Electronic Enterprise Integration

Homework04 WebDesign

Willy’s Breakfast Shop

Group 6

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■ Setting up behavior model – As-Is

The Fig.1 is the As-Is model. We take the flow of ‘’Willy’s Breakfast Shop ’’ as our example.

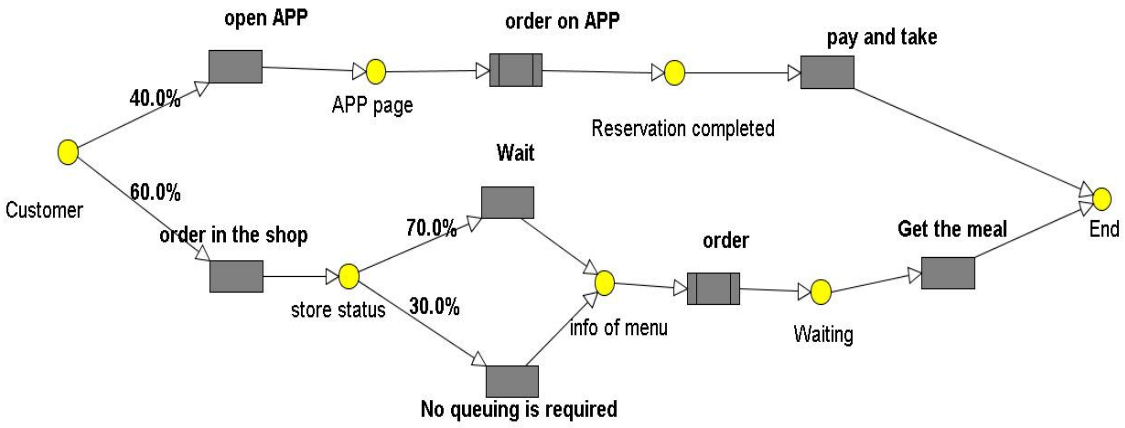


Fig.1 As-Is model

We assume that there are 40% of customers who will use APP in **open APP** activity to order the breakfast beforehand. They will enter **Order on APP** drill down in which there are three steps inside. First, login the member info. Next, customers are able to order the meal. Finally, they can check whether the order is correct or not. After finishing ordering, customer could pay the money and take their breakfast away in **pay and take** activity.

On the other hand, the other 60% customers will order the breakfast in the breakfast shop. They will enter **order in the shop** activity. Next, we assume that 70% of them will have to wait in line in **Wait** activity. The other 30% customers are lucky cause there are no other people waiting in line so that they don't need to wait for others.

Next, the customer will enter **order** activity in which there are three steps in order drill down. First, fill in the menu to choose what to eat. Second, order to the counter. Finally, pay for the meal and then wait for cooking until getting the meal in **Get the meal** drill down.

1. **order on app** drill down

Include **login, order the meal** and **confirm** which are shown in Fig.2.

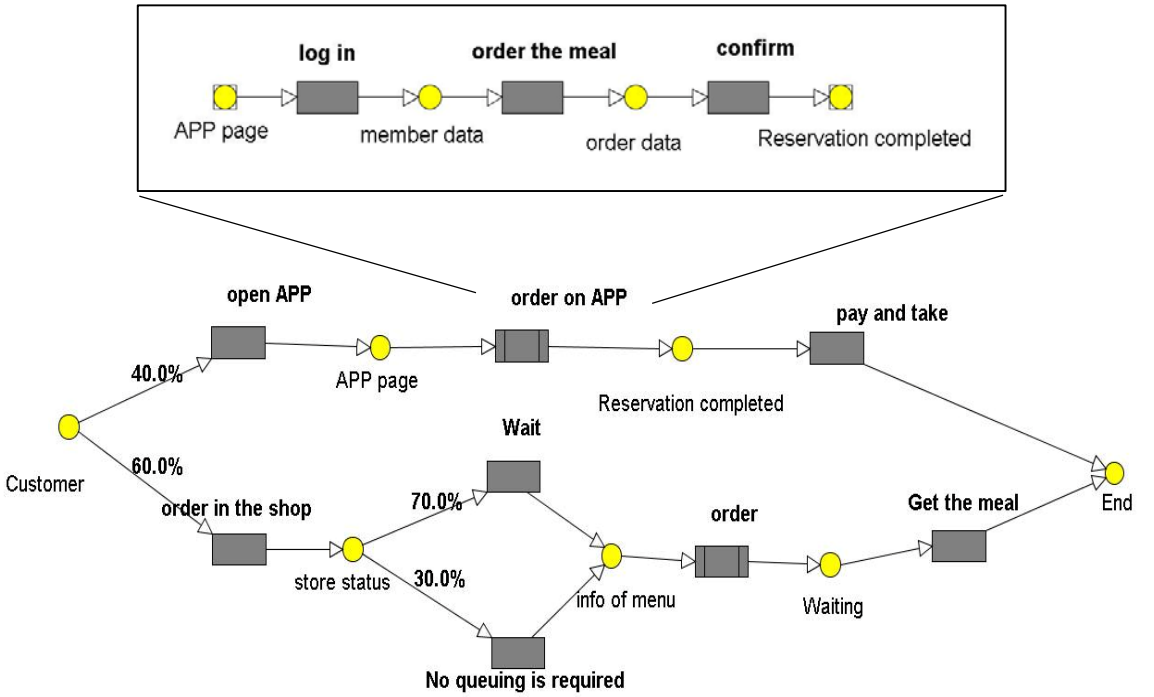


Fig.2 Drill down to **order on APP**

2. **order** drill down

Include **fill in the menu, order, confirm and pay** which are shown in Fig.3.

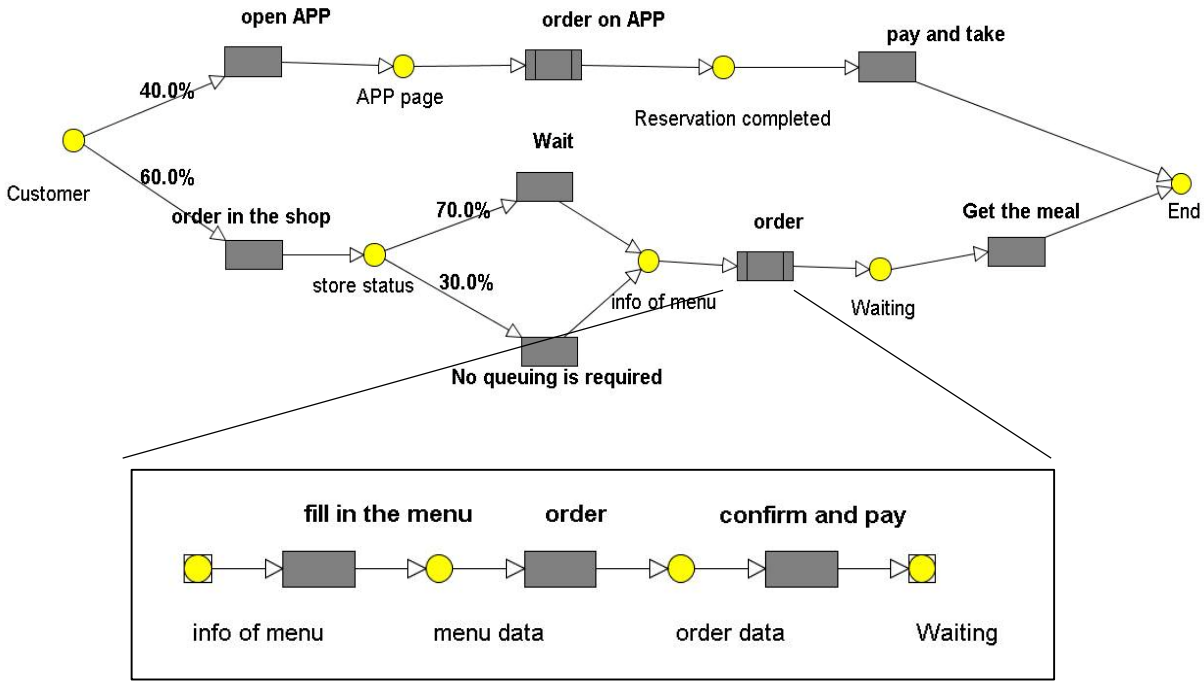


Fig.3 Drill down to **order**

■ Setting up behavior model – To-Be

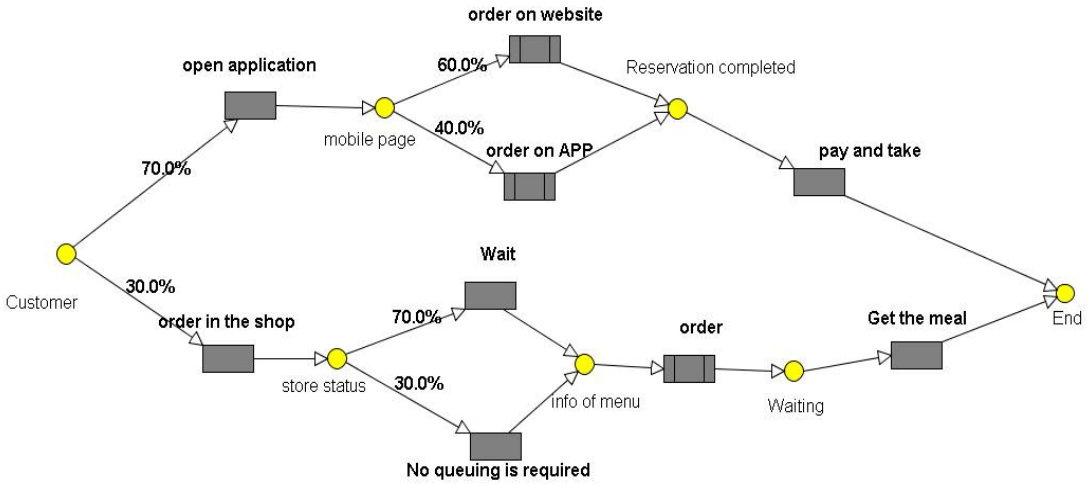


Fig.4 To-Be model

The Fig.4 is the To-Be model. In general, there is no big different between ASIS model and TOBE model because there are still lots of customer will order the breakfast in the shop. However, we set up a website for **Willy's Breakfast Shop** which can attractive some customers who usually buy the breakfast in the shop. The first different is we assume that if we implement a website, there are 70% of customer will enter **open application** activity rather than **order in the shop** activity. There are two choices for customer, first is the **order on APP** activity, second is **order on website** activity which is important for the owner because the owner can use the website to promote their daily special menu or introduce their special meal. For the customer, they can accumulate the bonus point in each order if the amount of consumption is greater than 100NTD. Once they have 10 points, they can have the coupon. The other activities are the same with the ASIS model.

