

Ho Chi Minh City University of Technology and Education

Faculty for High Quality Training

FINAL REPORT



HCMUTE

COURSE: WINDOWS PROGRAMMING

TOPIC: Building Restaurant Management

Lecture: Lê Vĩnh Thịnh

Course ID: 212WIPR230579E

Group 12

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Ho Chi Minh City - 2022

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1. DESIGN DATABASE

1.1. MANAGER

	Column Name	Data Type	Allow Nulls
🔍	mid	int	<input type="checkbox"/>
	mfirstname	varchar(MAX)	<input checked="" type="checkbox"/>
	mlastname	varchar(MAX)	<input checked="" type="checkbox"/>
	mbirthdate	date	<input checked="" type="checkbox"/>
	mgender	varchar(10)	<input checked="" type="checkbox"/>
	mphone	varchar(15)	<input type="checkbox"/>
	mpassword	varchar(MAX)	<input checked="" type="checkbox"/>
	memail	varchar(MAX)	<input checked="" type="checkbox"/>
	maddress	varchar(MAX)	<input checked="" type="checkbox"/>
	mimage	image	<input checked="" type="checkbox"/>
	mactive	bit	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	mid	mfirstna...	mlastna...	mbirthd...	mgender	mphone	mpassw...	memail	maddress	mimage	mactive
▶	1	Nguyen ...	Toan	2002-08-...	Male	0703679...	1	toanngu...	Thanh Ph...	<Binary ...	True
	2	Bui Ngoc	Anh	2002-01-...	Female	0941647...	2	gaukoala...	Quan 9	<Binary ...	True
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.2. EMPLOYEE

	Column Name	Data Type	Allow Nulls
🔍	eid	int	<input type="checkbox"/>
	efirstname	varchar(MAX)	<input checked="" type="checkbox"/>
	elastname	varchar(MAX)	<input checked="" type="checkbox"/>
	ebirthdate	date	<input checked="" type="checkbox"/>
	egender	varchar(10)	<input checked="" type="checkbox"/>
	ephone	varchar(15)	<input type="checkbox"/>
	epassword	varchar(MAX)	<input checked="" type="checkbox"/>
	eemail	varchar(MAX)	<input checked="" type="checkbox"/>
	eaddress	varchar(MAX)	<input checked="" type="checkbox"/>
	eimage	image	<input checked="" type="checkbox"/>
	eactive	bit	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	eid	efirstna...	elastname	ebirthdate	egender	ephone	epasswo...	eemail	eaddress	eimage	eactive
▶	1	Nguyen ...	Nam	2002-11-...	Male	0703311...	1	2011038...	Thanh Ph...	<Binary ...	True
	2	Gau	Koala	2002-01-...	Female	0553214...	1	anhngoc...	Quan 9	<Binary ...	True
	4	Vu Trong	Nhan	2002-10-...	Male	0931429...	1	2011039...	Quan 10	<Binary ...	True
	6	Ta	Nam	2002-12-...	Male	1234567...	NULL	2011042...	Thu Duc	<Binary ...	True
	7	Ta	Vu	2002-12-...	Male	0293213...	NULL	2011038...	Thu Duc	<Binary ...	True
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.3. CHECK

	Column Name	Data Type	Allow Nulls
🔑	checkid	int	<input type="checkbox"/>
	startshifta	datetime	<input checked="" type="checkbox"/>
	endshifta	datetime	<input checked="" type="checkbox"/>
	startshiftb	datetime	<input checked="" type="checkbox"/>
	endshiftb	datetime	<input checked="" type="checkbox"/>
	startshiftc	datetime	<input checked="" type="checkbox"/>
	endshiftc	datetime	<input checked="" type="checkbox"/>
	email	varchar(MAX)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	checkid	startshifta	endshifta	startshiftb	endshiftb	startshiftc	endshiftc	email
▶	1	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2011038...
	2	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	anhngoc...
	4	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2022-06-...	2011039...
	6	NULL	NULL	NULL	NULL	NULL	NULL	2011042...
	7	NULL	NULL	NULL	NULL	NULL	NULL	2011038...
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.4. DISHES

