Relational Database Project

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CIS 421

Application Background Description

Our application is made to be a grocery store inventory management system. A store would use this to keep track of every item in the store, every supplier who supplies the items, and every order that is shipped to the store from the suppliers. In the real world, this could be used to keep track of expenses, projected profits, and tracking bad products for recalls.

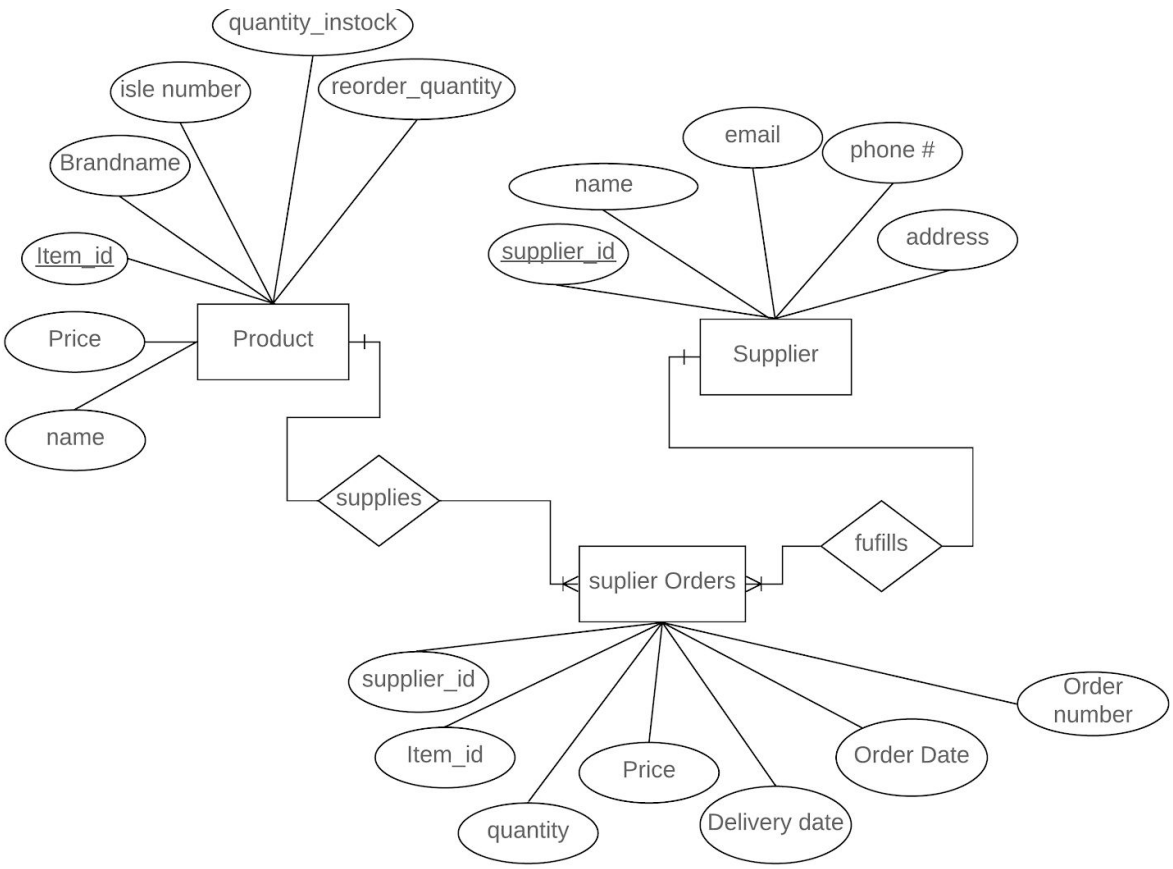
Enterprise Database Requirements (Informal)

As grocery stores deal with a number of suppliers, it is necessary to include a table for suppliers with information that will help contact them if there is an issue with an order, or to place another order. When we place an order, sometimes we want to go back and make changes, or just look over the order. Therefore we needed an orders table to list the quantity of items ordered, and from whom they ordered from. To keep track of all of the products that we buy, we also need a products table to identify these. The orders table will have a foreign key that references products, as well as a foreign key that references the supplier.

Team Member Responsibilities

Our team consists of three students. We split up the work as best we could to afford for our current schedules. All work was done together during meeting times, while Aouni came up with the project idea, drew up the relational schemas, did some of the coding, and also wrote some of the report. Omari created the entity relationship diagram, and did a good chunk of the project coding in C#. Edward wrote this report along with helping out with coding, mainly using the Microsoft SQL database connector.

