	1	1	30_3.jpeg

Figure 4: Food table in EATERIO database

	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	orh_id	orh_refcode	c_id	s_id	p_id	orh_ordertime	orh_pickuptime	orh_orderstatus	orh_finishedtime
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	22	202110280000022	16	3	20	2021-10-29 01:25:53	2021-10-29 08:30:00	FNSH	2021-11-09 01:55:19
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	23	202110290000023	16	2	21	2021-10-29 02:13:22	2021-10-29 12:00:00	FNSH	2021-11-14 16:44:32
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	24	202110290000024	16	3	22	2021-10-29 12:22:06	2021-10-29 13:00:00	FNSH	2021-11-15 12:42:47
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	25	202110290000025	19	3	23	2021-10-29 14:57:07	2021-10-29 15:00:00	FNSH	2021-11-15 12:17:21
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	26	202111160000026	16	2	24	2021-11-16 10:22:55	2021-11-16 12:00:00	FNSH	2021-11-16 10:25:48
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	27	202111160000027	16	2	25	2021-11-16 10:29:05	2021-11-16 10:45:00	FNSH	2021-11-16 10:29:28
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	28	202111170000028	3	1	26	2021-11-17 11:27:23	2021-11-17 12:00:00	FNSH	2021-11-17 11:29:20
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	29	202111170000029	2	2	27	2021-11-17 20:02:10	2021-11-18 12:00:00	FNSH	2021-11-19 01:34:28
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	30	202111170000030	2	3	28	2021-11-17 20:03:30	2021-11-18 12:30:00	FNSH	2021-11-19 01:34:58
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	31	202111170000031	3	1	29	2021-11-17 20:30:35	2021-11-18 11:30:00	FNSH	2021-11-19 01:34:06
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	32	202111170000032	16	2	30	2021-11-17 21:40:44	2021-11-18 13:00:00	FNSH	2021-11-19 01:34:25
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	33	202111190000033	16	3	31	2021-11-19 22:32:32	2021-11-20 10:30:00	FNSH	2021-11-21 13:02:33
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	34	202111210000034	16	3	32	2021-11-21 15:10:48	2021-11-21 15:15:00	FNSH	2021-11-21 15:15:01
	<input type="checkbox"/>	<input type="checkbox"/> Edit	<input type="checkbox"/> Copy	<input type="checkbox"/> Delete	35	202111210000035	16	2	33	2021-11-21 15:49:12	2021-11-21 15:55:00	FNSH	2021-11-21 15:51:03

Figure 5: Order Header table in EATERIO database

		ord_id	ord_h_id	f_id	ord_amount	ord_buyprice	ord_note
<input type="checkbox"/>	Edit  Copy  Delete	25	22	28	2	40.00	
<input type="checkbox"/>	Edit  Copy  Delete	26	22	22	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	27	23	13	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	28	23	14	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	29	24	22	1	30.00	No veggie
<input type="checkbox"/>	Edit  Copy  Delete	30	25	29	3	10.00	
<input type="checkbox"/>	Edit  Copy  Delete	31	26	13	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	32	26	14	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	33	27	14	1	35.00	
<input type="checkbox"/>	Edit  Copy  Delete	34	27	19	1	30.00	ข้าวผัด
<input type="checkbox"/>	Edit  Copy  Delete	35	28	10	1	40.00	
<input type="checkbox"/>	Edit  Copy  Delete	36	28	5	1	35.00	
<input type="checkbox"/>	Edit  Copy  Delete	37	29	19	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	38	30	30	1	40.00	
<input type="checkbox"/>	Edit  Copy  Delete	39	31	3	1	40.00	ไข่เจียว
<input type="checkbox"/>	Edit  Copy  Delete	40	31	9	1	40.00	ไข่เจียวเผา
<input type="checkbox"/>	Edit  Copy  Delete	41	32	14	1	35.00	
<input type="checkbox"/>	Edit  Copy  Delete	42	32	12	1	30.00	
<input type="checkbox"/>	Edit  Copy  Delete	43	33	26	1	35.00	
<input type="checkbox"/>	Edit  Copy  Delete	44	34	26	2	35.00	
<input type="checkbox"/>	Edit  Copy  Delete	45	34	30	1	40.00	
<input type="checkbox"/>	Edit  Copy  Delete	46	35	14	2	35.00	More Rice
<input type="checkbox"/>	Edit  Copy  Delete	47	35	20	1	25.00	

Figure 6: Order Detail table in EATERIO database

		p_id	c_id	p_type	p_amount	p_detail
<input type="checkbox"/>	Edit  Copy  Delete	20	16	CRDC	110.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	21	16	CRDC	60.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	22	16	CRDC	30.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	23	19	CRDC	30.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	24	16	CRDC	60.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	25	16	CRDC	65.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	26	3	CRDC	75.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	27	2	CRDC	30.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	28	2	CRDC	40.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	29	3	CRDC	80.00	MasterCard [*5454]
<input type="checkbox"/>	Edit  Copy  Delete	30	16	CRDC	65.00	MasterCard [*5454]
<input type="checkbox"/>	Edit  Copy  Delete	31	16	CRDC	35.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	32	16	CRDC	110.00	Visa [*4242]
<input type="checkbox"/>	Edit  Copy  Delete	33	16	CRDC	95.00	Visa [*4242]

Figure 7: Payment table in EATERIO database

		ct_id	c_id	s_id	f_id	ct_amount	ct_note
<input type="checkbox"/>	Edit  Copy  Delete	78	16	2	13	2	
<input type="checkbox"/>	Edit  Copy  Delete	79	16	2	14	1	
<input type="checkbox"/>	Edit  Copy  Delete	80	16	2	19	1	