	Column Name	Data Type	Allow Nulls
🔑	dishesid	nchar(15)	<input type="checkbox"/>
	dname	varchar(MAX)	<input checked="" type="checkbox"/>
	dprice	float	<input checked="" type="checkbox"/>
	ingredient1	char(15)	<input checked="" type="checkbox"/>
	ingredient2	char(15)	<input checked="" type="checkbox"/>
	ingredient3	char(15)	<input checked="" type="checkbox"/>
	dquantity	int	<input checked="" type="checkbox"/>
	required1	int	<input checked="" type="checkbox"/>
	required2	int	<input checked="" type="checkbox"/>
	required3	int	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

1.5. SHIFT

	Column Name	Data Type	Allow Nulls
PK	shiftid	int	<input type="checkbox"/>
	T2	varchar(MAX)	<input checked="" type="checkbox"/>
	T3	varchar(MAX)	<input checked="" type="checkbox"/>
	T4	varchar(MAX)	<input checked="" type="checkbox"/>
	T5	varchar(MAX)	<input checked="" type="checkbox"/>
	T6	varchar(MAX)	<input checked="" type="checkbox"/>
	T7	varchar(MAX)	<input checked="" type="checkbox"/>
	CN	varchar(MAX)	<input checked="" type="checkbox"/>
	email	varchar(MAX)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	shiftid	T2	T3	T4	T5	T6	T7	CN	email
▶	1	2	3	1	2	3	1	2	2011038...
	2	3	1	2	3	1	2	3	anhngoc...
	4	1	2	3	1	2	3	1	2011039...
	6	2	3	1	2	3	1	2	2011042...
	7	3	1	2	3	1	2	3	2011038...
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.6. SALARY

	Column Name	Data Type	Allow Nulls
PK	salaryid	int	<input type="checkbox"/>
	totalSalaryOfMonday	float	<input checked="" type="checkbox"/>
	totalSalaryOfTuesday	float	<input checked="" type="checkbox"/>
	totalSalaryOfWednesday	float	<input checked="" type="checkbox"/>
	totalSalaryOfThursday	float	<input checked="" type="checkbox"/>
	totalSalaryOfFriday	float	<input checked="" type="checkbox"/>
	totalSalaryOfSaturday	float	<input checked="" type="checkbox"/>
	totalSalaryOfSunday	float	<input checked="" type="checkbox"/>
	email	varchar(MAX)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	salaryid	totalSala...	totalSala...	totalSala...	totalSala...	totalSala...	totalSala...	totalSala...	email
▶	4	NULL	NULL	NULL	0	NULL	NULL	NULL	2011039...
	6	NULL	NULL	NULL	0	NULL	NULL	NULL	anhngoc...
	8	NULL	NULL	NULL	0	NULL	NULL	NULL	2011038...
	9	NULL	NULL	NULL	NULL	NULL	NULL	NULL	2011042...
	10	NULL	NULL	NULL	NULL	NULL	NULL	NULL	2011038...
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.7. TABLE

	Column Name	Data Type	Allow Nulls
🔑	tableid	char(15)	<input type="checkbox"/>
	tablename	varchar(MAX)	<input checked="" type="checkbox"/>
	quantitycus	int	<input checked="" type="checkbox"/>
	status	varchar(MAX)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	tableid	tablena...	quantity...	status
▶	B1	Couple	2	0
	B2	Family	4	0
	B3	Big Family	6	0
	B4	Giant Fa...	10	0
*	NULL	NULL	NULL	NULL