Entity Relationship Diagram



Relational Schema

Products (id: integer unique,
name: varchar(100) ,
Price: integer,
brandName: varchar(100),
isle_Num: integer,
quantity_in_stock: integer,
Reorder_quantity: integer)

Supplier (id: integer unique,
name: varchar(50) ,
email_addr: varchar(50),
phone_number: varchar(11),
Address: varchar(50))

Orders (order_number: integer unique,
supplier_id: integer unique,
item_id: integer unique,
quantity: integer
Price: integer,
isle_Num: integer,
Delivery_date: date
Order_date: date)

Database

ABE-PC\LOCALDB#8...tory - dbo.Orders

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
245345	234258	4	43	140.0000	2019-01-02	2018-12-24
2345345	535367	2	30	300.0000	2019-04-03	2019-03-03
3423521	235245	3	38	220.0000	2019-02-04	2019-02-01
47576478	123123	5	600	12000.0000	2018-04-06	2018-04-01
72623373	837454	1	200	2000.0000	2019-05-05	2019-04-04
NULL	NULL	NULL	NULL	NULL	NULL	NULL

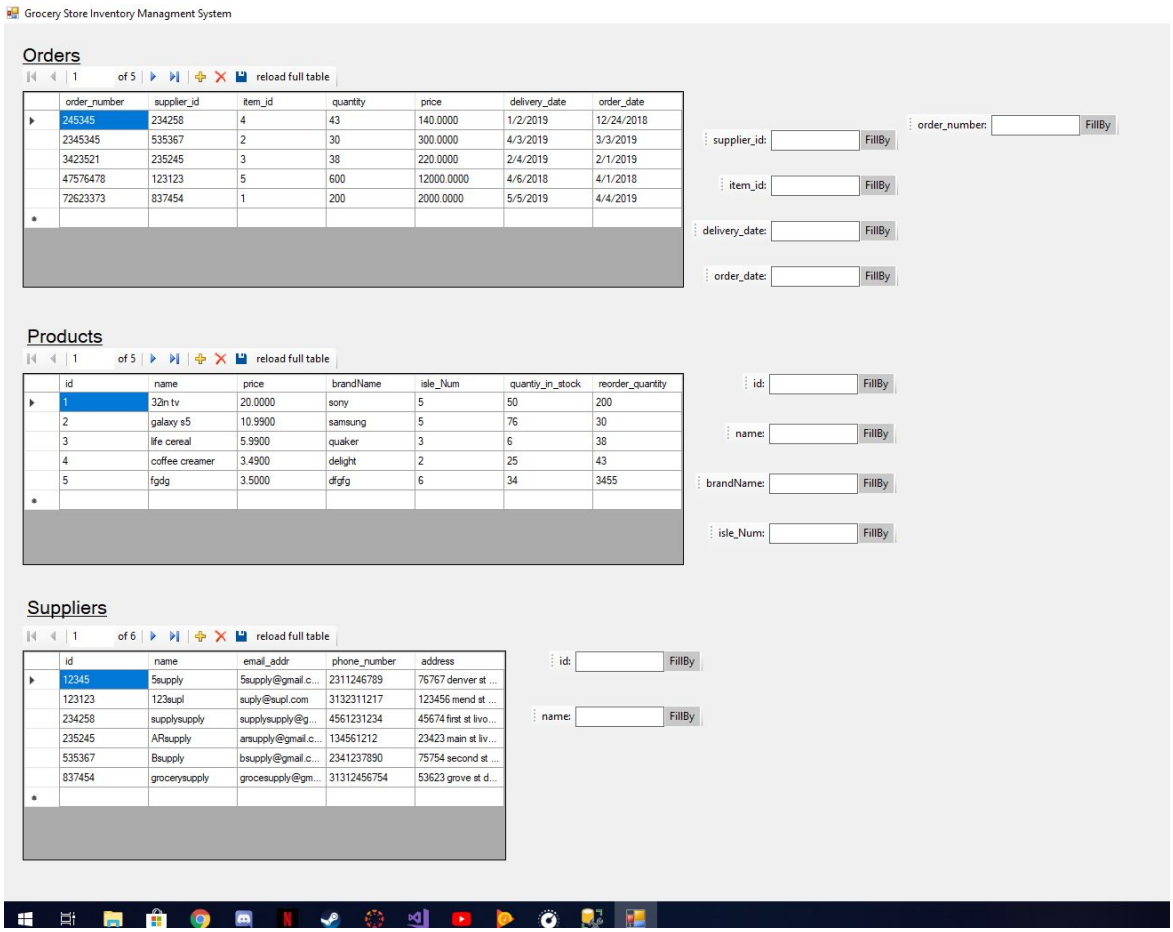
ABE-PC\LOCALDB#8...ry - dbo.Products | ABE-PC\LOCALDB#8...tory - dbo.Orders