1. **order on website** drill down

The "**order on website**" includes **login, order the meal** and **confirm** which are shown in Fig.5.Cutomers can browse in the website to select the items and see the comments given by other customers.

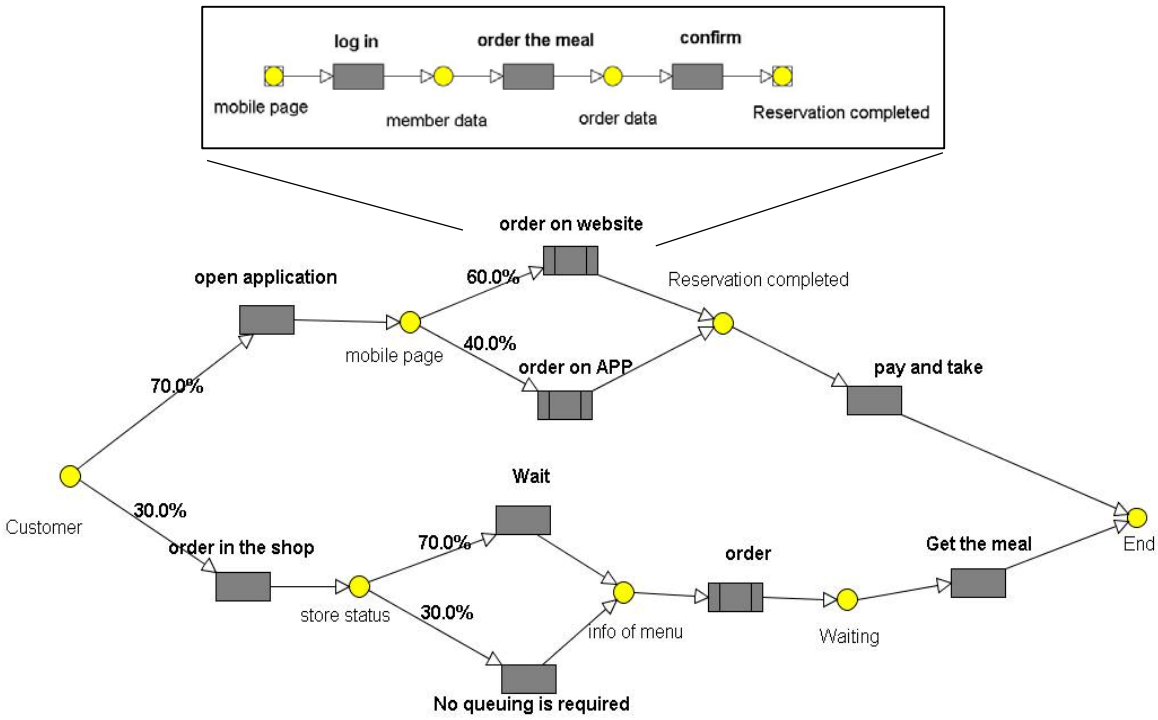


Fig.5 Drill down to Add member

2. **order on APP** drill down

The "**order on APP**" include **login, order the meal** and **confirm** which are shown Fig.6

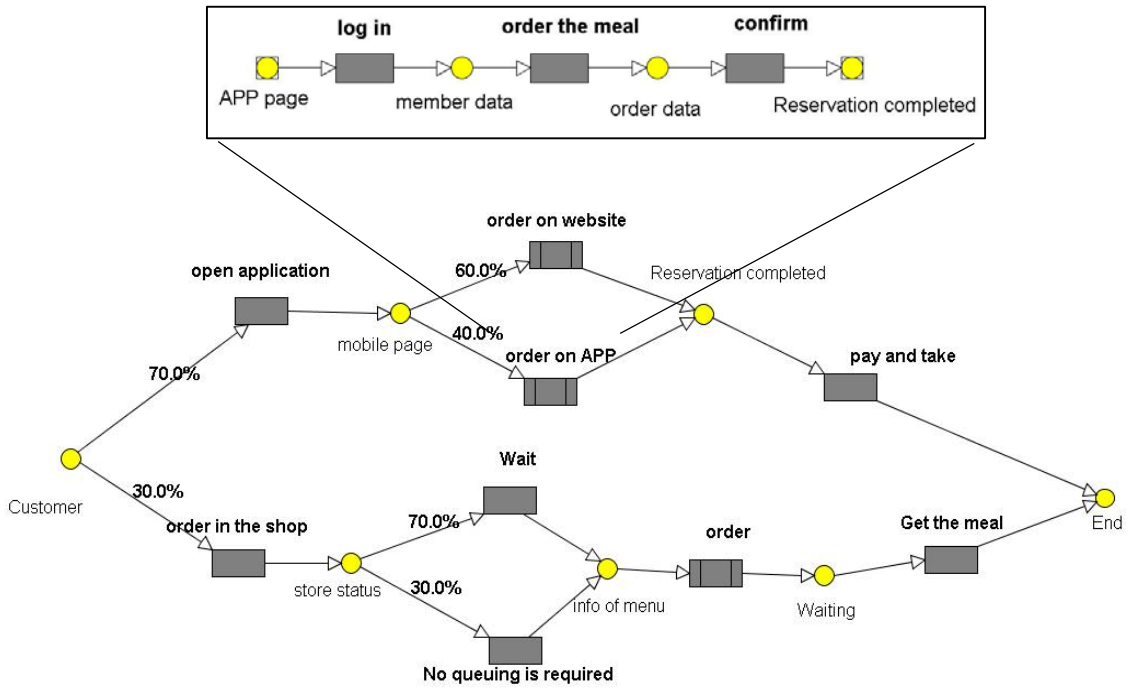


Fig.6 Drill down to Add member

3. **order** drill down

Include **fill in the menu, order, confirm and pay** which are shown in Fig.7

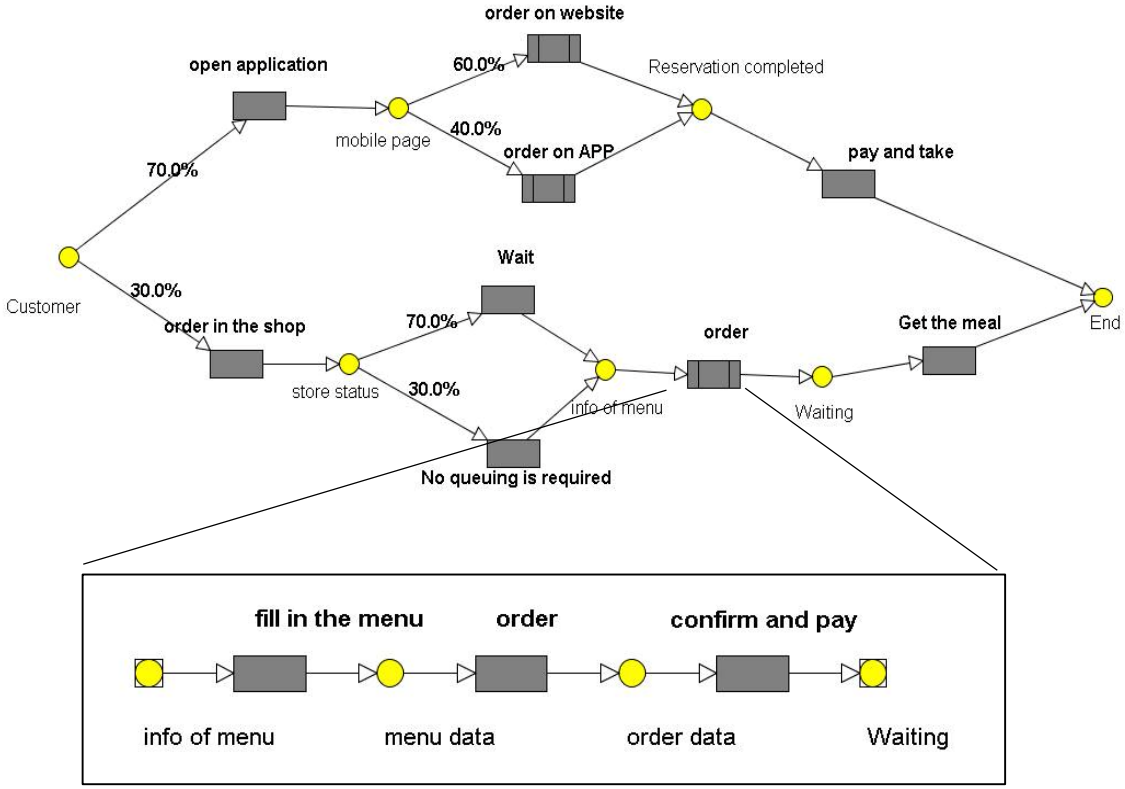


Fig.7 Drill down to Add member

■ Time, Cost and Value added Data

Table 1 shows the average time, cost and value added we set in each activity of AS-IS Model. Table 2 shows the same parameters with different values in TO-BE Model.