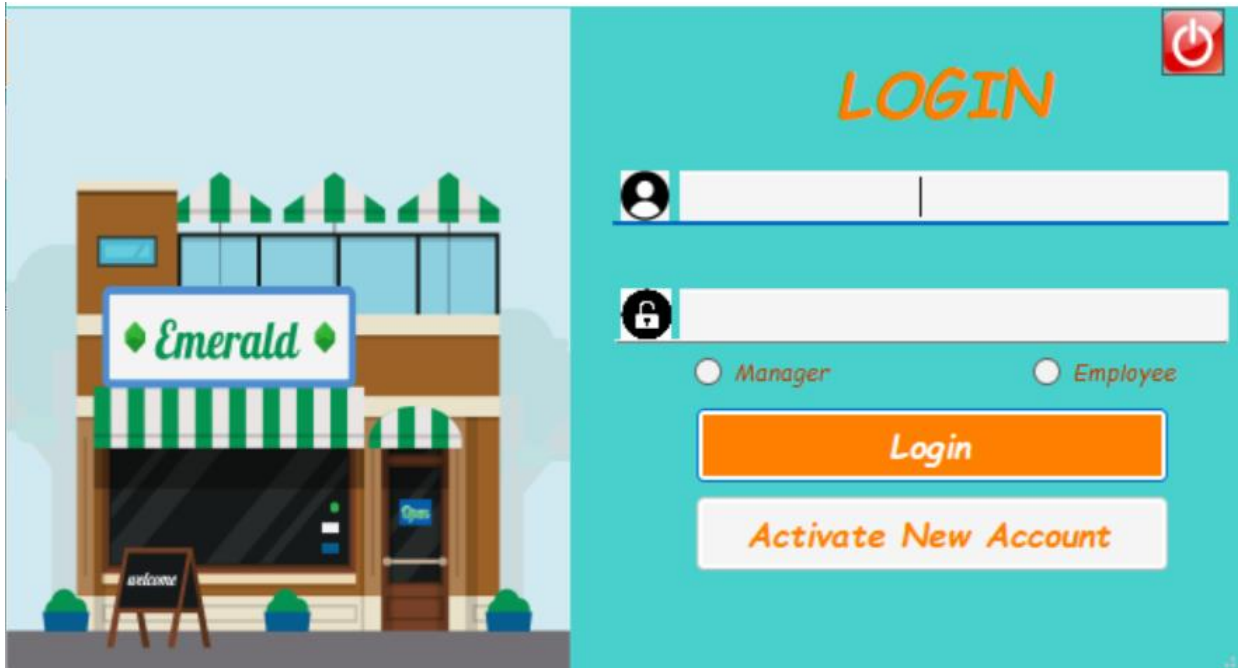
1.8. KITCHEN

	Column Name	Data Type	Allow Nulls
🔑	ingredientID	char(15)	<input type="checkbox"/>
	ingredientName	varchar(MAX)	<input checked="" type="checkbox"/>
	quantity	int	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

	ingredie...	ingredie...	quantity
▶	K1	Rice Noo...	1000
	K2	Broth	1000
	K3	Beef	1000
	K4	Salad	1000
*	NULL	NULL	NULL

2. INTERFACES AND FUNCTIONS

The form can login to two accounts, Manager and Employee, in addition, Manager add new Employee after that Employee active new account.



The screenshot shows the login interface for the Emerald application. On the left is a cartoon illustration of a two-story building with a sign that says "Emerald". On the right is a teal-colored login panel. At the top right of the panel is a red power button icon. The word "LOGIN" is written in large, orange, stylized letters. Below it are two input fields: the first has a person icon and the second has a padlock icon. Under the padlock field are two radio buttons labeled "Manager" and "Employee". At the bottom of the panel are two buttons: an orange "Login" button and a white "Activate New Account" button.

Employees activate the account thanks to the added management email, there will be an otp code sent to the email and use it to activate



The screenshot shows the "Activate New Account" form. The title "Activate New Account" is centered at the top in a bold, black, italicized font. On the left is a large, empty white rectangular box. To the right of this box are four input fields: "Email:", "Verification Code:", "Password:", and "Comfirm Password:". The "Verification Code:" field has a small teal button with the word "Send" next to it. At the bottom right is a large teal button with the word "Activate" in white. Below the "Activate" button is the text "Already activated?" followed by a purple link that says "Log In".

MANAGER

This is the main interface of the management where the manager can change information and refresh his image, the sub-interface updates the current time to help manage the time easily.