id	name	price	brandName	isle_Num	quantiy_in_sto...	reorder_quantity
1	32in tv	20.0000	sony	5	50	200
2	galaxy s5	10.9900	samsung	5	76	30
3	life cereal	5.9900	quaker	3	6	38
4	coffee creamer	3.4900	delight	2	25	43
5	fgdg	3.5000	dfgfg	6	34	3455
NULL	NULL	NULL	NULL	NULL	NULL	NULL

ABE-PC\LOCALDB#82...ry - dbo.Supplier | ABE-PC\LOCALDB#8...ry - dbo.Products | ABE-

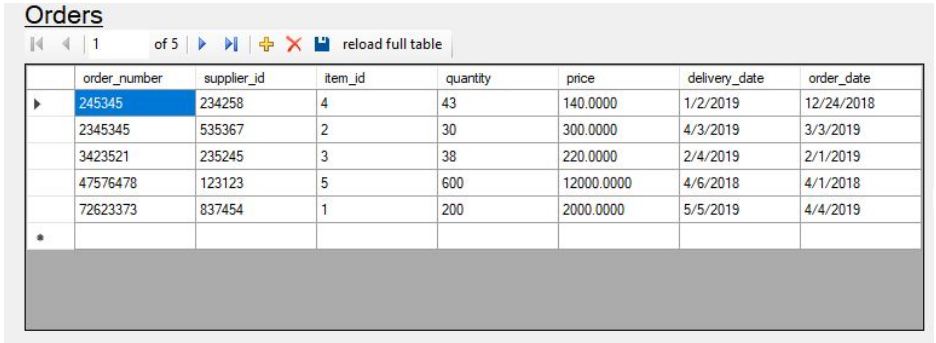
id	name	email_addr	phone_number	address
12345	5supply	5supply@gmail...	2311246789	76767 denver st...
123123	123supl	suply@supl.com	3132311217	123456 mend st...
234258	supplysupply	supplysupply@...	4561231234	45674 first st liv...
235245	ARsupply	arsupply@gmai...	134561212	23423 main st li...
535367	Bsupply	bsupply@gmail...	2341237890	75754 second st...
837454	grocerysupply	grocesupply@g...	31312456754	53623 grove st ...
NULL	NULL	NULL	NULL	NULL

Database interface



Sql Statements

1.



SELECT order_number, supplier_id, item_id, quantity, price, delivery_date, order_date FROM dbo.Orders
Where item_id = 5

Orders

1 of 1 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
47576478	123123	5	600	12000.0000	4/6/2018	4/1/2018

supplier_id: FillBy

item_id: 5 FillBy

delivery_date: FillBy

order_date: FillBy

2.

Orders

1 of 5 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
245345	234258	4	43	140.0000	1/2/2019	12/24/2018
2345345	535367	2	30	300.0000	4/3/2019	3/3/2019
3423521	235245	3	38	220.0000	2/4/2019	2/1/2019
47576478	123123	5	600	12000.0000	4/6/2018	4/1/2018
72623373	837454	1	200	2000.0000	5/5/2019	4/4/2019

SELECT order_number, supplier_id, item_id, quantity, price, delivery_date, order_date FROM dbo.Orders

Where order_number = 245345

Orders

1 of 1 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
245345	234258	4	43	140.0000	1/2/2019	12/24/2018

3.

Orders

1 of 5 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
245345	234258	4	43	140.0000	1/2/2019	12/24/2018
2345345	535367	2	30	300.0000	4/3/2019	3/3/2019
3423521	235245	3	38	220.0000	2/4/2019	2/1/2019
47576478	123123	5	600	12000.0000	4/6/2018	4/1/2018
72623373	837454	1	200	2000.0000	5/5/2019	4/4/2019

SELECT order_number, supplier_id, item_id, quantity, price, delivery_date, order_date FROM dbo.Orders
Where delivery_date = 5/5/19

Orders

1 of 1 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
72623373	837454	1	200	2000.0000	5/5/2019	4/4/2019