Table 1 Parameters of AS-IS Model.

AS-IS Model			
Behavior	Avg. Time	Cost	Value added
Open app	2(s)		
Order on app ✓ Log in ✓ Order the meal ✓ Confirm	 1.5(min) 3.0(min) 0.5(min)		
Pay and take	1.0(min)	30	80
Order in the shop	2.0(min)		

Wait	10.0(min)		
No queuing is required	0.5(min)		
Order ✓ Fill in the menu ✓ Order ✓ Confirm and pay	 3.0(min) 2.0(min) 1.0(min)	 30	 80
Get the meal	10.0(min)	15	

Table 2 Parameters of TO-BE Model.

TO-BE Model			
Behavior	Avg. Time	Cost	Value added
Open application	0.5(s)		
Order on website ✓ Log in ✓ Order the meal ✓ confirm	 1.0(min) 0.5(min) 0.01(min)	 2	
Order on app ✓ Log in ✓ Order the meal ✓ Confirm	 1.5(min) 3.0(min) 0.5(min)		
Pay and take	1.0(min)	30	100
Order in the shop	2.0(min)		
Wait	10.0(min)		
No queuing is required	0.5(min)		
Order ✓ Fill in the menu ✓ Order ✓ Confirm and pay	 3.0(min) 2.0(min) 1.0(min)	 30	 80
Get the meal	10.0(min)	15	

■ Setting up Organization model

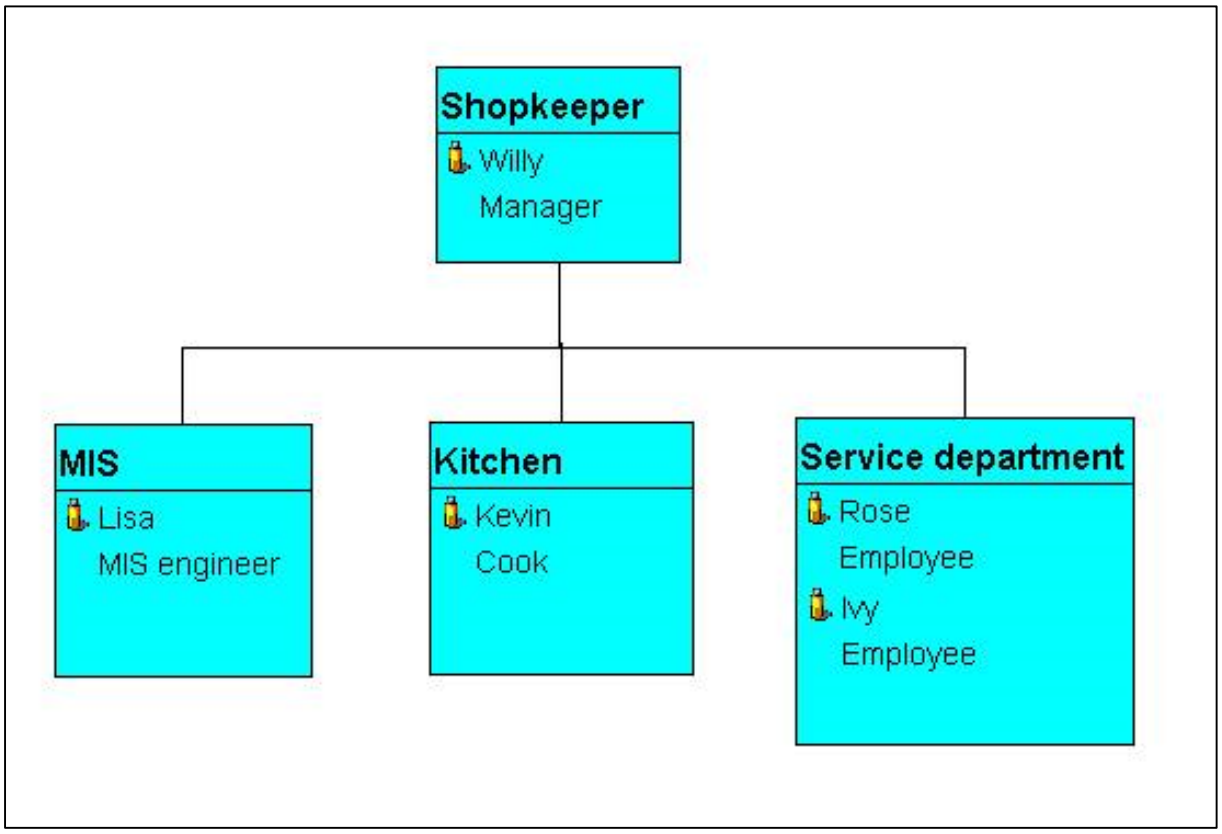


Fig.4 Organization model

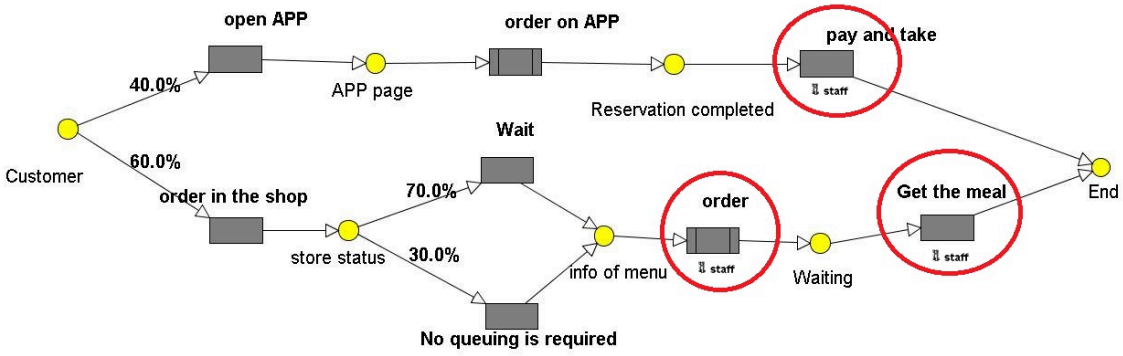


Fig.5 Organization model Connect the Breakfast Shop process (As-Is)

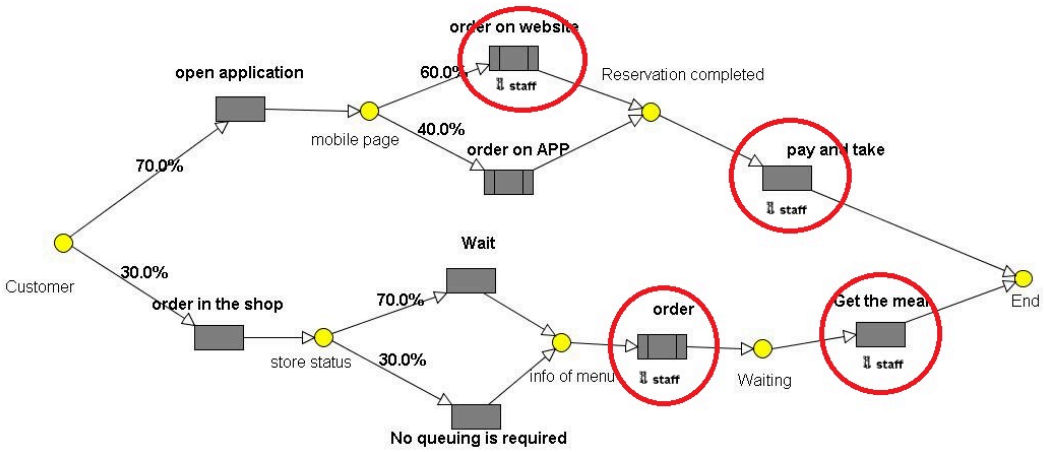


Fig.6 Organization model Connect the Breakfast Shop process (To-Be)