Hello Nguyen Huynh Thanh Toan
Have a nice day ^ _ ^ !
[Edit My Information](#) | [Refresh](#) | [Log Out](#)

10 Tháng Sáu 2022 11:57:35

[Manage Employee](#) [Calculate Salary For Employee](#) [Manage Table](#)



[Split work shift](#) [Reset Time For Employee](#)

	Full Name	Birthdate	Gender	Email	Address	Image
▶	Nguyen Hoang Nh...	24/11/2002	Male	20110383@studen...	Thanh Pho Thu Duc	
	Gau Koala	07/01/2002	Female	anhngocbui332@g...	Quan 9	
	Vu Trong Nhan	21/10/2002	Male	20110390@studen...	Quan 10	



Total Employee: 7



Email:

Address:

Password:

First Name:

Image: 

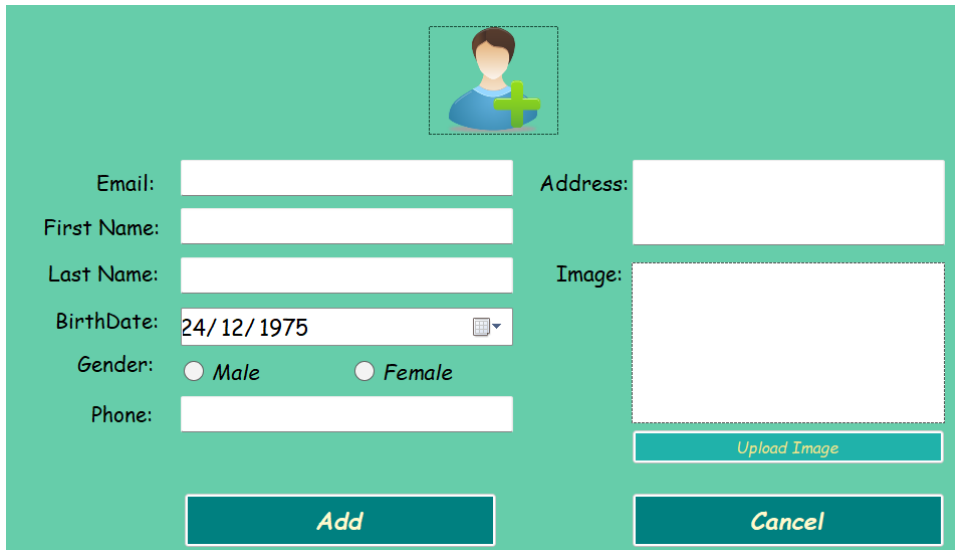
Last Name:

BirthDate: 


Gender: ☒ Male ☐ Female

Phone:

In addition, management can add employees, delete employees, and temporarily lock the employee's current account if the employee is on leave or takes some time off for some reason. And the manager can easily view the information. employees and number of employees and search for employee information thanks to the search button and split work shift



Employee Add Form

Icon: 


Email:

Address:

First Name:

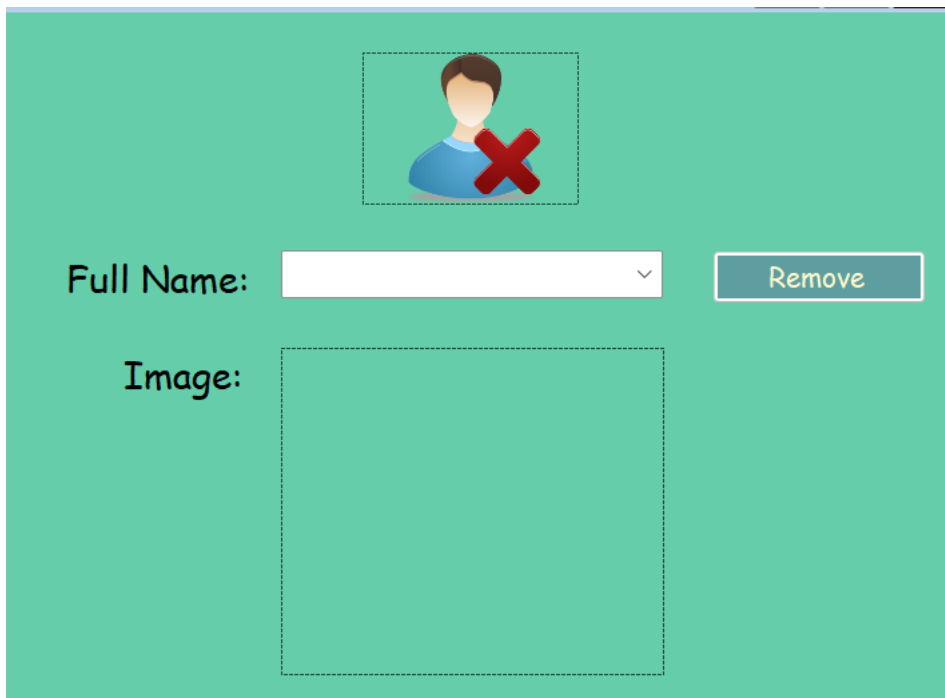
Last Name:

