Pizza Management System

Start New Order

Transaction History
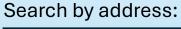
PMS24

Transaction History

Search by phone number:

Search by last name:

Search by address:

Name	Phone	Address	Order Type	Total	Payment	Date	Order ID
Adam Ant	111-222-3333	*Null*	Carryout	15.75	Cash	2024-12-25	10027
Larry David	111-222-3333	123 Main St.	Delivery	35.50	Card	2024-12-15	10014
Josh Gregory	912-286-6548	*Null*	Carryout	13.50	Card	2024-12-1	10001
Liz Lemon	555-666-7777	*Null*	Carryout	17.00	Check	2025-1-3	10035
The Rock	555-888-9999	1 Rodeo Dr.	Delivery	88.00	Cash	2025-1-5	10043
Little Wayne	777-888-9999	12 Road Ave. Apt. 12B	Delivery	43.75	Check	2024-12-7	10009
Mark Zuckerberg	000-123-4567	*Null*	Carryout	5.00	Card	2025-1-1	10023

< *Navigate between pages using arrows to left and right.* >

CANCEL TO HOME

Transaction History

Search by phone number:

000-123-4567 🔍

Search by last name:

🔍

Search by address:

🔍

Name	Phone	Address	Order Type	Total	Payment	Date	Order ID
Mark Zuckerberg	000-123-4567	*Null*	Carryout	5.00	Card	2025-1-1	10023

<	>	*Navigate between pages using arrows to left and right.*	>

CANCEL TO HOME

Customer Search

Customer Phone Number:

555 - 555 - 5554

CANCEL TO HOME

Customer Info

First Name:

Last Name:

Order Type:

Carry-Out   Delivery

Address details (required for delivery orders)

Street Address	Apt/Unit	City	State	Zip	Landmark *(100 chars)*

< Enter new phone

CANCEL TO HOME

Start new order >

Customer Info

Example:

Record not found! Enter information:

First Name:

Last Name:

Order Type:

☐ Carry-Out   ☐ Delivery

Address details (required for delivery orders)

Street Address	Apt/Unit	City	State	Zip	Landmark *(100 chars)*

< Enter new phone	CANCEL TO HOME	Start new order >

Customer Info

Example:

Record found! Verify & change incorrect information:

First Name: **John**

Last Name: **Smith**

Order Type:

☐ Carry-Out   ☐ Delivery

Address details (required for delivery orders)

Street Address	Apt/Unit	City	State	Zip	Landmark *(100 chars)*
123 Main St.	*1A*	*Townsville*	*GA*	*12345*	*Building 1, first floor, apt A*

< Enter new phone   CANCEL TO HOME   Start new order >

Item Select

?

Select to add:

| Pizza 🍕 | Beverage 🧴 |

Add a Pizza

Size:
- ☐ XL
- ☐ LG
- ☐ SM

Size:
- ☐ Thin
- ☐ Hand
- ☐ Pan

Sauce:
- ☐ Trad Red
- ☐ Buffalo
- ☐ BBQ

Extra Cheese:
- ☐ Yes
- ☐ No

Special Instructions (100 chars):

[   ]

Meat Ingredients	Extra	Whole	Left	Right
Pepperoni	☐	☐	☐	☐
Sausage	☐	☐	☐	☐
Grilled Chicken	☐	☐	☐	☐
Ham	☐	☐	☐	☐
Bacon	☐	☐	☐	☐
Anchovy	☐	☐	☐	☐

Other Ingredients	Extra	Whole	Left	Right
Mushrooms	☐	☐	☐	☐
Tomatoes	☐	☐	☐	☐
Olives	☐	☐	☐	☐
Onions	☐	☐	☐	☐
Banana Peppers	☐	☐	☐	☐
Jalapeños	☐	☐	☐	☐
Pineapple	☐	☐	☐	☐

[< Cancel & select new item]　　　[CANCEL TO HOME]　　　[Add & select next item >]

Add Beverages

Cola:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

Diet Cola:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

Lemon-Lime:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

Ginger Ale:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

Orange:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

Grape:

◀ 0 ▶ 20 oz bottle

◀ 0 ▶ 2-litre bottle

< Cancel & select new item

CANCEL TO HOME

Add & select next item >

Current Order & Totals

Cost	Current Items in Order	Delete
$		
<	*Click the left or right arrow to view items if the order doesn't fit one table.*	>

Order Total:

$ [   ] subtotal

$ [   ] delivery fee

$ [   ] tax

$ [   ] TOTAL

PROCESS PAYMENT NOW

< Select more items to add

CANCEL TO HOME

Submit & pay on delivery >

Current Order & Totals

Example:

Cost	Current Items in Order	Delete
3.00	Bevg: 2L, RootBeer	**X**
10.00	Pizza, SM, Hand, Buffalo, [GrlChkn, Whole][Onion, Whole]	**X**
25.25	Pizza, LG, Thin, TradRed, ExtraChs, [Pepperoni, Extra, Whole][Mushrooms, L-half]	**X**
<	*Click the left or right arrow to view items if the order doesn't fit one table.*	**>**

Order Total:

$ 31.25 subtotal

$ 2.75 delivery fee

$ 2.50 tax

$ 36.50 TOTAL

PROCESS PAYMENT NOW

< Select more items to add

CANCEL TO HOME

Submit & pay on delivery >

Process Cash Payment

?