Figure 8: Cart table in EATERIO database

## Context Diagram (CD)

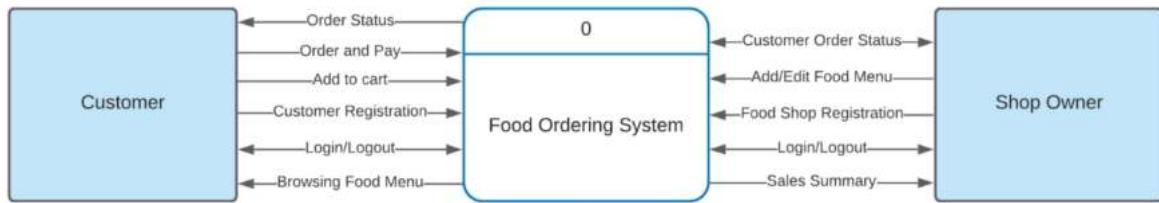


Figure 9: Context diagram of EATERIO project

## Data Flow Diagram (DFD)

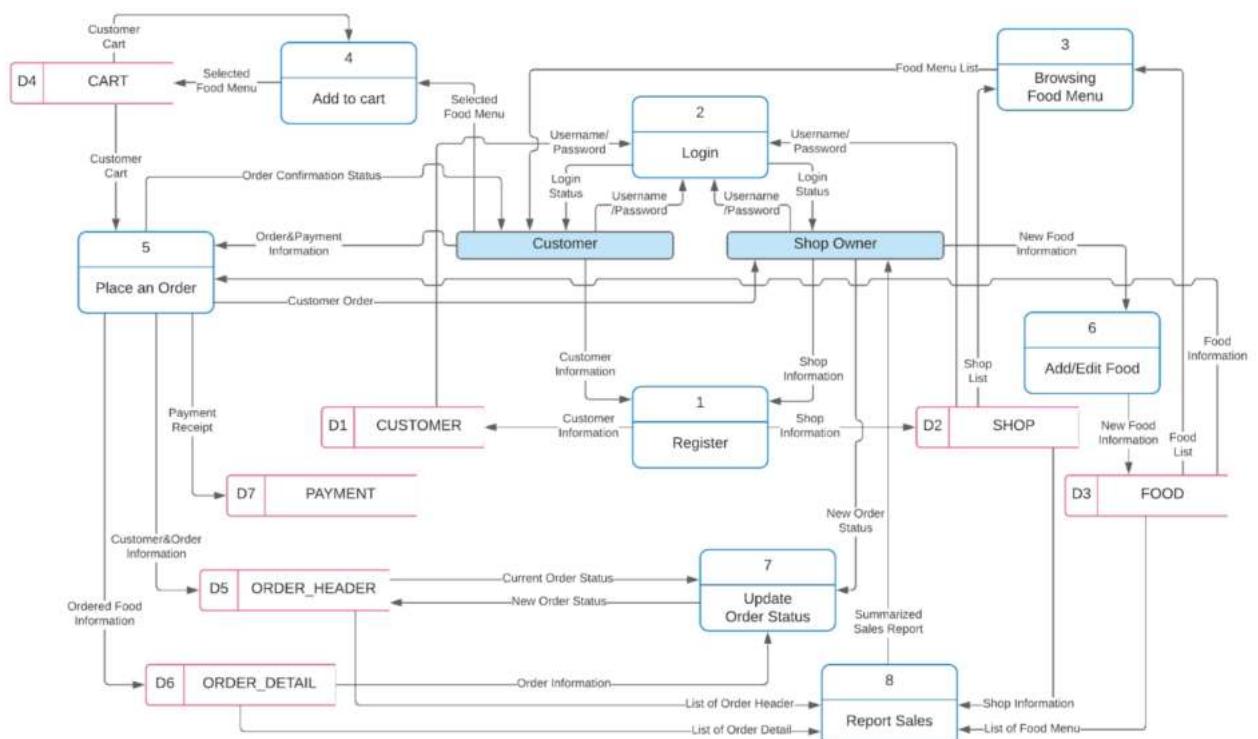


Figure 10: Data Flow Diagram of EATERIO project

## Functional Design

Function	Customer	Shop Owner
Log in & Register	Yes	Yes
Edit account information	Yes	Yes
Browse for shop and menus	Yes	No
Place an order	Yes	No
View order history	Yes	Yes
Manage menus in the shop	No	Yes
Update order status	No	Yes
View sales and revenue report	No	Yes

### Customer Functions

- Login and register customer account

Customers can register their account by entering their details such as name, email address, phone number, username, and password. After that, they can log in to their account.

- Browse for shop and food menus

Customers can take a look at the list of food shops available in the canteen and the list of menu offerings along with their price and availability. Customers also can search for the name of shops and menus.

- Order foods from a shop

Customers must log in to the system first before they can place an order. They can only place orders for menus from the same shop and put them in a cart. In each menu in the order, customers can specify the amount and comment for the menu such as no vegetables.

Customers have the ability to pre-order menus for at most 1 day. They can also specify the pick-up time. After they press the order button, the payment option is displayed. After the payment is made, the ordering process is completed.

- View the order history

Customers can look back at their order history and order status such as order received, preparing the order, the order is ready to pick up, and the order is completed.

- Edit account information

Customers can edit their account information such as personal details, contact information, etc.

## **Shop Owner Functions**

- Login and register shop account

Shop owners can register their account by entering their details such as a shop name, email address, phone number, username, and password. System admin must approve the shop owner account first before the account can be used.

- Manage shop information

Shop owners can manage their shop information. They can change their opening hours, shop detail, shop name, and shop image. If they want to close their shop for a day or more, they can also do that in this system.

- Manage shop offering menus

Shop owners can manage their offering menus. They can add, edit, or delete the menu. They can change the pricing of menu items and change the image. They can also set the availability of menu items.

- Manage incoming customer orders and update their status

Shop owners can see the list of incoming customer orders and its details such as menu and amount. They can update the customer order to “preparing” if they are preparing the food of that order, “ready to pick up” if they finished preparing the food and want to notify the customer to come and pick up the food, and “completed” if the customer picked up their food at the shop.

- View the sale summary and revenue report

Shop owners can take a look at their revenue reports. They can see which menu is the top seller, making them the most profitable of all time, or popular among customers at that time.

## User Interface Design

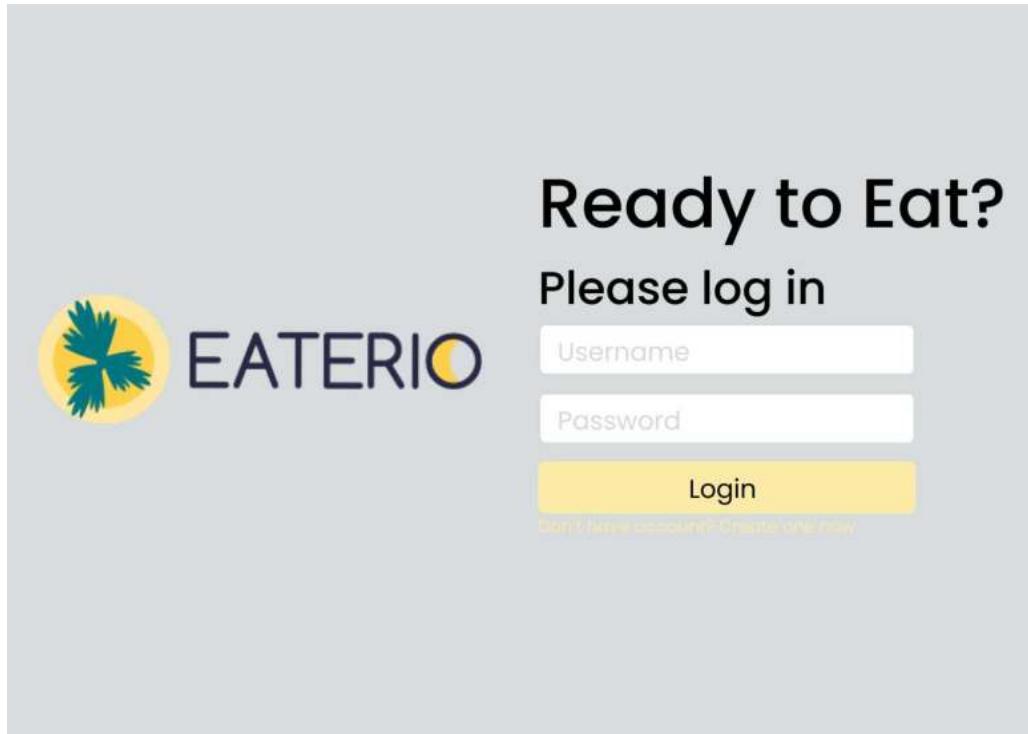


Figure 11: UI Design of the login screen

The registration screen features the EATERIO logo on the left. The main title 'Create account' is at the top. To the right are ten input fields: 'First name', 'Lastname', 'Gender' (dropdown), 'Date of birth' (dropdown), 'Email', 'Phone number', 'Account for' (dropdown), 'Username', 'Password', and 'Confirm password'. A large yellow 'Create account' button is at the bottom.

Figure 12: UI Design of the registration screen



### All Shops

A small image of a dish consisting of rice, stir-fried vegetables, and a protein (possibly chicken or pork) served with a lime wedge.

ນ້ອກແຕກຕາມສັ່ງ  
Open: 10:00 - 17:00

A small image of a dish of Pad Thai with shrimp and vegetables.

ພັດໄກເຈົ້າແກກ  
Open: 09:30 - 16:00

A small image of a dish of rice topped with stir-fried meat and vegetables.

ອູດອູດໝູກວດ  
Open: 10:30 - 15:00

Figure 13: UI Design of the home screen, displaying the list of shops.

A screenshot of the EATERIO mobile application's shop view screen for "ນ້ອກແຕກຕາມສັ່ງ" (Nork Tep Taam Sang). At the top, the shop's name is displayed next to the EATERIO logo. Below the name is a large image of a dish featuring rice, stir-fried vegetables, and a protein. A title "ນ້ອກແຕກຕາມສັ່ງ" is overlaid on the image. On the left, there is a "Menu" section listing three items with small images, names, and prices: "ບັວກະເພາຫຼຸມສັບ 45 THB", "ບັວຫຼຸມຮະເກີຍນໄປດ້າວ 40 THB", and "ຜັດໄກກຸ່ງ 65 THB". Each menu item has a "bag" icon to its right. On the right, there is a "Shop Info" section containing the shop's opening hours (10:00 - 17:00), pre-order availability (Available), location (SIT Canteen 1st Fl.), and phone number (081-2345679).

Figure 14: UI Design of the shop view screen, displaying the list of offering menus.