Image:


BirthDate: 

Gender: ☐ Male ☐ Female

Phone:



Employee Remove Form

Icon: 


Full Name: 

Image:

Lock Employee Account

Email: 20110390@student.hcmute.edu.vn

Search

Full Name: Vu Trong Nhan

Image:



Cancel

Lock Account

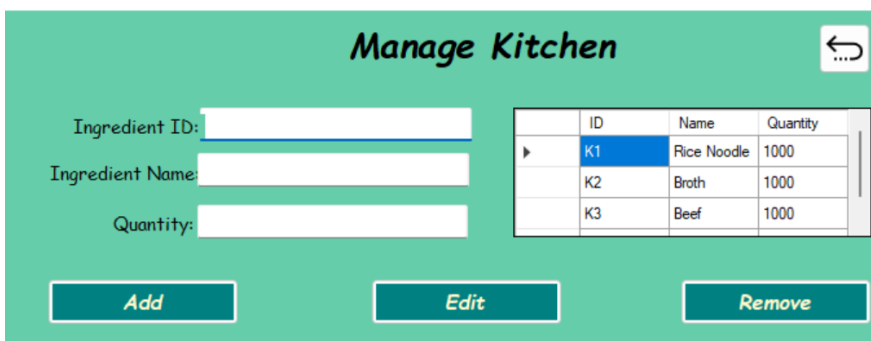
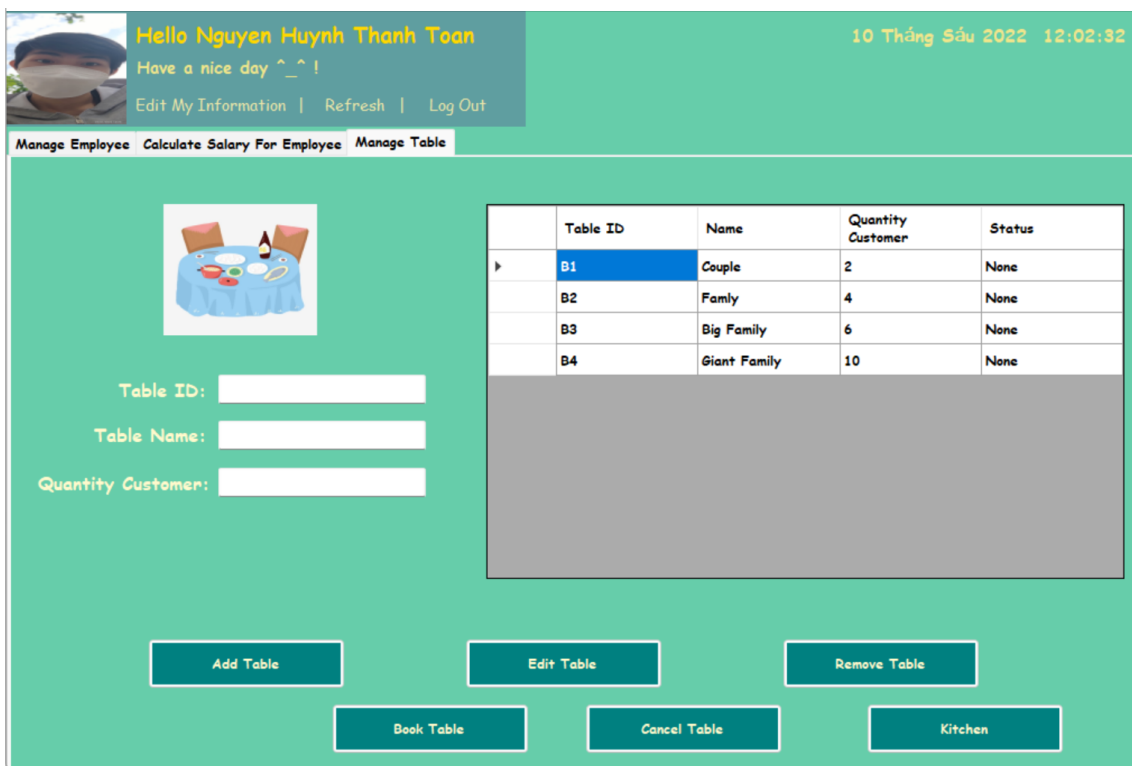
☒ Split Shifts