■ Setting up Object model

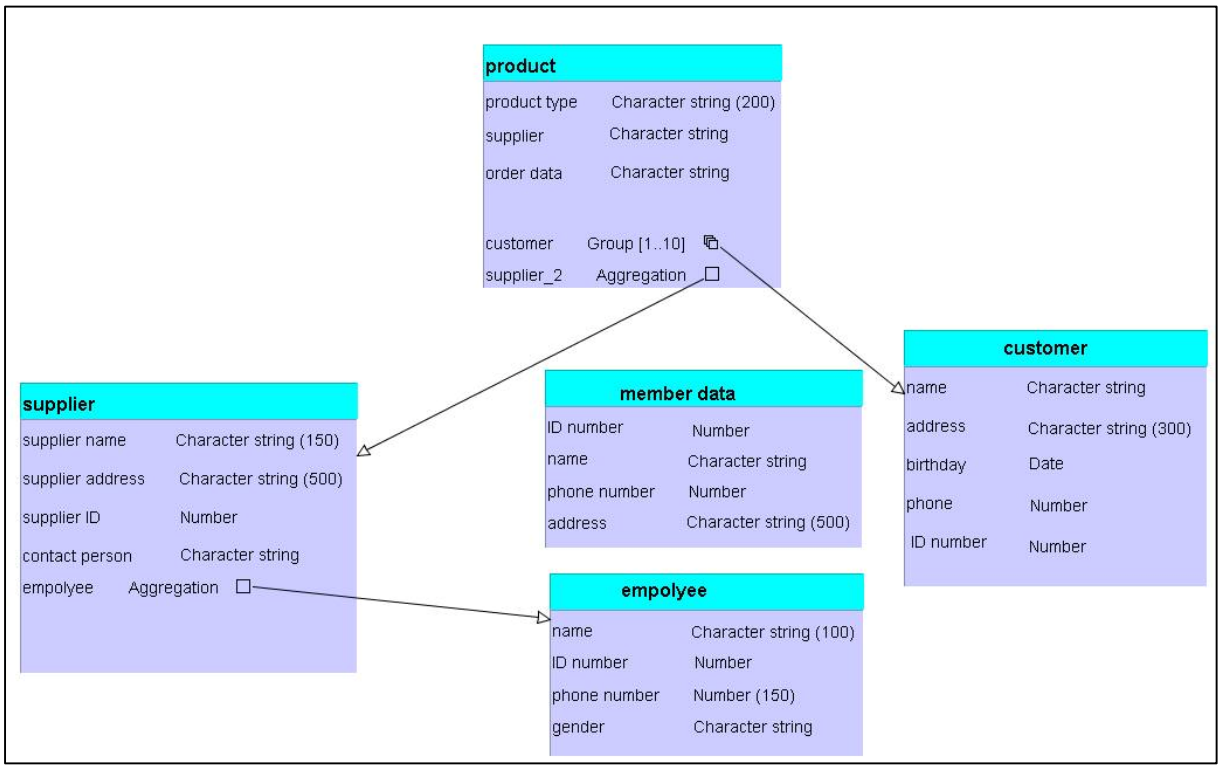


Fig.7 Object model (As-Is)

There are five tables in the database of the As-Is model, product table, Supplier table, Customer table, Employee table and Member table.

We can connect product table and Supplier table by the Supplier name, the product table and customer table by customer name, and connect Supplier table and employee table by

empolyee name, shown in Fig.11.

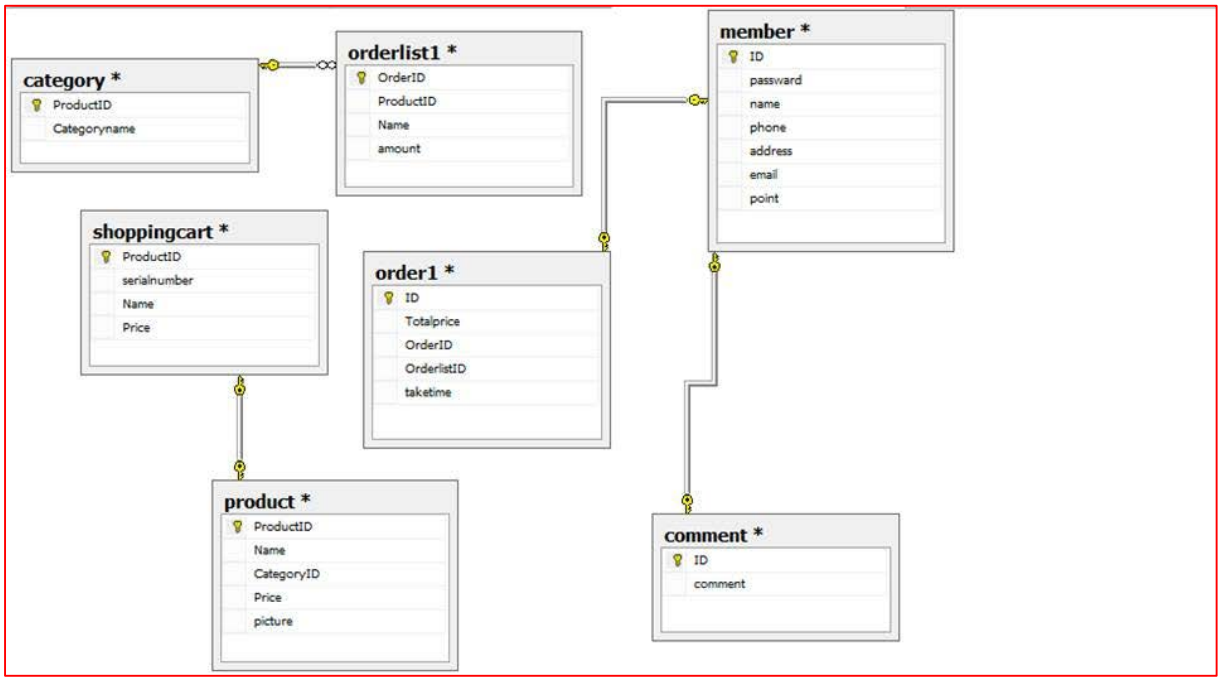
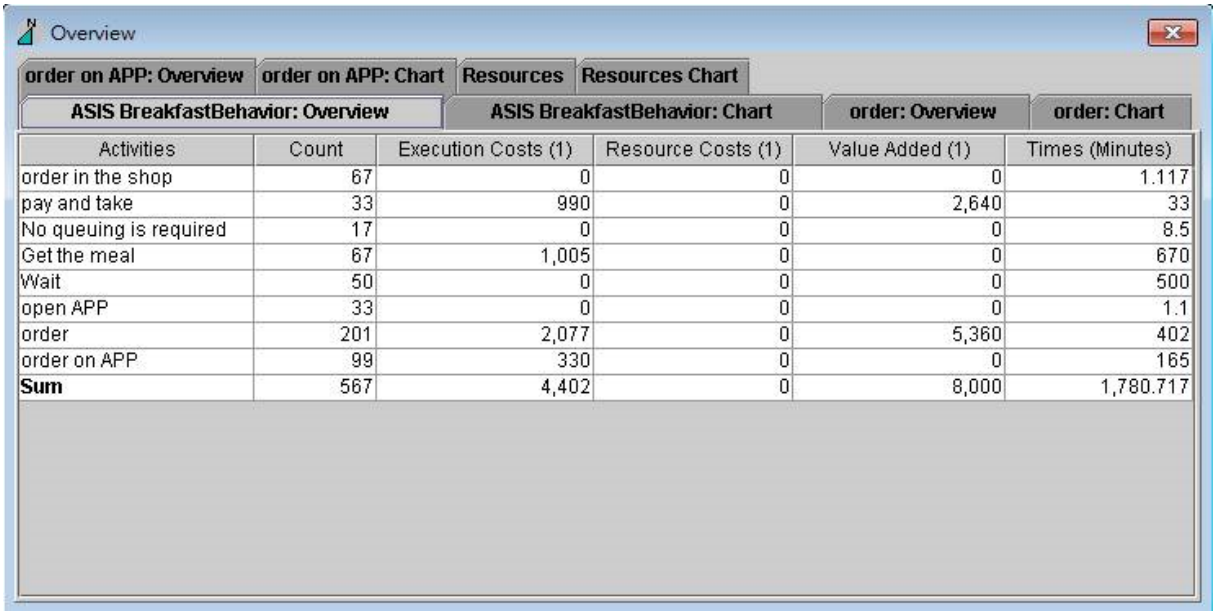


Fig.12 Object model (To-Be model)

There are only five tables in the database in the AS-IS model. The only difference between As-Is and To-Be model's table is the website & App table. In the To-Be model, there is "order on website" function in the Breakfast Shop process. The table is shown in Fig.12.

■ Simulation (As-Is)

We use the cost, time and value added that we set up in each activity in the As-Is model, then run the simulation. The result is shown in Fig.13.



Activities	Count	Execution Costs (1)	Resource Costs (1)	Value Added (1)	Times (Minutes)
order in the shop	67	0	0	0	1.117
pay and take	33	990	0	2,640	33
No queuing is required	17	0	0	0	8.5
Get the meal	67	1,005	0	0	670
Wait	50	0	0	0	500
open APP	33	0	0	0	1.1
order	201	2,077	0	5,360	402
order on APP	99	330	0	0	165
Sum	567	4,402	0	8,000	1,780.717

Fig.13 As-Is model overview

We found that the total cost is $4402, the total process time is 1780.717(min), and the value added is $8000.