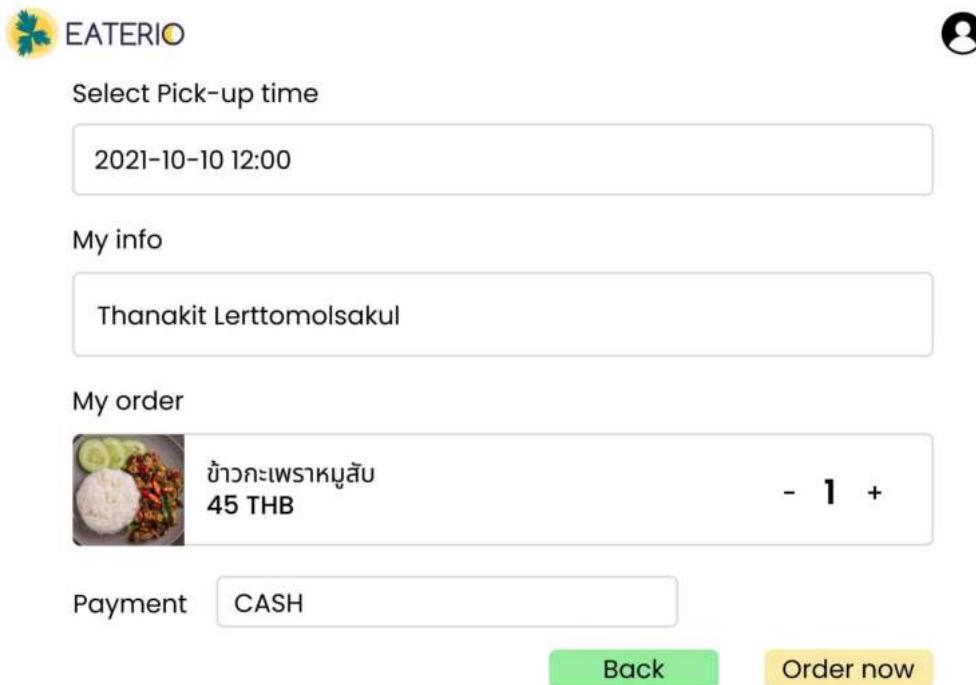


Figure 15: UI Design of the ordering screen, displaying the list of items in the cart and customer information

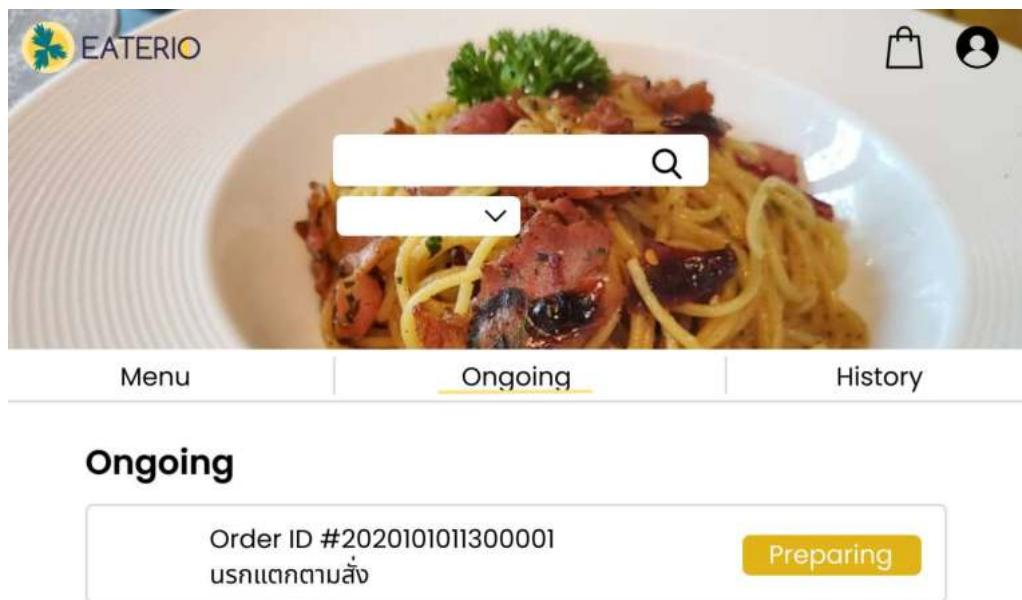


Figure 16: UI Design of the ordering history screen, displaying the list of placed order and their status.



Today Total Order

**69 Orders**

Today Total Revenue

**4,209 THB**

Shop profile

Menu

Order

Summary

### Menu list



ข้าว กะเพรา หมูสับ

45

THB

Avaliability

ON



Figure 17: UI Design of the shop owner home screen, displaying the brief overview of sales and menus.

## Section 3

### Implementation of Database Management System

The database management system (DBMS) implemented for developing the EATERIO system is MySQL. Other tools for developing the application are HTML, CSS, PHP, and JavaScript. To connect with the payment gateway, we decided to use Omise Payment API version 2019-05-27. Source code of this project is uploaded to GitHub and can be accessed by using this link: <https://github.com/waterthatfrozen/EATERIO>. Following are the screenshots of the EATERIO system.