Payment Details

$ [   ] ORDER TOTAL

$ [   ] Amount Given

$ [   ] Change Owed

Print Receipts

< Go back to totals   CANCEL TO HOME   Submit & return home

?

Payment Details

$ [   ] Check Amount

[   ] Check Number

Print Receipts

< Go back to totals   CANCEL TO HOME   Submit & return home

Process Card Payment

Payment Details

				Number

mm	*dd*	*yyyy*	Expiration

	CVC

Attempt Payment

< Go back to totals

CANCEL TO HOME

Submit & return home

Process Card Payment

Example:

Payment Details

| 1234 | 1234 | 1234 | 1234 | Number |

| 11 | 11 | 2222 | Expiration |

| 333 | CVC |

Attempt Payment

⚠️ Payment failed. Verify details and try again, change payment method, or edit order.

< Go back to totals

CANCEL TO HOME

Submit & return home

Process Card Payment

Example:

Payment Details

| 1234 | 1234 | 1234 | 1234 | Number |

| 11 | 11 | 2222 | Expiration |

| 333 | CVC |

Attempt Payment

✅ Payment success. Printing receipts...

| < Go back to totals | CANCEL TO HOME | Submit & return home |

Help Dialogues (cont.):

'Home' Help: ✖

Employees:
-Click 'Start New Order' to search for a customer's record and begin entering customer order.
-Click 'Transaction History' to view a history of transactions.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

'Transaction History' Help ✖

Employees:
-Use the table to locate customer transaction information.
-To search for a customer transaction by customer last name, enter a last name and click the magnifying glass.
-To search by phone number, enter a phone number.
-To search by address, enter an address (will only return results if the customer has placed a delivery order in the past.)
-Click "Cancel to Home" to exit and return to the home screen.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

Help Dialogues:

'Customer Search' Help ✖

Employees:
-Enter the customer's phone number and verify the number.
-Click the magnifying glass icon to search for customer data.
-Click 'Cancel Search' to clear field.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

'Customer Info' Help ✖

Employees:
-If no customer record was found, manually enter customer info.
-If a record was found, verify info & edit any incorrect details.
-Select the order type by clicking the box next to Carry-Out or Delivery.
-Click 'Start new order' to begin adding items to the order.
-Click 'Enter new phone' to return home to customer search screen.
-Click 'Cancel Order' to clear fields and return to phone number input.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

'Item Select' Help ✖

Employees:
-Click 'Pizza' to begin building a pizza.
-Click 'Beverage' to select beverages.
-Click 'Edit Customer Info' to return to customer info screen.
-Click 'View Current Order' to view items in order and subtotal.
-Click 'Cancel Order' to clear fields and return to phone number input.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

Help Dialogues (cont.):

'Add Pizza' Help: ✖

Employees:
-Select pizza base options: size, crust, sauce, extra cheese.
-Select ingredients, including extra servings and if the ingredient should cover the whole pizza, the left half, or right half.
-Enter any special instructions the customer may have, up to 100 chars.
-Verify selections and click 'Add & select next item' to add the pizza to the order and return to the Item Select screen.
-Click 'Cancel Pizza' to clear current selections and add a different item.
-Click 'Cancel Order' to clear all fields and return to phone number search.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

'Add Beverages' Help ✖

Employees:
-Select a beverage type by clicking the up arrow to the quantity desired. Click the down arrow to reduce the quantity.
-Verify selections and click 'Add Beverage' to add to order and continue.
-Click 'Cancel Beverage' to reset selections and return to item selection.
-Click 'Cancel Order' to clear all fields and return to phone number search.

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

Help Dialogues (cont.):

'Current Order & Totals' Help: ✖

Employees:
-Verify order total. Review ordered items if requested.
-Click the black 'X' next to an item to delete it from the order.
-To edit a pizza or beverage, delete it from the order then select 'Go back & add more' to redo the selections.
-Click the arrows at the bottom left and right of the table if the entire order doesn't fit on one table.
-Click 'Go back & add more' to return to Item Select screen and continue order.
-Select the desired payment method.
-Click 'Process Payment Now' to pay now.
-Click 'Submit & pay on delivery' to submit the order and print receipts.
-Click 'Cancel Order' to clear all fields and return to home (Customer Search).