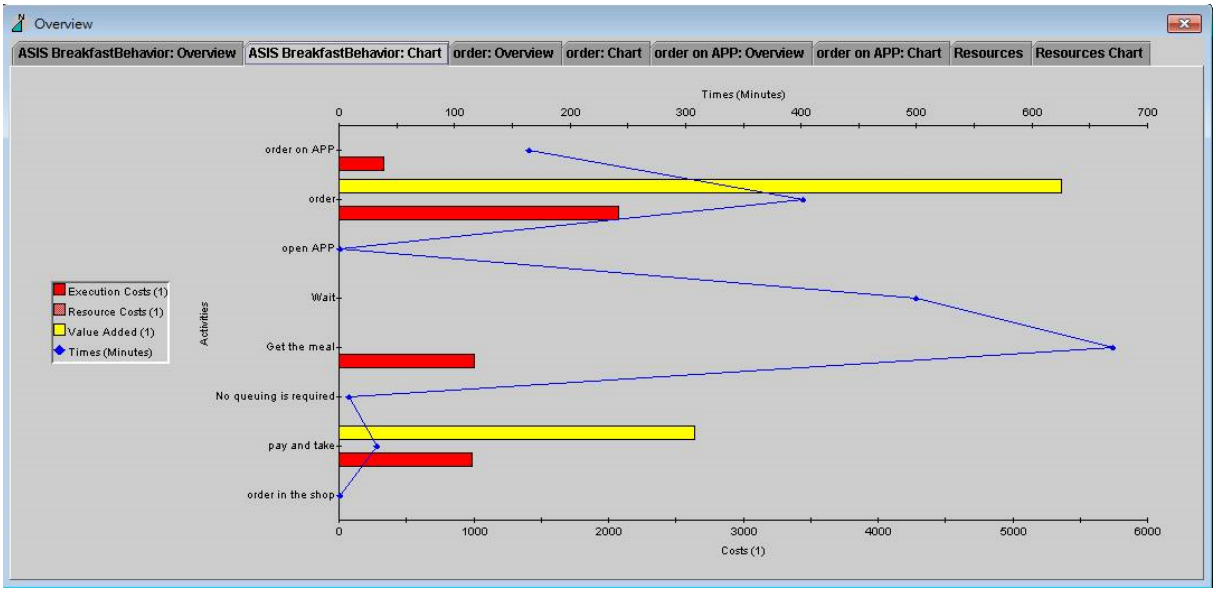
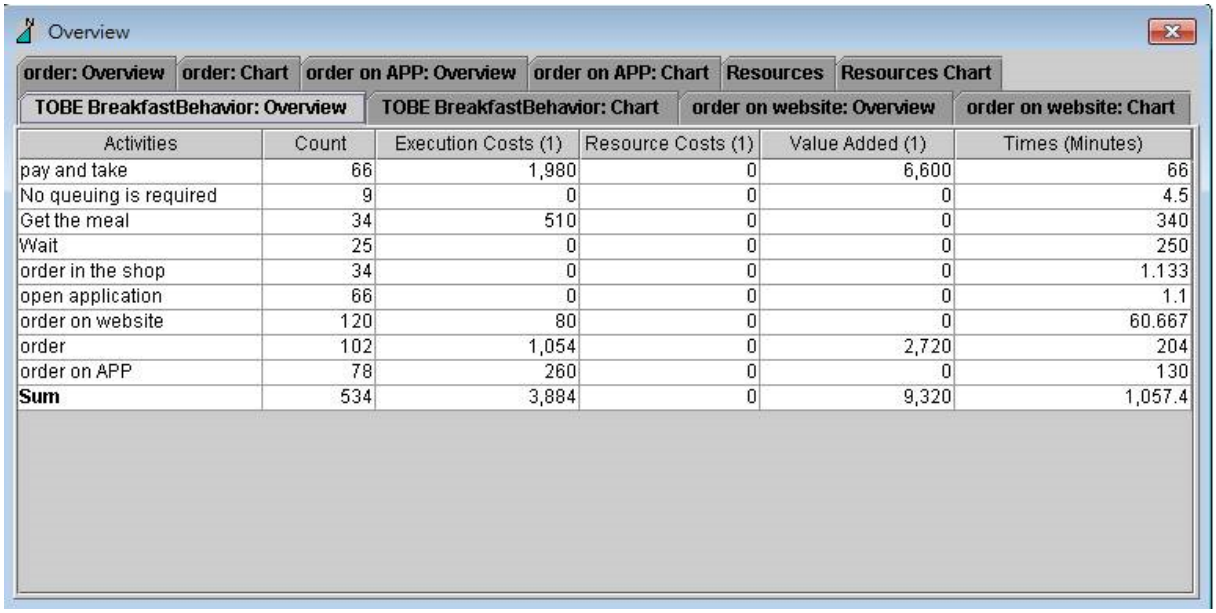


Fig.14 As-Is model chart

The Fig.14 shows AS-IS Model chart, most of the customers prefer ordering meal on the spot, as a result, it takes more time for ordering process and picking up the food.

■ Simulation (To-Be)

We use the cost, time and value added that we set up in each activity in the To-Be model, then run the simulation. Comparing with the As-Is model, the result is shown as Fig.15 .



Activities	Count	Execution Costs (1)	Resource Costs (1)	Value Added (1)	Times (Minutes)
pay and take	66	1,980	0	6,600	66
No queuing is required	9	0	0	0	4.5
Get the meal	34	510	0	0	340
Wait	25	0	0	0	250
order in the shop	34	0	0	0	1.133
open application	66	0	0	0	1.1
order on website	120	80	0	0	60.667
order	102	1,054	0	2,720	204
order on APP	78	260	0	0	130
Sum	534	3,884	0	9,320	1,057.4

Fig.85 To-Be model overview

We assume that through promoting Online ordering system, customers will be able to choose a more convenient service. The To-BE chart also shows that if more customers choose to order online, it will shorten waiting time on the spot and also result in cost down and profits increase. So we can conclude that the total cost and processing time are all cut down, and the value added has increased to $9320 from $8000. The Fig.16 shows the chart of To-Be model.

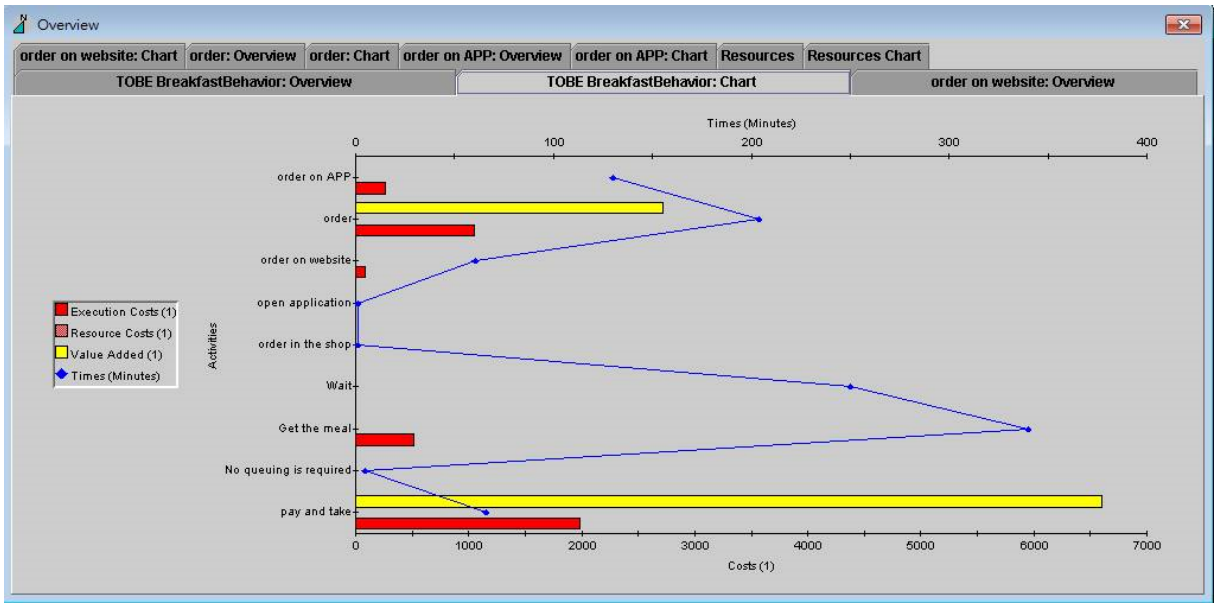


Fig.9 To-Be model chart

According to the simulation result, after Online ordering system was implemented into TO-BE Model, most of the customers will order the meal in advance through this system since its convenience feature. This system reduces the waiting time compared to the original model, which also increases customer satisfaction. Therefore, we decided to set up a website for online ordering service. This is due to the fact that it not only provides more prompt service but also brings more benefits to the breakfast shop.

■ Website functions

Fig.17 shows the login page. Both customers and managers can login. The right hand side can let new customer create new account.

Fig.17 Login page

Fig.18 shows the page that when manager login, manager can add new products, edit product content, and delete the product. The product's database is in the right hand side. The manager can update today's sales show as the red circle.

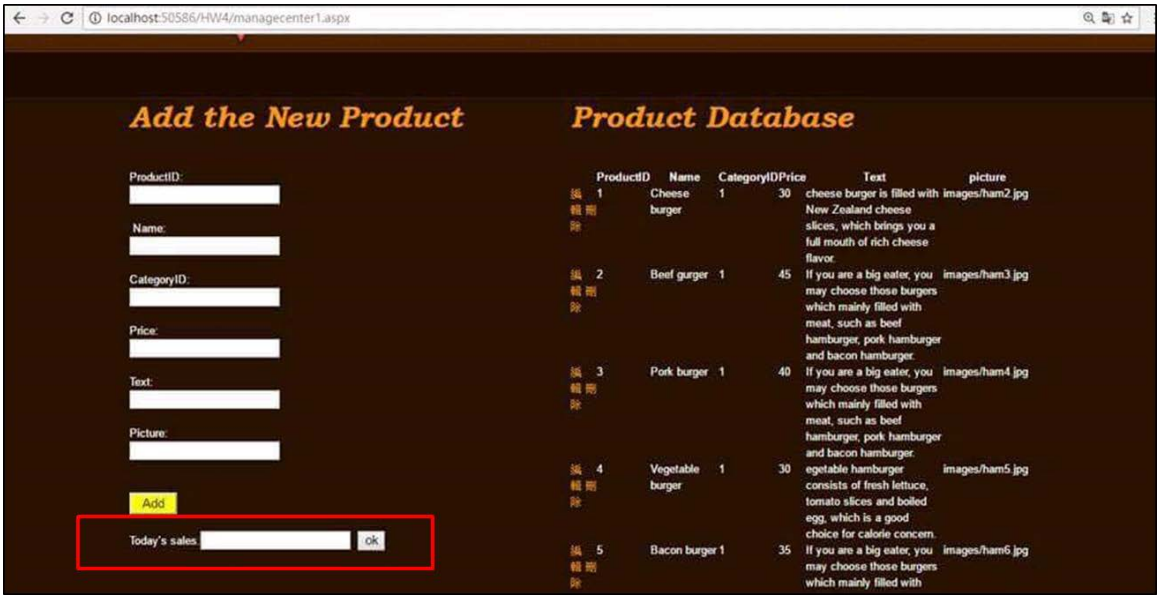


Fig.18 Manager login

When member login they will see the page show as Fig.19 There are several functions.