#### Customer Page

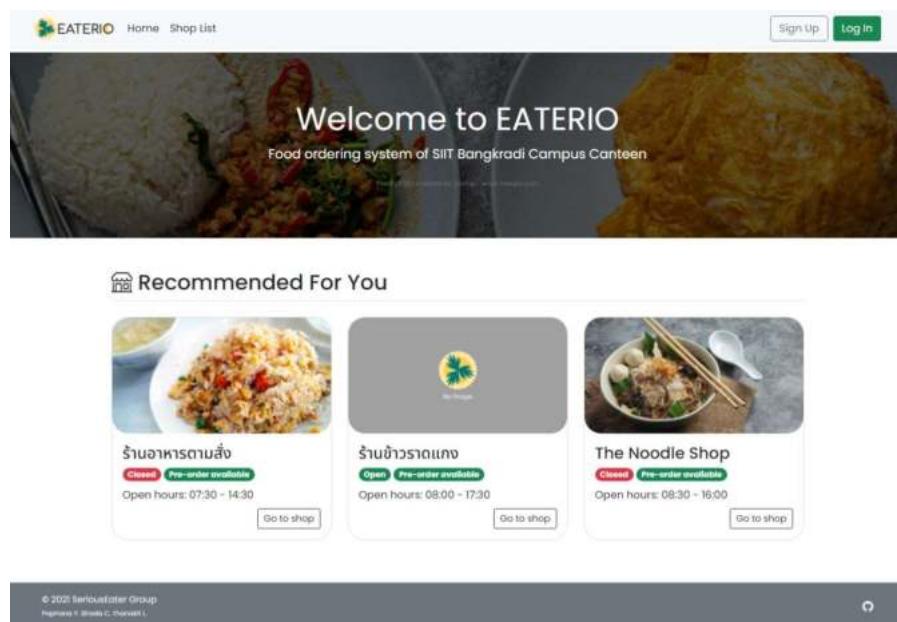


Figure 18: Home Page of EATERIO system

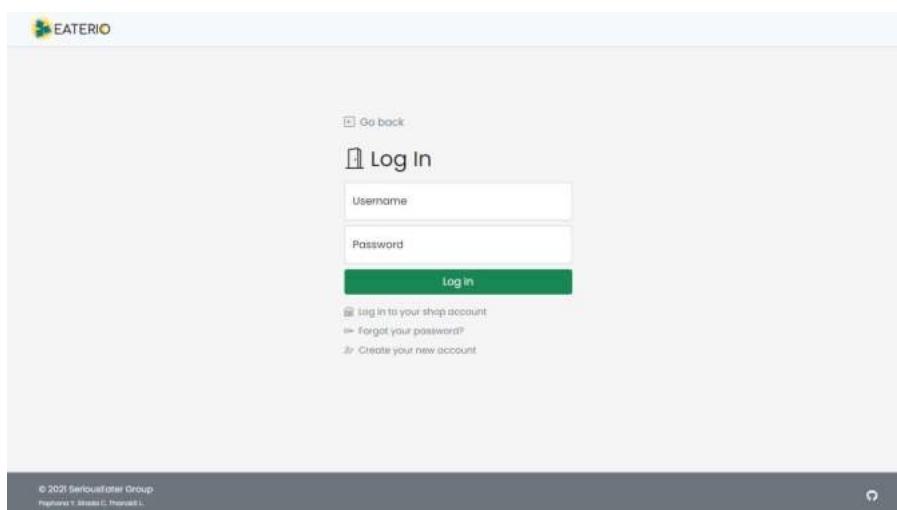
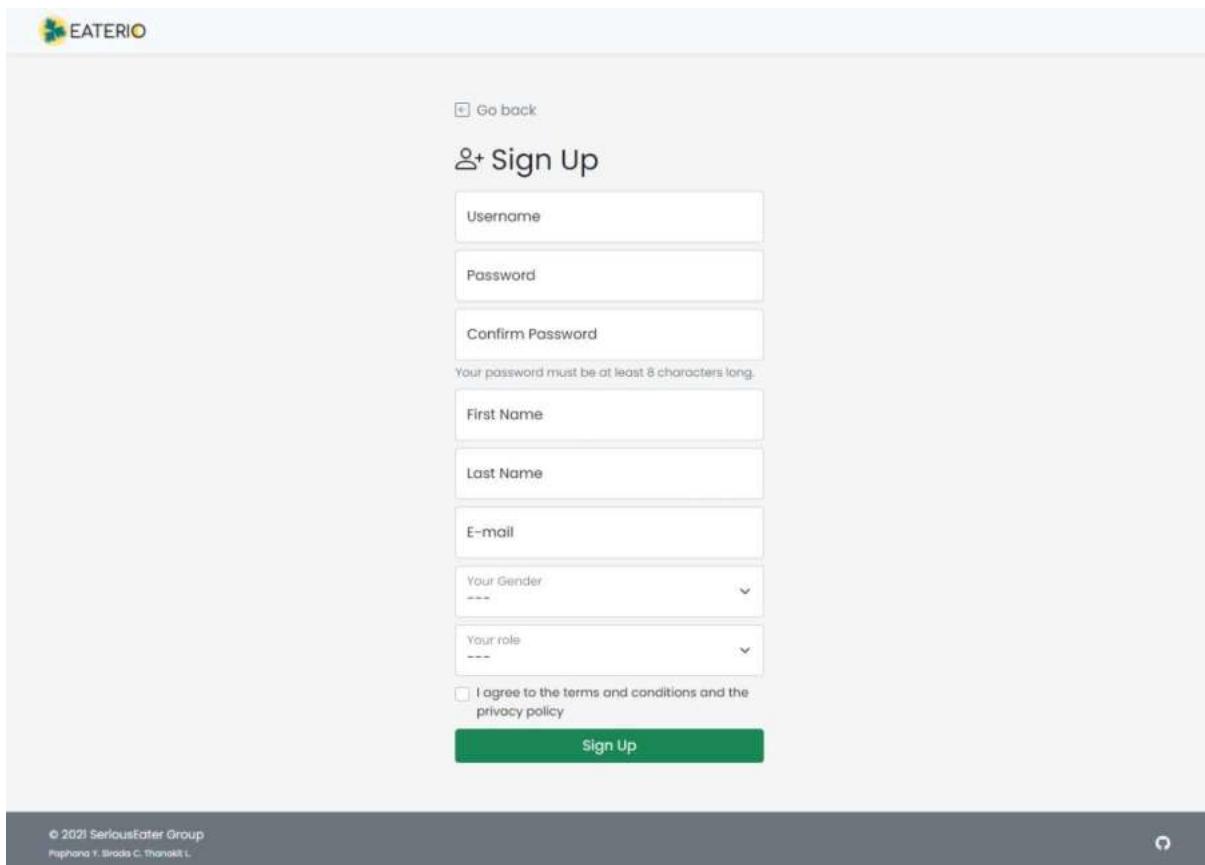


Figure 19: Login Page of EATERIO system



The screenshot shows the 'Sign Up' page for the EATERIO system. At the top left is the EATERIO logo. Below it is a 'Go back' button. The main title 'Sign Up' is centered above a series of input fields. There are four stacked input fields for 'Username', 'Password', 'Confirm Password', and a note below them stating 'Your password must be at least 8 characters long.' Below these are four more input fields for 'First Name', 'Last Name', 'E-mail', and dropdown menus for 'Your Gender' and 'Your role'. A checkbox labeled 'I agree to the terms and conditions and the privacy policy' is positioned below the gender and role dropdowns. A large green 'Sign Up' button is at the bottom. The footer contains copyright information: '© 2021 SeriousEater Group' and 'Praphana Y. Sirinda C. Thanakitt L.'

Figure 20: Customer Register Page of EATERIO system

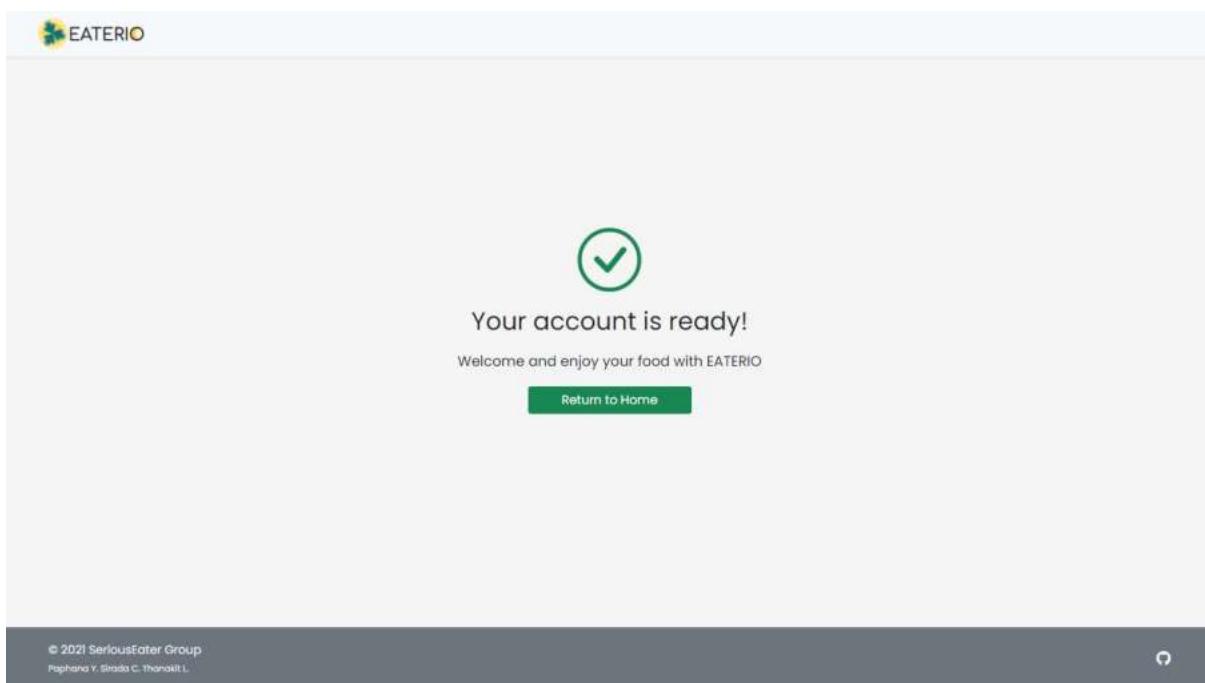


Figure21: Customer Register Completion Page of EATERIO system

EATERIO Home Shop List Order History My Cart Welcome, Paphana Log Out

[Go back](#)

### Available Shop



ร้านอาหารตามสั่ง

Closed Pre-order available

Open hours: 07:30 - 14:30

[Go to shop](#)



ร้านข้าวราดแกง

Open Pre-order available

Open hours: 08:00 - 17:30

[Go to shop](#)



The Noodle Shop

Closed Pre-order available

Open hours: 08:30 - 16:00

[Go to shop](#)

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Figure 21: Shop List Page of EATERIO system

EATERIO Home Shop List Order History My Cart Welcome, Paphana Log Out

[Go back](#)



ร้านอาหารตามสั่ง

Closed Pre-order available

Unit #2  
Open hours: 07:30 - 14:30  
Telephone number: (+66) 0900001234

### Menu



ข้าวกะเพราหมูสับ  
40.00 THB

[Add to cart](#)



ข้าวผัดกุ้ง  
55.00 THB

[Add to cart](#)



ผัดเสือล็อว  
40.00 THB

[Add to cart](#)



ข้าวไข่เจียว  
30.00 THB

[Add to cart](#)

Figure 22: Food Menu of Shop Page of EATERIO system

EATERIO Home Shop List Order History

My Cart 4 Welcome, Paphana Log Out

[Go back](#)



ข้าวหมูกะเกี๊ยม

35.00 THB

[Available](#) [Pre-order available](#)

Additional Request (Optional)

Such as no veggie.