	Email	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
▶	20110383@st...	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3
	anhngocbui332...	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3
	20110390@st...	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2
	20110420@st...	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3
	20110384@st...	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3	Ca 1, Ca 2	Ca 1, Ca 3	Ca 2, Ca 3

Calculate employee salary

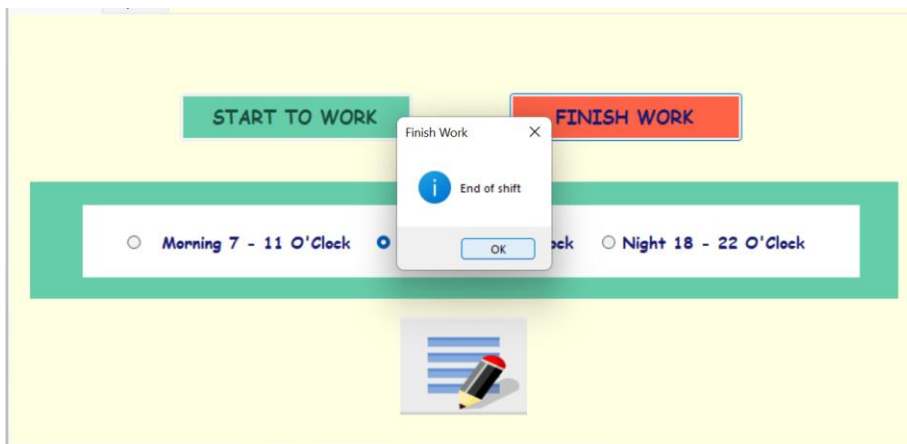
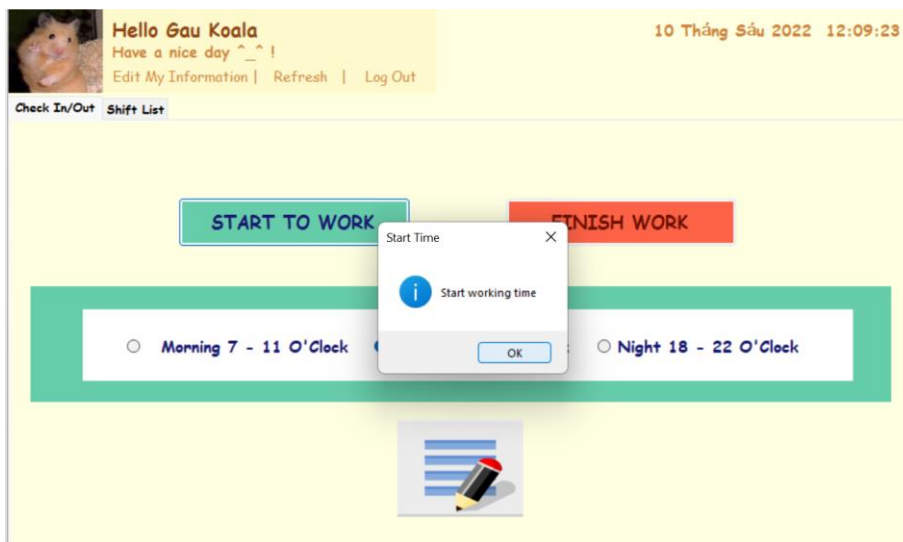
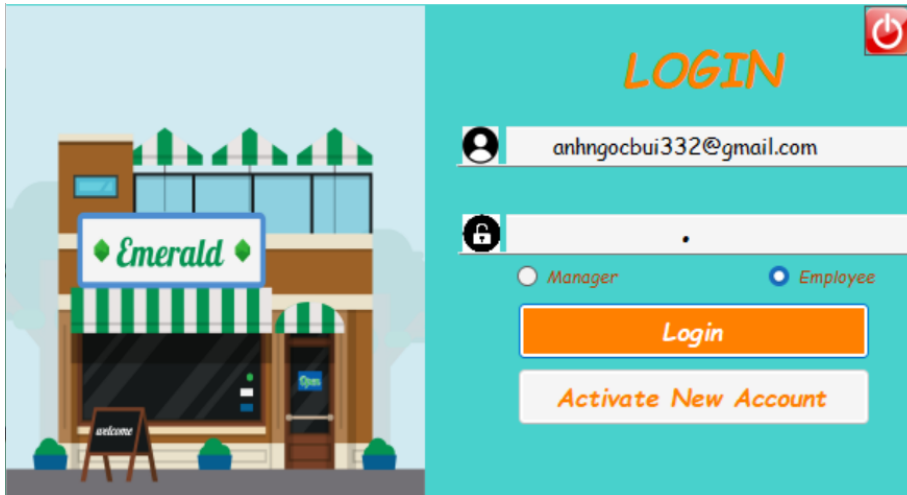