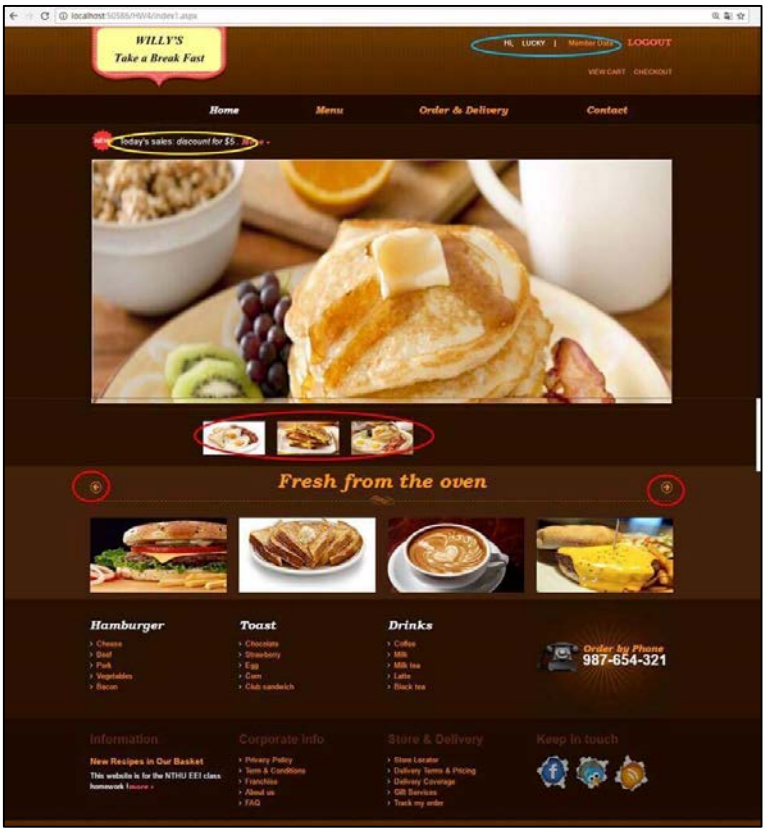


Fig.19 Index page

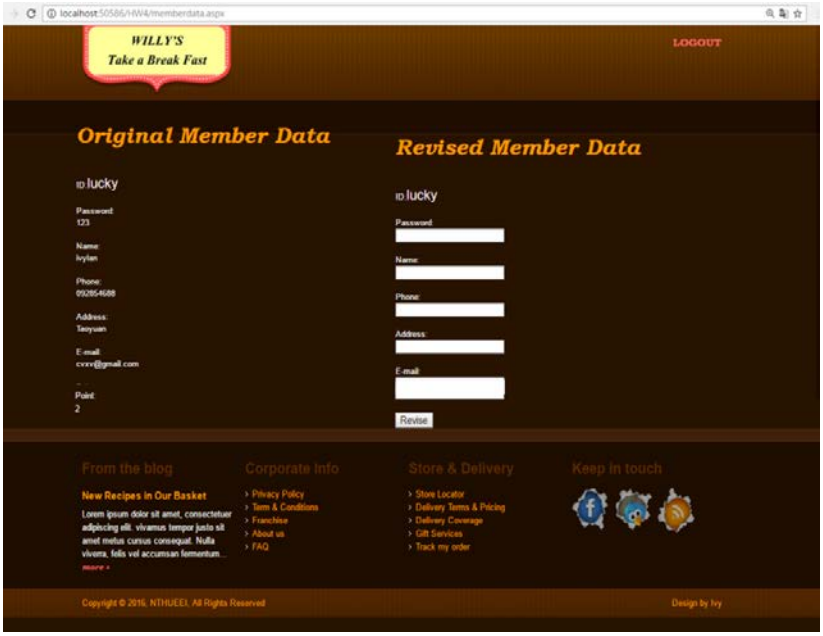


Fig.20 Member data update

When customer click member data, they can see their member data, and update them. Show above as Fig.20. The yellow circle in Fig.19 is today's sales which is update by manager in the beginning. When customer click the middle picture, they will see the page like Fig.21.

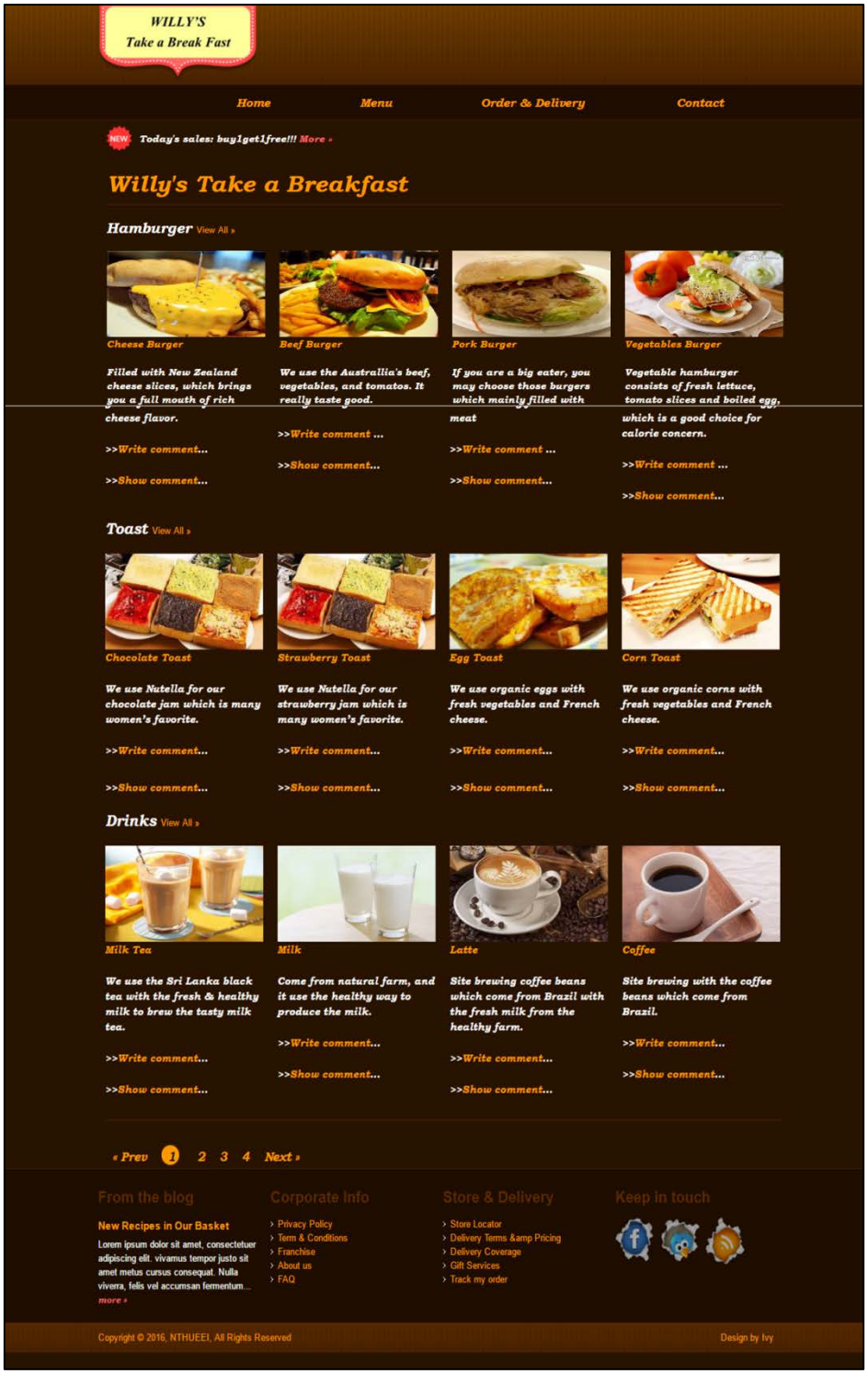


Fig.21 Product page

Customer can write the comment (Fig.22)and see the comment(Fig.23) that written by the customer.