[Add to cart](#)

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Figure 23: Food Information Page of EATERIO system

EATERIO Home Shop List Order History

My Cart 4 Welcome, Paphana Log Out

[Go back](#)

## My Cart

### My Order

From ร้านเขียวรามคำ



2x ข้าวพะแนงไก่  
60.00 THB (30.00 THB each)

[Edit item](#)



1x ข้าวผัดเนื้อไก่  
35.00 THB (35.00 THB each)

[Edit item](#)



1x ข้าวไข่เจียว  
30.00 THB (30.00 THB each)

[Edit item](#)

[Remove all item in cart](#)

Grand Total

**125.00 THB**

### My Information

Name: Paphana Yiwsiw

Email: 6222780379@g.suittu.oc.th

### Pick-Up Detail

Pick-Up Date and Time

11/22/2021 04:14 PM



You can order from this shop until 17:30

Also, you can pick-up order tomorrow from 08:00 to 17:30

[Proceed with payment](#)

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Figure 24: Customer Cart Page of EATERIO system

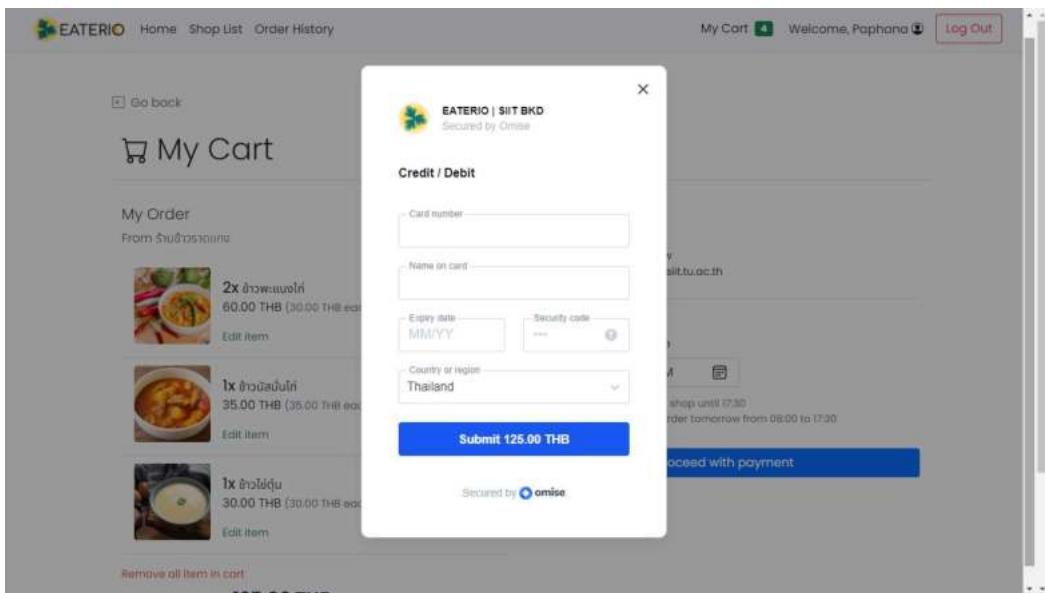


Figure 25: Payment Gateway Popup of EATERIO system

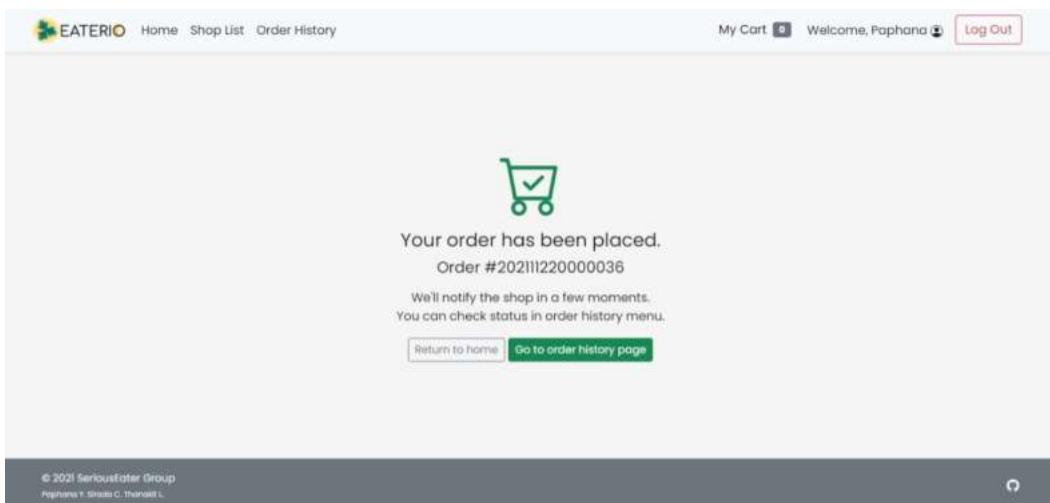


Figure 26: Order Confirmation Page of EATERIO system

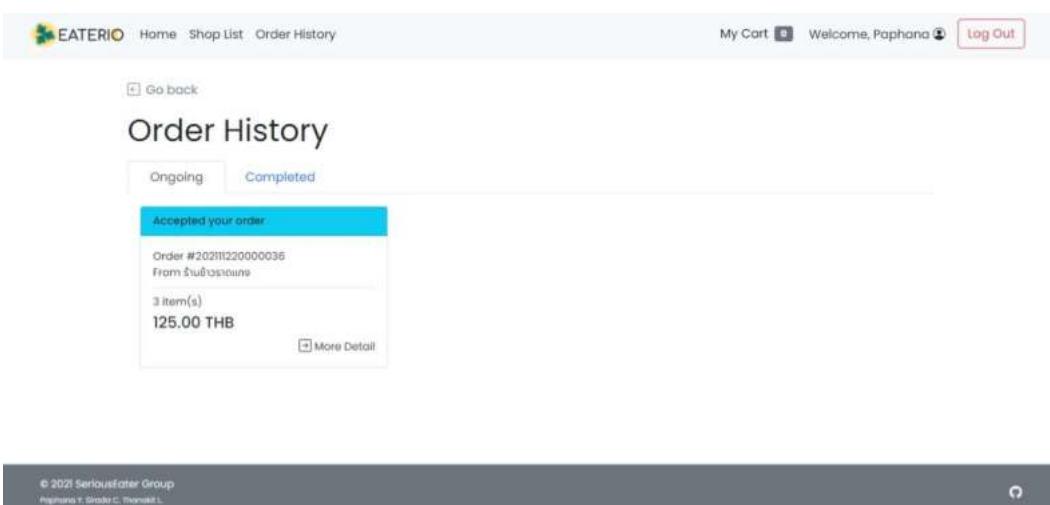


Figure 27: Customer Order HistoryPage of EATERIO system

EATERIO Home Shop List Order History My Cart 0 Welcome, Paphana Log Out

[Go back](#)

## Order Detail

**Accepted**

Order #202111220000036  
From ร้านป้ากระเต๊ก

Placed on November 22, 2021 16:15  
Will be pick-up on November 23, 2021 12:15

Menu

	2x ข้าวพะแนงไก่ 60.00 THB (30.00 THB each)		1x ข้าวมีหัวเป็ด 35.00 THB (35.00 THB each)
	1x ข้าวไข่เจียว 30.00 THB (30.00 THB each)		

Grand Total **125.00 THB**  
Pay by Credit Card Visa [^4242]

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Figure 28: Ongoing Customer Order Detail Page of EATERIO system

EATERIO Home Shop List Order History My Cart 0 Welcome, Paphana Log Out

[Go back](#)

## Order Detail

**Completed**

Order #20210280000022  
From The Noodle Shop

Placed on October 29, 2021 01:25  
Finished on November 9, 2021 01:55

Menu

	2x ก๋วยเตี๋ยวหมูเจียว 80.00 THB (40.00 THB each)		1x ս:հմիկբան 30.00 THB (30.00 THB each)
---	---	---	--

Grand Total **110.00 THB**  
Pay by Credit Card Visa [^4242]

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Figure 29: Completed Customer Order Detail Page of EATERIO system

