

SQL Review

All together now.

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill_Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

What are the foreign and primary keys?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

Let's try some SQL

Select fields

From table

Where conditions or join

Group by fields

Order by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Start with the
basic SQL
form.

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Select fields

From table

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Select **fields**

From table

What fields
do you
need?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Name and
Phone
number.

Select **fields**

From table

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Select **name, phone**

From table

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Select name, phone

From table

What tables do you need?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.99
103	Banana	12	\$0.50

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

All the
information
is from
Customer.

For each customer, print out their name and their phone number.

Select name, phone

From **table**

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each customer, print out their names and their phone number.

Select name, phone

From customer

Next Question!



Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Start with the
basic SQL
form.

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select fields

From table

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
	102	1
	101	4

For each orderID, print out the number of items in that Order.

Select fields

From table

Hmm... seems like subtotals.
We need group by.

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select fields

From table

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select **fields**

From table

Group by fields

What fields
do you
need?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select **fields**

From table

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select **fields**

From table

Group by fields

What does
"number of"
mean?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Count(*)!

Select **fields**

From table

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select **orderID**, **count(*)**

From table

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
	102	1
	101	4

For each orderID, print out the number of items in that Order.

Select orderID, count(*)

From table

Group by fields

What tables does the information come from?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.40
103	Banana	12	\$0.30

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the items in that Order.

This has the items of each bill. We need to count here.

Select orderID, count(*)

From table

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select orderID, count(*)

From **Bill_Item**

Group by fields

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select orderID, count(*)

From Bill_Item

Group by **fields**

What should we group by?

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order. •

Select orderID, count(*)

From Bill_Item

Group by **fields**

Implies an order by group.

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select orderID, count(*)

From Bill_Item

Group by orderID

Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

For each orderID, print out the number of items in that Order.

Select orderID, count(*)

From Bill_Item

Group by orderID

New Question!



Customer

CustID	Name	Phone
45	James Gosling	905-234-4567
55	Alan Turing	905-345-5678

Order

OrderID	Date	CID
1	11/11/11	45
2	11/12/11	45
3	11/12/11	55

Inventory

Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item

OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

Print out all of the items on order 1, each with their price, order quantity and name.

Select fields

From table

Where join

And condition

New Question!

Customer			Order		
CustID	Name	Phone	OrderID	Date	CID
45	James Gosling	905-234-4567	1	11/11/11	45
55	Alan Turing	905-345-5678	2	11/12/11	45
			3	11/12/11	55

Inventory			
Barcode	Name	Quantity	Price
101	Orange	23	\$0.50
102	Apple	34	\$0.90
103	Banana	12	\$0.27

Bill Item		
OrID	BCode	Quant
1	101	4
1	102	2
1	103	3
2	101	5
3	102	1
3	101	4

What does this print on the screen?

Select Name, Quant, Price,
 (Quant*Price) as SubTotal
 From Bill_Item, Inventory
 Where Barcode=BCode
 And OrID=3