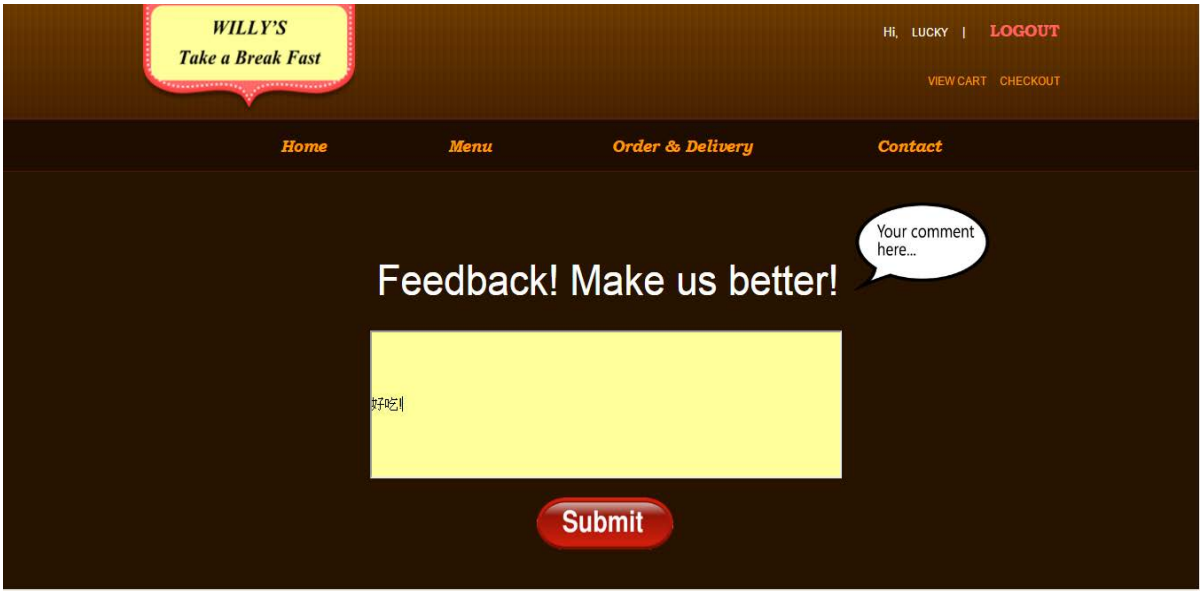


Fig.22 Write comment

Fig.23 Show the comment

Fig.24 shows the menu. Customer can add meal in the cart as Fig.25. And the customer can confirm the billing data as Fig.26, and also type the take time and the quantity of the product.

Fig.24 Menu

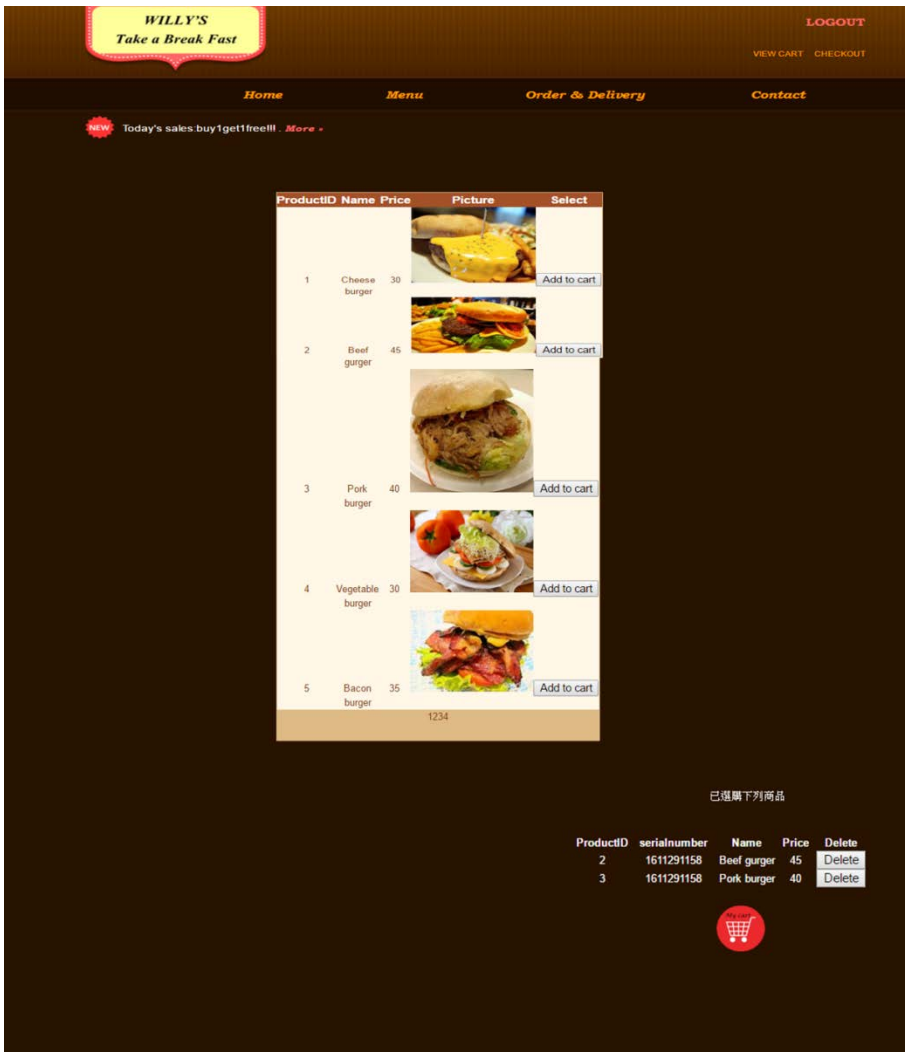


Fig.25 Add to cart

Confirm the billing data as Fig.26, and also type the take time and the quantity of the product.

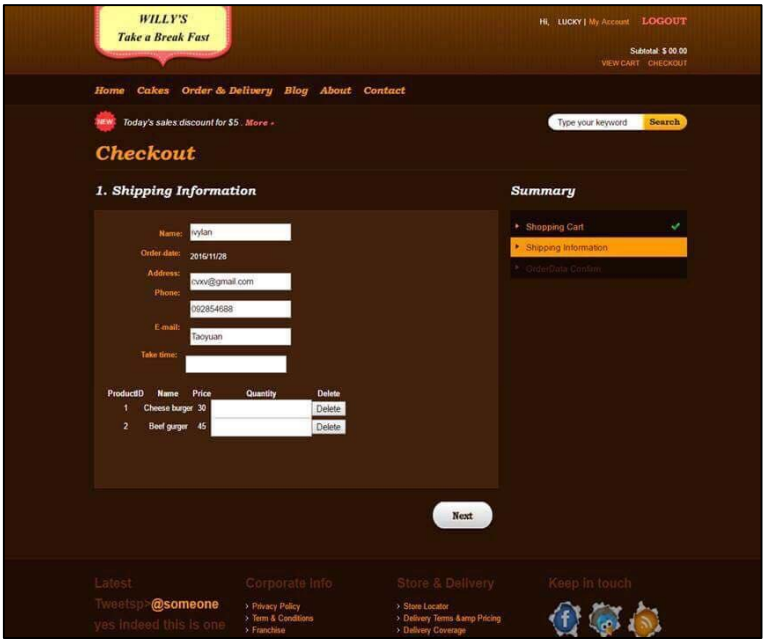


Fig.26 billing data information

Fig.27 can confirm the order data and get the point. Fig.28 shows the order is finished.

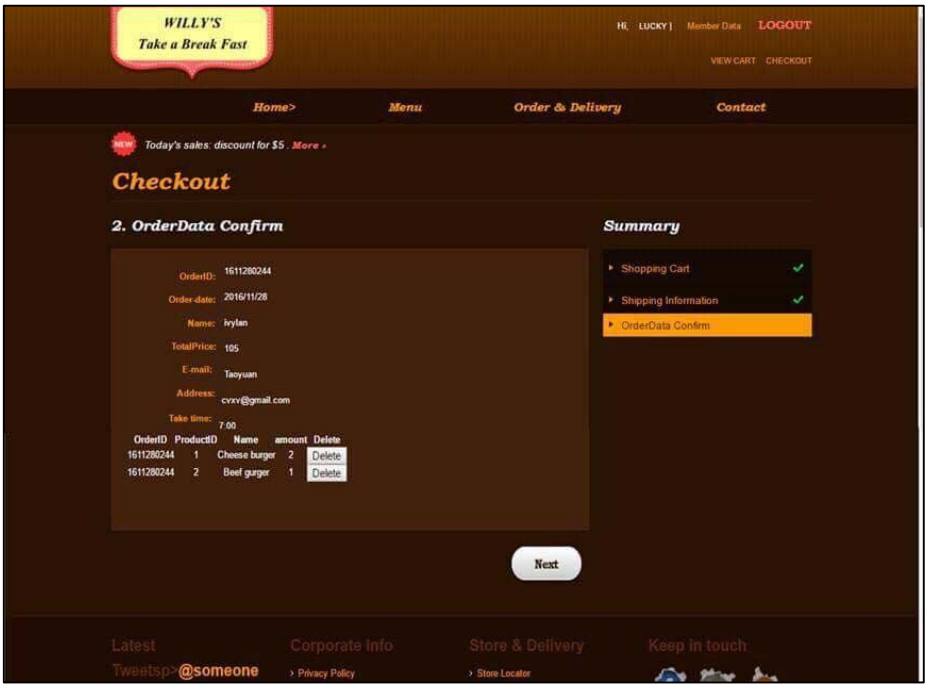


Fig.27 confirm the order data

Fig.28 finish the order

We modified our website. First, we add the different promotion.