## Shop Owner Page

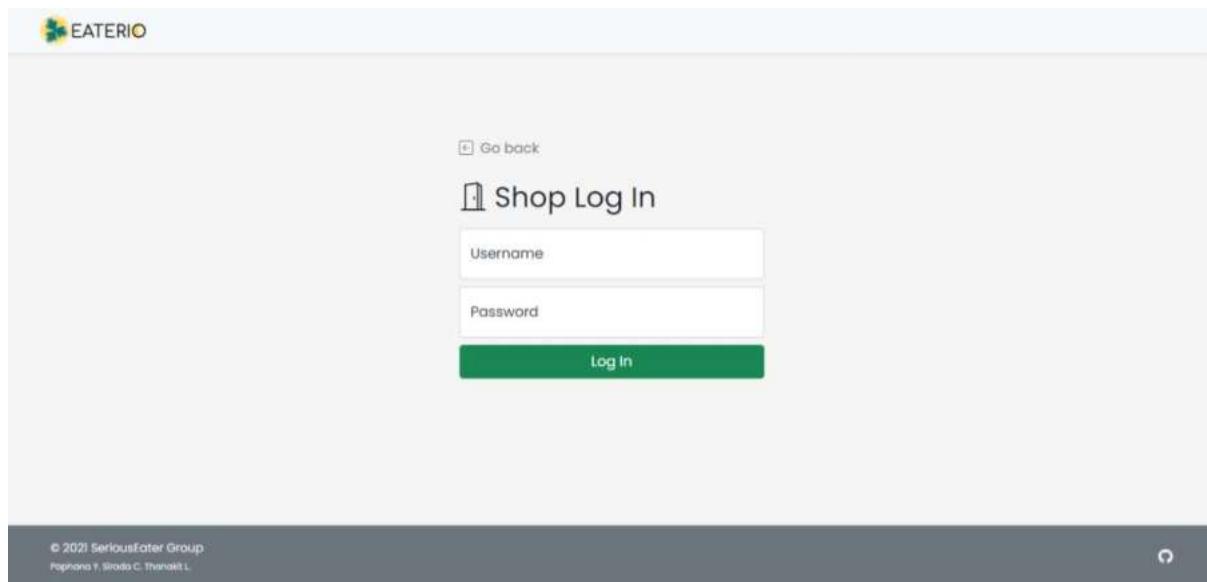


Figure 30: Shop Owner Login Page of EATERIO system

The screenshot shows the 'Shop Dashboard' page for November 22, 2021. At the top, there is a navigation bar with the EATERIO logo, links for Home, Order, Menu, Profile, and Revenue Report, a welcome message 'Welcome, ร้านข้าวราดแกง', and a 'Log Out' button. Below the navigation is a banner featuring images of food and the text 'ร้านข้าวราดแกง' and 'SIT Bangkradi Campus Canteen'. The dashboard itself has four main sections: 'Today Completed Order' (0 Orders), 'Today Revenue' (0.00 THB), 'Remaining Order' (1 orders left to be finished), and 'Food Menu' (10 Menus available to order). Each section includes a 'Go to [list]' button. At the bottom left is a copyright notice: '© 2021 SeriousEater Group' and 'Paphorn Y, Sirodu C, Thonakitt L'. On the right side, there is a small circular icon.

Figure 31: Shop Owner Home Page of EATERIO system

#	Image	Menu name	Price	Menu Status	Action
1		ข้าวไข่เจียว	30.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
2		ข้าวแกงซีอิ๊วเข้มข้น	30.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
3		ข้าวผัดเผ็ด	30.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>

Figure 32: Food Menu List in Shop Owner Page of EATERIO system

1 people	6 orders	235.00 THB	#1
Customers ordered this menu	Order included this menu	Gained from this menu	Menu's ranking in the shop

#	Order Ref. Code	Order Status	Order Date	Customer Name	Amount	Action
1	20210290000023	Completed	October 29, 2021 02:13	Paphana Yiwswi	1	<a href="#">View</a>
2	XXXXXXXXXXXX	Completed	XXXXXXXXXX	XXXXXXXXXXXX	1	<a href="#">View</a>

Figure 33: Food Menu Detail in Shop Owner Page of EATERIO system

Update Menu Detail

Menu available for today  
 Accepting Pre-order for this menu

Menu Name: ข้าวบับมันไก่

Price (THB): 35.00

Upload food image

Choose File: No file chosen

[Update Menu Detail](#)

Figure 34: Update Menu Information in Shop Owner of EATERIO system

EATERIO Home Order Menu Profile Revenue Report Welcome, ຮ້ານເຂົ້າວາດແກ່ງ ແລ້ວ Log Out

[Go back](#)

## Customer Order

ACPT | Accepted   PREP | Preparing   RDPK | Wait for pick-up   FNSH | Finished

Accepted order

Order #202111220000036  
 Name: Paphana Yiwswi (Student)  
 Pick-up time: November 22, 2021 16:15

3 menus | 125.00 THB

2x ຂ້າພະແບຍໄກ  
 1x ຂ້າບັລິບໄກ  
 1x ຂ້າໄສເຖິງ

[More Detail](#) [Mark as Preparing](#)

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Figure 35: Order List in Shop Owner Page of EATERIO system

EATERIO Home Order Menu Profile Revenue Report Welcome, ຮ້ານເຂົ້າວາດແກ່ງ ແລ້ວ Log Out

[Go back](#)

## Order #202111220000036

Current Status: **Accepted** Placed on November 22, 2021 16:15  
 Order of Paphana Yiwswi (Student) Pick-up time is November 23, 2021 12:15  
 The order is not finish yet.

[Mark as Preparing](#) [Mark as Ready for pick-up](#) [Mark as Finished](#)

Menu

 2x ຂ້າພະແບຍໄກ 60.00 THB (30.00 THB each)	 1x ຂ້າບັລິບໄກ 35.00 THB (35.00 THB each)
 1x ຂ້າໄສເຖິງ 30.00 THB (30.00 THB each)	

Grand Total **125.00 THB**  
 Pay by Credit Card Visa (\*4242)

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 Paphana Y. Siroki C. Thonsakdi L.

Figure 36: Customer Order Detail in Shop Owner Page of EATERIO system

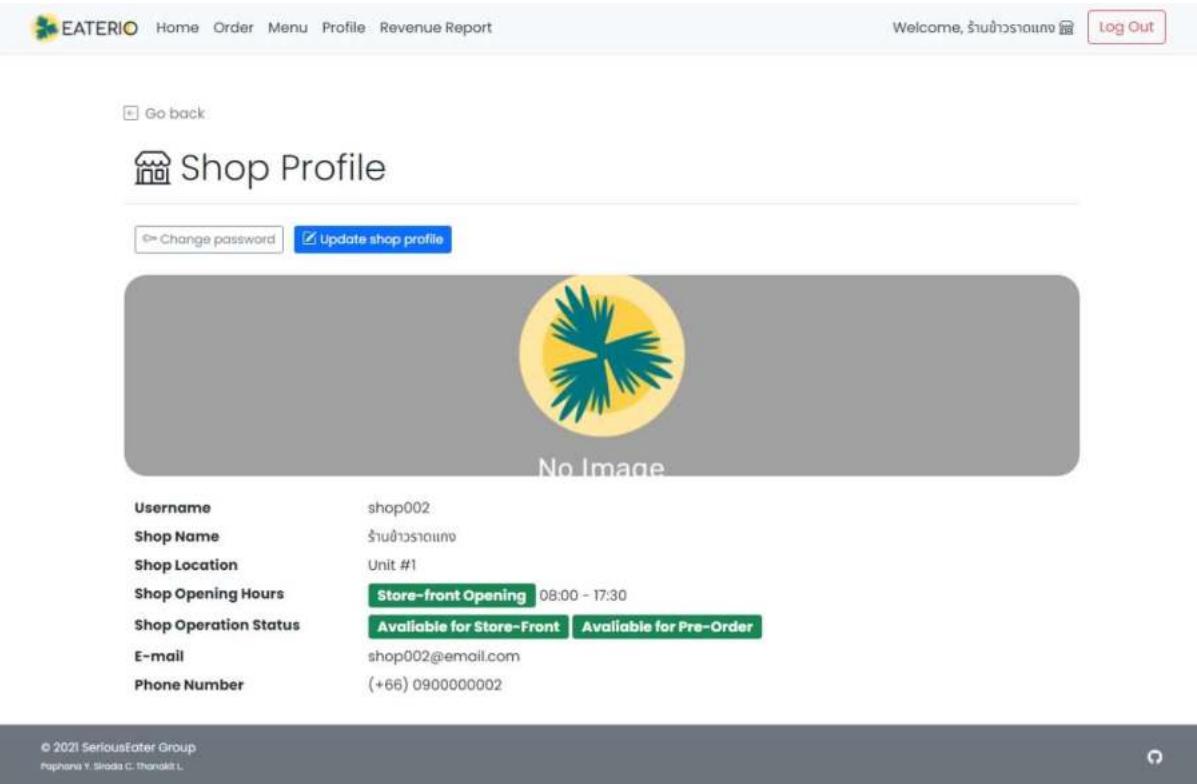


Figure 37: Shop Profile Page of EATERIO system

The screenshot shows the 'Update Shop Information' page of the EATERIO system. At the top, there is a navigation bar with links for Home, Order, Menu, Profile, and Revenue Report. On the right side of the top bar, it says 'Welcome, ร้านข้าวราดแห้ง' and has a 'Log Out' button. Below the top bar, there is a 'Go back' link. The main title is 'Update Shop Information' with a pencil icon. There are two checkboxes: 'Opening for today' and 'Accepting Pre-Order', both of which are checked. Below these checkboxes are input fields for 'Username' (shop002), 'Shop Name' (ร้านข้าวราดแห้ง), 'E-mail' (shop002@email.com), and 'Shop Location' (Unit #1). There is also an input field for 'Phone Number' (0900000002). Below these fields are two time inputs for 'Open Hour' (08:00 AM) and 'Close Hour' (05:30 PM), each with a clock icon. There is a section for 'Upload shop image' with a 'Choose File' button and a message 'No file chosen'. At the bottom of the page is a green 'Update Shop Profile' button. At the very bottom, there is a copyright notice: '© 2021 SeriousEater Group' and 'Popcorn Y. Shoda C. Thanakrit L.'.