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

'Process Payment' Help ✖

Employees:
-Enter the required fields.
-Cash: Enter the amount given by the customer, tend the amount of change displayed, and click 'Print Receipts'.
-Check: Enter the check details and click 'Print Receipts'.
-Card: Enter the card details (CVC usually on back of card) and click 'Attempt Payment'. If successful, receipts will print. If failed, verify card details or click 'Go back to totals' to edit the order or select a new payment method.
-Click 'Go back to totals' to view/edit order.
-Click 'Submit & return home' to complete order.
-Click 'Cancel Order' to clear all fields and return to home (Customer Search).

Managers:
Call the help-desk at XXX-XXX-XXXX for technical assistance.

DB Example:

```
--Return all values for all CUSTOMER records (rows) & CUSTOMERADDRESS records
SELECT * FROM CUSTOMER;
SELECT * FROM CUSTOMERADDRESS;
SELECT * FROM CUST_CARD;

--Return all values in CUSTOMER & CUSTOMERADDRESS tables via primary/foreign keys
SELECT * FROM CUSTOMER
```

100 %

Results | **Messages**

	CustPhone	CustFname	CustLname
1	444-444-4444	Willafourd	Fourntain the Fourth
2	555-555-5554	Larry	David
3	555-555-5555	Ice	Cube
4	912-286-6548	Josh	Gregory
5	912-614-2755	Hnnah	Gregory

	StreetAddress	City	US_State	ZipCode	CustPhone
1	123 Rodeo Dr.	Bevery Hills	CA	90210	555-555-5555
2	1308 Carswell Ave.	Waycross	GA	31501	912-614-2755
3	321 Seinfield Loop	Upper Manhattan	NY	12345	555-555-5554
4	607 Reed St.	Waycross	GA	31503	912-286-6548

	CardNumber	CardExpire	CardCVC	CustPhone
1	0123456789012345	2030-07-07	012	912-286-6548
2	1111222233334444	2029-12-25	555	555-555-5555

This screenshot shows a small demo DB with 3 tables: CUSTOMER, CUSTOMERADDRESS , and CUST_CARD.

CUSTOMERADDRESS and CUST_CARD are weak entities "owned" by CUSTOMER. They are separated due to rules regarding keys & data dependency.
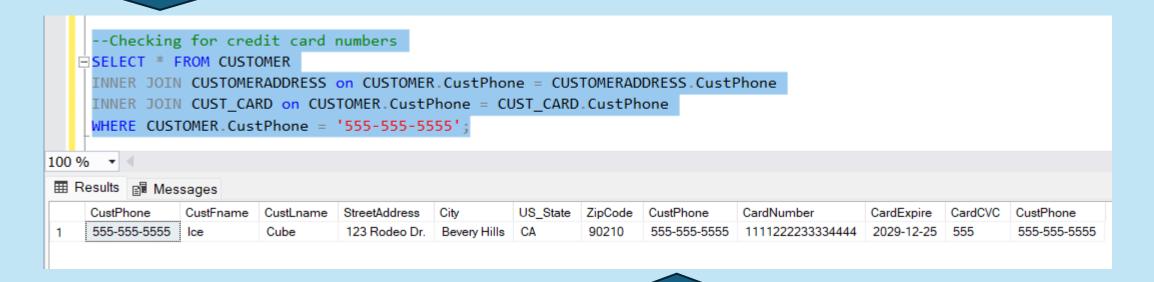
The tables are linked by values in the 1st column of the upper table (the primary key) & the last column of the lower tables (a foreign key).

This is the core of relational modeling. It optimizes table size, querying, data access & integrity, DB security, load balancing, performance, etc.

GUI & DB Query:

1: This returns all values in all columns of a table called CUSTOMER but only for rows where the value in the phone number column matches '555-555-5555'. The search then moves to the tables CUSTOMERADDRESS & CUST_CARD using SQL *'inner join'*.

2: Using .NET's SqlClient service, the value searched for (like a phone number) may be from any input, including user input from GUI text fields (or other data cast to a string). SqlClient can then use the string to build an SQL query, connect to a DB, and send the query.

```sql
--Checking for credit card numbers
SELECT * FROM CUSTOMER
INNER JOIN CUSTOMERADDRESS on CUSTOMER.CustPhone = CUSTOMERADDRESS.CustPhone
INNER JOIN CUST_CARD on CUSTOMER.CustPhone = CUST_CARD.CustPhone
WHERE CUSTOMER.CustPhone = '555-555-5555';
```

100 %

⊞ Results   📄 Messages

	CustPhone	CustFname	CustLname	StreetAddress	City	US_State	ZipCode	CustPhone	CardNumber	CardExpire	CardCVC	CustPhone
1	555-555-5555	Ice	Cube	123 Rodeo Dr.	Bevery Hills	CA	90210	555-555-5555	1111222233334444	2029-12-25	555	555-555-5555

3: The results are returned as a single row. An SqlReader object can be used to read the results and store it in a string variable. Repeated fields (like CustPhone) can be eliminated during the query or after. The string can then be split into parts and used to fill desired text fields in a GUI.