Manage Table is adding tables, removing tables, editing tables, booking and canceling tables and managing kitchen ingredients..



EMPLOYEE

Employee checks in his shift, if it is not yet in shift, it will display a notice not to start the shift after starting the shift, the new shift end button will be displayed and can change the shift by sending an invitation to other staff





Hello Gau Koala

Have a nice day ^ _ ^ !

[Edit My Information](#) | [Refresh](#) | [Log Out](#)

10 Tháng Sáu 2022 12:10:55

[Check In/Out](#)
[Shift List](#)

	Email	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
▶	anhngocbul3...	Ca 2 & Ca 3	Ca 1 & Ca 2	Ca 1 & Ca 3	Ca 2 & Ca 3	Ca 1 & Ca 2	Ca 1 & Ca 3	Ca 2 & Ca 3

Change

20110384@student.hcmute.edu.vn

20110390@student.hcmute.edu.vn

Send Invitation

Employees Who Can Change Shifts: 1

Employees Who Can Change Shifts: 2

[Check In/Out](#)
[Shift List](#)

	Email	Monday	Tuesday	Friday	Saturday	Sunday
▶	anhngocbul3...	Ca 2 & Ca 3	Ca 1 & Ca 2	Ca 1 & Ca 2	Ca 1 & Ca 3	Ca 2 & Ca 3

Change

20110384@student.hcmute.edu.vn

20110390@student.hcmute.edu.vn

Send Invitation

Employees Who Can Change Shifts: 1


Employees Who Can Change Shifts: 2

Change Shift

Invitation sent successfully!

OK

Change Shifts



You Get 1 Offer to Change Shift.
So Today You Work All 3 Shifts.
Do you agree?

Yes

No



Hello Ta Vu

Have a nice day ^ _ ^ !

[Edit My Information](#) | [Refresh](#) | [Log Out](#)

10 Tháng Sáu 2022 12:22:59

[Check In/Out](#)
[Shift List](#)

	Email	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
▶	20110384@...	Ca 2 & Ca 3	Ca 1 & Ca 2	Ca 1 & Ca 3	Ca 2 & Ca 3	Ca 1 & Ca 2...	Ca 1 & Ca 3	Ca 2 & Ca 3

Change

Send Invitation

3. CONCLUSION

Through the process of researching, analyzing, researching on the topic and using the Winform interface, we have drawn the following results:

- Evaluate the restaurant management process by manual method.
- Building a restaurant management program and making table orders for customers like reality.

Oriented development:

After learning Windows Programming, we have gained more practical knowledge, from which we will absorb and develop more in the future with this project. Development of the interface to be more user-friendly and the database management system will be upgraded and replaced. We really thank you for your guidance and encouragement so that we can complete this project.