Figure 38: Update Shop Profile Page of EATERIO system

Figure 39: Shop Revenue Report Selection Page of EATERIO system

Figure 40: Summarized Revenue Report of Shop Page of EATERIO system

## Admin Page

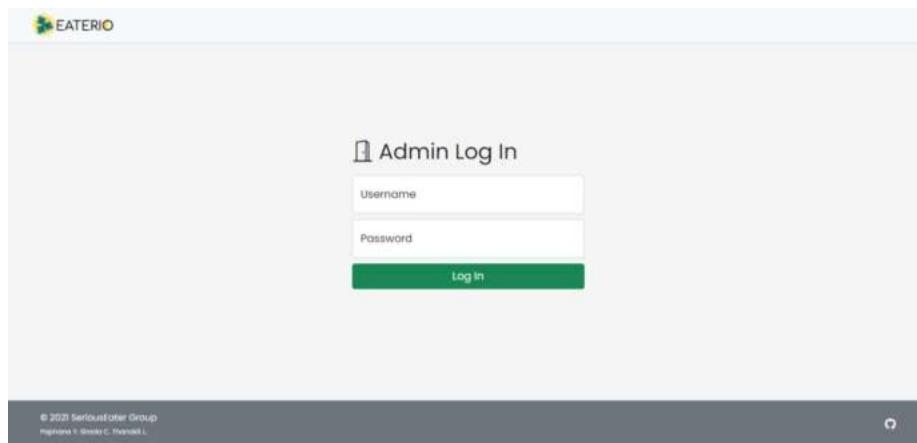


Figure 41: Admin Login Page of EATERIO system

A screenshot of the Admin Home Page. The top navigation bar includes the EATERIO logo, links for Home, Customer, Shop, Menu, Order, and a "Welcome, Admin" message with a log out button. The main area features a banner for the "ADMIN DASHBOARD" at "SIIT Bangkadi Campus Canteen". Below the banner is a section titled "System Status" with four boxes: "Customer" (8 customer(s) in the system), "Food Shop" (3 food shop(s) in the system), "Menu" (30 menu(s) in the system), and "Order" (15 order(s) in the system). Each box has a "Go to [list]" button. The footer contains the copyright notice "© 2021 SeriousEater Group Proprietary &amp; Confidential. All Rights Reserved".

Figure 42: Admin Home Page of EATERIO system

A screenshot of the Admin Customer Management Page. The top navigation bar includes the EATERIO logo, links for Home, Customer, Shop, Menu, Order, and a "Welcome, Admin" message with a log out button. Below the navigation is a "Shop List" section with a search bar for "Username" and "Shop Name", and buttons for "Search", "Clear", and "Add new shop". A table lists three shop entries: "shop001" (Unit #2, Open Hour 07:30-14:30, Status Closed/Pre-order available), "shop002" (Unit #1, Open Hour 08:00-17:30, Status Open/Pre-order available), and "shop003" (Unit #3, Open Hour 08:30-16:00, Status Closed/Pre-order available). Each row has "View", "Edit", and "Delete" buttons. The footer contains the copyright notice "© 2021 SeriousEater Group Proprietary &amp; Confidential. All Rights Reserved".

Figure 43: Admin Customer Management Page of EATERIO system

Customer List

#	Username	First name	Last name	Type	E-mail	Action
1	6222780668	Sirada	Chaisawat	Student	6222780668@g.sil.tu.ac.th	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
2	6222780569	Thanakit	Lerttomolsokul	Student	6222780569@g.sil.tu.ac.th	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
3	BKD_Admin01	Admin	Bangkradi	Admin	admin_dummy@email.com	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
4	someone	someone	someone	Visitor	someone@email.com	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
5	6222780379	Paphana	Yiwsiw	Student	6222780379@g.sil.tu.ac.th	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
6	iamguest	Guest01	Guest01	Visitor	guest@gmail.com	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
7	johndoe	John	DoeY	Faculty Staff	john@gmail.com	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
8	customer	Customer	Bangkradi	Visitor	email@gmail.com	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>

Figure 44: Admin Customer Management Page of EATERIO system

Menu List

#	Menu name	Shop name	Price	Menu Status	Action
1	ข้าวผัดกุ้ง	ร้านอาหารตามสั่ง	55.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
2	ข้าวไข่ก้อม	ร้านอาหารตามสั่ง	40.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
3	ข้าวแกงเผ็ดหมูปิ้น	ร้านอาหารตามสั่ง	40.00 THB	Available Pre-order Unavailable	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
4	ผัดซีอิ๊ว	ร้านอาหารตามสั่ง	40.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
5	ผัดผักกาด	ร้านอาหารตามสั่ง	40.00 THB	Available Pre-order available	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>

Figure 45: Admin Food Management Page of EATERIO system

Order List

#	Order Ref. Code	Shop Name	Order Status	Order Date	Customer Name	Order Cost	Action
1	202111220000036	ร้านข้าวสารสอง	Accepted	November 22, 2021 16:15	Paphana Yiwsiw	125.00 THB	<a href="#">View</a> <a href="#">Update Status</a>
2	202111210000035	ร้านข้าวสารสอง	Completed	November 21, 2021 15:49	Paphana Yiwsiw	95.00 THB	<a href="#">View</a> <a href="#">Update Status</a>
3	202111210000034	The Noodle Shop	Completed	November 21, 2021 15:10	Paphana Yiwsiw	110.00 THB	<a href="#">View</a> <a href="#">Update Status</a>
4	202111200000022	The Noodle	Accepted	November 19, 2021	Prasittha Viwesw	250 กก. 1400	<a href="#">View</a>

Figure 46: Admin Order Management Page of EATERIO system

## Section 4

### Stored Procedures

In the EATERIO database, we included 4 stored procedures to handle the order and revenue query from customers and shop owners more easily. These 4 stored procedures are shown below.

#### 1. “customer\_order” procedure

In this procedure, it accepts input order id in integer. The result from executing this procedure is a list of the order reference code, customer name, shop name, food name, amount, buy price, order note, and order pick-up time.

```

DELIMITER $$

CREATE PROCEDURE `customer_order` (IN order_id INT(11))
BEGIN
    SELECT f.f_name AS food_name, ord.ord_buyprice AS buy_price,
    ord.ord_amount AS amount ,ord.ord_note AS order_note
    FROM order_header orh
    INNER JOIN order_detail ord ON orh.orh_id = ord.orh_id
    INNER JOIN food f ON f.f_id = ord.f_id
    WHERE orh.orh_id = order_id;
END$$
DELIMITER ;

```

Routine name	customer_order				
Type	PROCEDURE				
Parameters	Direction	Name	Type	Length/Values	Options
	IN	order_id	INT	11	<input type="button" value="Drop"/>
<a href="#">Add parameter</a>					
Definition	<pre> 1 BEGIN 2     SELECT orh.orh_refcode AS reference_code, 3         CONCAT(c.c_firstname, ' ', c.c_lastname) AS customer_name, s.s_name 4         AS shop_name,f.f_name AS food_name,ord.ord_buyprice AS buy_price, 5         ord.ord_amount AS amount ,ord.ord_note AS order_note, 6         orh.orh_ordertime AS order_time , orh.orh_pickuptime AS pickup_time 7     FROM order_header orh 8     INNER JOIN order_detail ord ON orh.orh_id = ord.orh_id 9     INNER JOIN food f ON f.f_id = ord.f_id 10    INNER JOIN customer c ON orh.c_id = c.c_id 11    INNER JOIN shop s ON orh.s_id = s.s_id 12    WHERE orh.orh_id = order_id; 13 END </pre>				