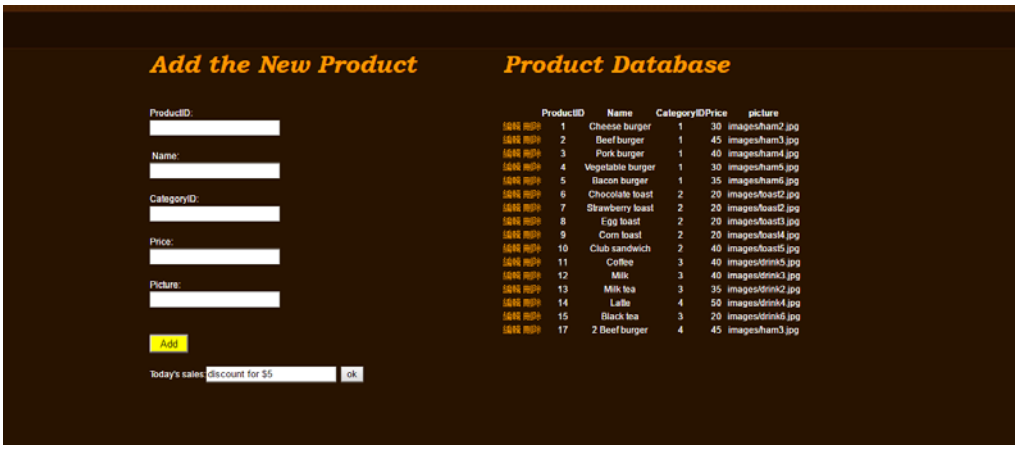


Fig.29 promotion 1

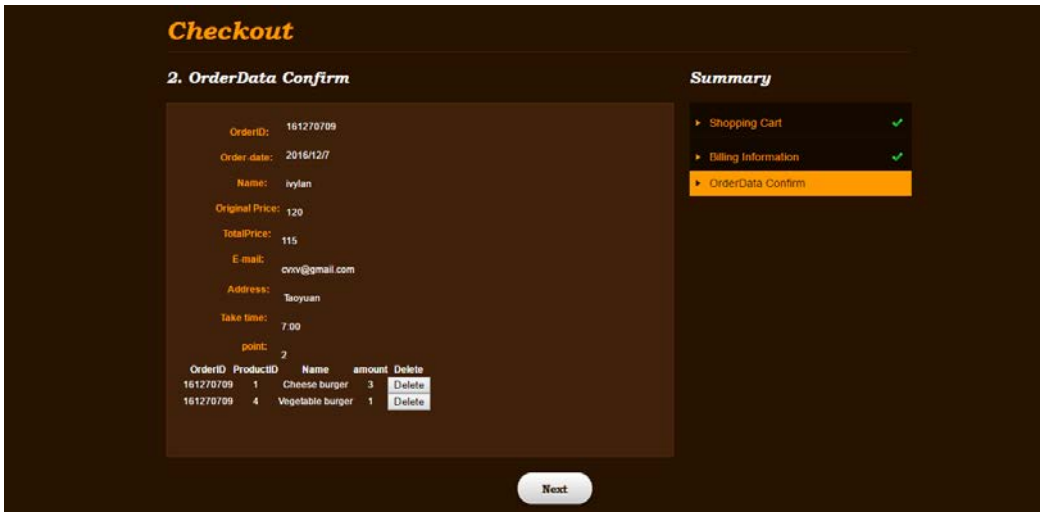


Fig.30 promotion 1 result

Fig 29 shows the manager set the today's sales as discount for $5. Fig30 shows that the original price is 120, but the total price customer has to pay are 115.

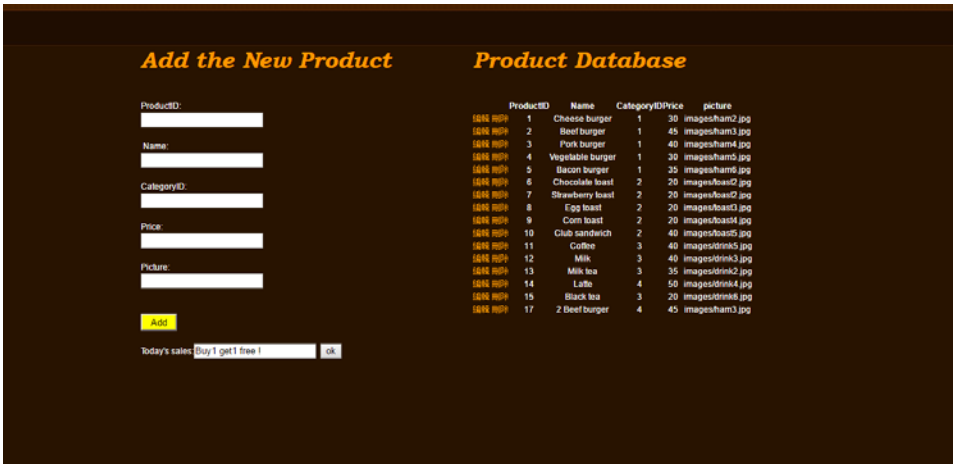


Fig.31 promotion 2

Fig.32 promotion 2 result

The manager set the second sales as Buy 1 get 1 free, shows as fig31. The original price is 60, but the customer only has to pay 30 dollars show in total price.

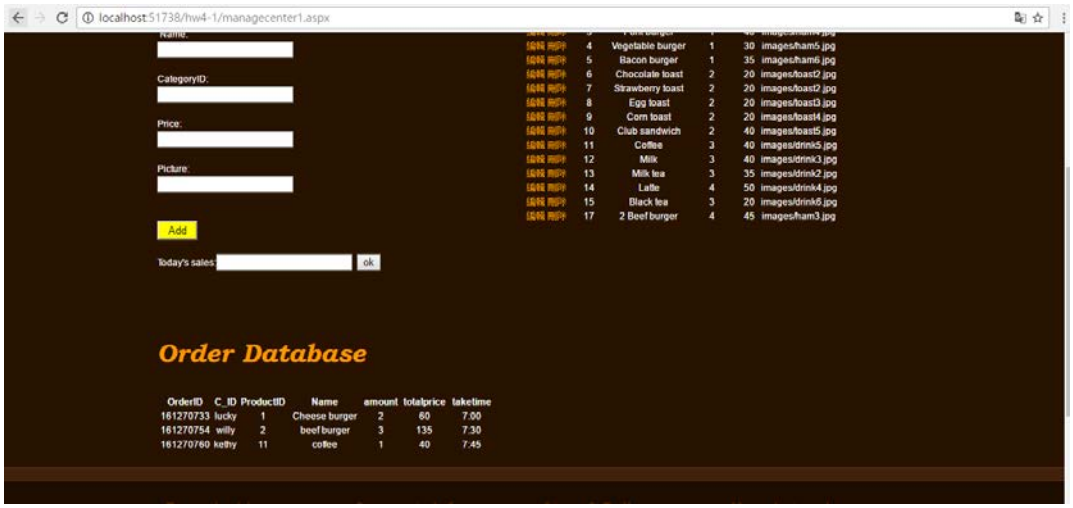


Fig.33 order database

Fig 33 shows the manager can see the order today. It contains OrderID, customerID, productID, product name, amount, total price and take time.

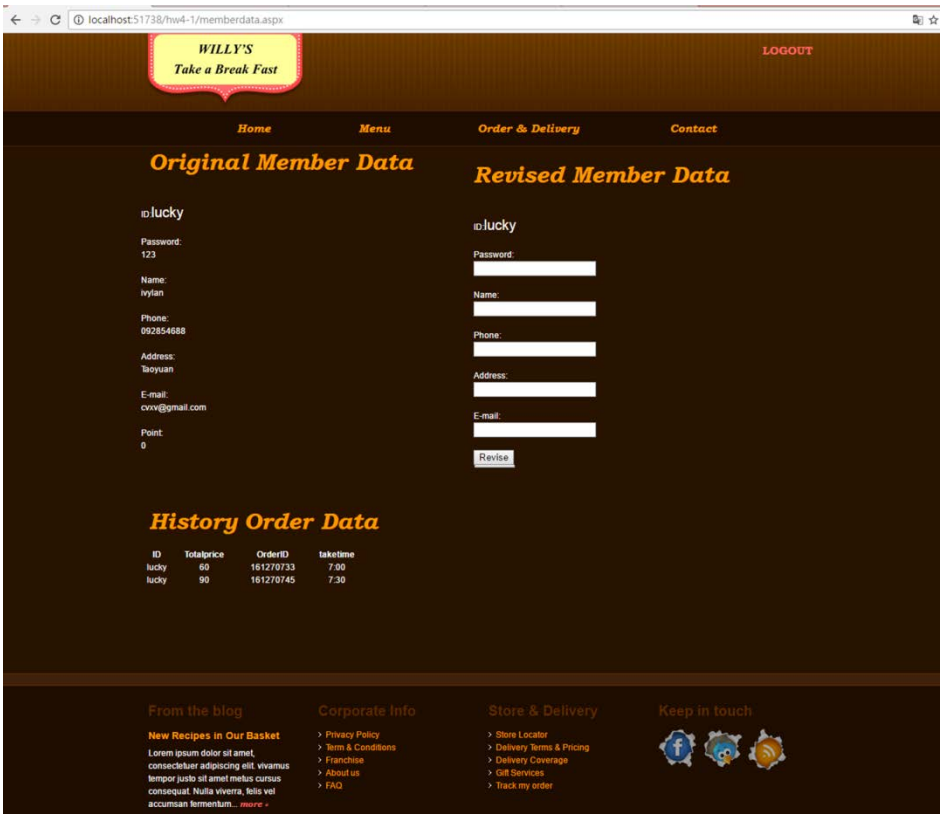


Fig.34 order database

Fig 34 shows that customer can see their history order data.

■ Conclusion

As the APP and website are spread widely, more and more people use these ways to enjoy the service. According to the reasons, we implement the website of the breakfast shop, hoping the process can bring more benefit. After simulated the To-Be model, the total process time and total cost are all decreased, and the value added is increased. So, use the technology into the service has lot of benefit, and we can use the comment that customers write on the web to improve our service.