Figure 47: Implementation of customer\_order procedure in the database

## 2. “customer\_order\_history” procedure

In this procedure, it accepts input customer id in integer. The result from executing this procedure is a list of orders of that customer which includes the order reference code, customer name, shop name, pickup time, order cost, and order status.

```

DELIMITER $$

CREATE PROCEDURE `customer_order_history` (IN customer_id INT(11))
BEGIN
    SELECT orh.orh_refcode AS reference_code,
    CONCAT(c.c_firstname, ' ', c.c_lastname) AS customer_name,
    s.s_name AS shop_name, orh.orh_ordertime AS order_time,
    orh.orh_pickuptime AS pickup_time,
    p.p_amount AS order_cost, orh.orh_orderstatus AS order_status
    FROM order_header orh
    INNER JOIN customer c ON orh.c_id = c.c_id
    INNER JOIN payment p ON orh.p_id = p.p_id
    INNER JOIN shop s ON orh.s_id = s.s_id
    WHERE c.c_id = customer_id;
END$$
DELIMITER ;

```

Routine name	customer_order_history				
Type	PROCEDURE				
Parameters	1	IN	custom	IN	11
	<b>Add parameter</b>				
Definition	<pre> 1 BEGIN 2     SELECT orh.orh_refcode AS reference_code, 3         CONCAT(c.c_firstname, ' ', c.c_lastname) AS customer_name, 4         s.s_name AS shop_name, orh.orh_ordertime AS 5             order_time, orh.orh_pickuptime AS pickup_time, 6         p.p_amount AS order_cost, orh.orh_orderstatus AS 7             order_status 8     FROM order_header orh INNER JOIN customer c ON 9         orh.c_id = c.c_id 10    INNER JOIN payment p ON orh.p_id = p.p_id 11    INNER JOIN shop s ON orh.s_id = s.s_id 12    WHERE c.c_id = customer_id; 13 END </pre>				

Figure 48: Implementation of customer\_order\_history procedure in the database

### 3. “shop\_alltime\_revenue” procedure

In this procedure, it accepts input shop id in integer. The result from executing this procedure is the total revenue from finished orders of that corresponding shop since the beginning.

```
DELIMITER $$  
CREATE PROCEDURE `shop_alltime_revenue` (IN shop_id INT(11))  
BEGIN  
    SELECT SUM(ord.ord_amount*ord.ord_buyprice) AS alltime_revenue  
    FROM order_header orh  
    INNER JOIN order_detail ord ON orh.orh_id = ord.orh_id  
    INNER JOIN food f ON f.f_id = ord.f_id  
    INNER JOIN shop s ON s.s_id = orh.s_id  
    WHERE s.s_id = shop_id AND orh.orh_orderstatus = 'FNSH';  
END$$  
DELIMITER ;
```

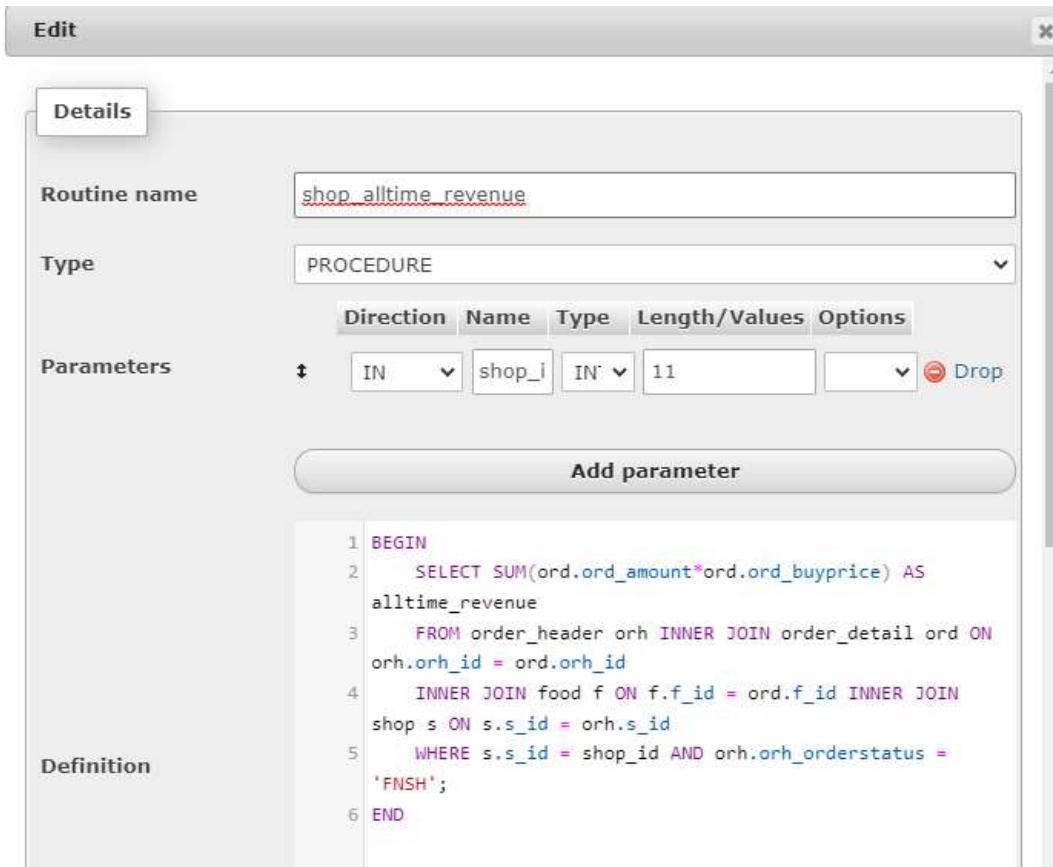


Figure 49: Implementation of shop\_alltime\_revenue procedure in the database

#### 4. “shop\_menu\_revenue” procedure

In this procedure, similar to the previous one, it accepts input shop id in integer. The result from executing this procedure is the list of food names in the corresponding shop and its revenue generated from that menu since the beginning. The revenue is calculated from finished orders only.

```

DELIMITER $$

CREATE PROCEDURE `shop_menu_revenue` (IN shop_id INT(11))
BEGIN
    SELECT f.f_name AS food_name,
    SUM(ord.ord_amount*ord.ord_buyprice) AS menu_revenue
    FROM order_header orh
    INNER JOIN order_detail ord ON orh.orh_id = ord.orh_id
    INNER JOIN food f ON f.f_id = ord.f_id
    WHERE orh.s_id = shop_id AND orh.orh_orderstatus = 'FNSH'
    GROUP BY ord.f_id ORDER BY menu_revenue DESC;
END$$
DELIMITER ;

```

Routine name	shop_menu_revenue				
Type	PROCEDURE				
Parameters	\$	IN	shop_id	IN	11
Definition	<pre> 1 BEGIN 2     SELECT f.f_name AS food_name, 3         SUM(ord.ord_amount*ord.ord_buyprice) AS menu_revenue 4     FROM order_header orh INNER JOIN order_detail ord ON 5         orh.orh_id = ord.orh_id 6     INNER JOIN food f ON f.f_id = ord.f_id 7     WHERE orh.s_id = shop_id AND orh.orh_orderstatus = 8         'FNSH' 9     GROUP BY ord.f_id ORDER BY menu_revenue DESC; 10 END. </pre>				

Figure 50: Implementation of shop\_menu\_revenue procedure in the database

## **Section 5**

### **Conclusion**

EATERIO system is a canteen food ordering and management system based on a case scenario at Sirindhorn International Institute of Technology, Bangkradi Campus. The system consists of 2 parts, customers and shop owners part. Customers can log in to the system, browse the list of shops and menus, place orders and pay, and view their order history. Customers can also pre-order the food up to 1 day in advance. Shop owners can log in to the system, manage the menu, update the customer order status, update the shop information, and view the revenue reports. We also included the admin account which is a special privilege account where you can manage information in every aspect of the system from customer and shop to the order information.

In this project, the MySQL database is implemented while developing the project. MySQL is one of the database management systems or DBMS, which is a collection of programs that provides services for accessing a database while maintaining all the required features of the data. It enabled users to insert, update, delete and select information from a database as per the requirements. DBMS also acts as an intermediate layer between application and data. The programs access the DBMS, which then accesses the data consequently.

In developing this project, we selected to develop in the web application form. HTML, CSS, and Javascript are used in the development of user interface and experience (UI/UX). We used the Bootstrap CSS framework to make front-end development easier and more efficient. PHP is used to link with the database to obtain the information and present it to the user. In the payment part, we connected with the Omise payment gateway API version 2019-05-29 to make the payment with a credit card or debit card possible and implement it in the project successfully.

Overall, the EATERIO project can implement the database in MySQL as designed according to the ER diagram successfully and its application is working and having features as we wanted. We used HTML, Bootstrap CSS, Javascript, PHP, SQL, and Omise API to develop the project successfully and work in the way we wanted. Finally, we hope that this project or similar project will be used inside our campus in the future to enhance the food ordering experience better than what we currently have.