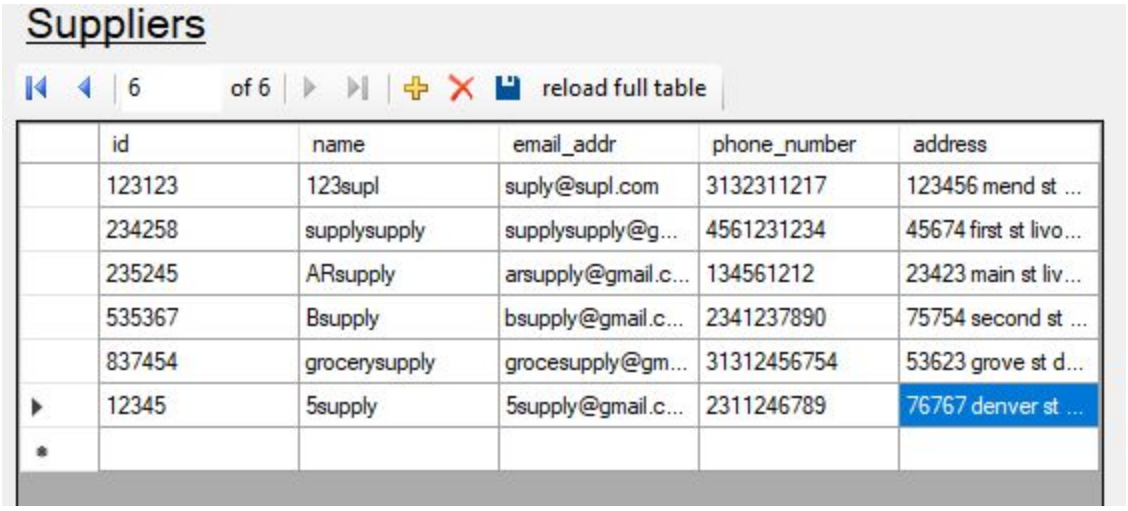
4.

Suppliers

1 of 5 reload full table

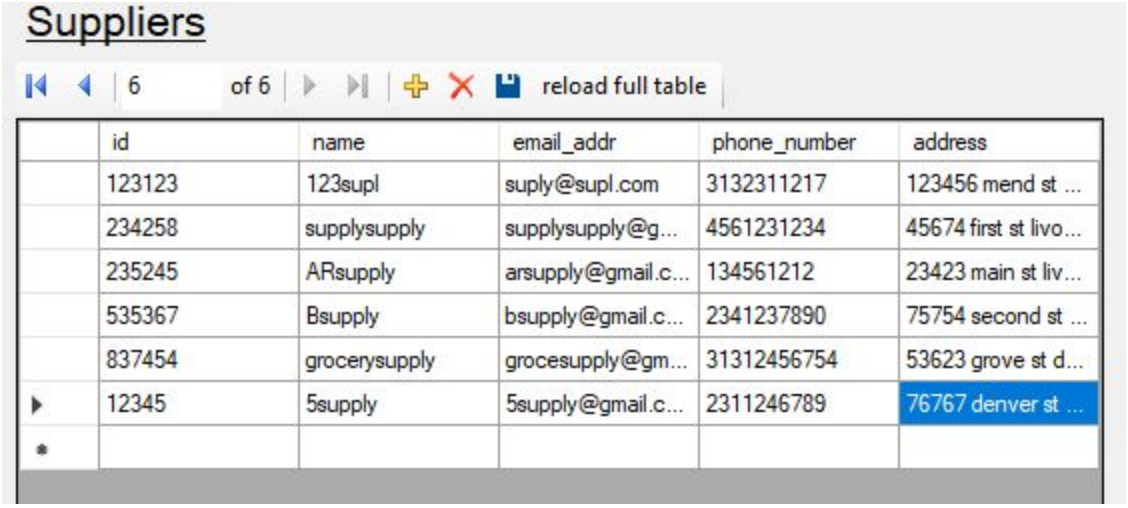
id	name	email_addr	phone_number	address
123123	123supl	suply@supl.com	3132311217	123456 mend st ...
234258	supplysupply	supplysupply@g...	4561231234	45674 first st livo...
235245	ARsupply	arsupply@gmail.c...	134561212	23423 main st liv...
535367	Bsupply	bsupply@gmail.c...	2341237890	75754 second st ...
837454	grocerysupply	grocesupply@gm...	31312456754	53623 grove st d...

Insert into Supplier(id, name, email_addr, phone_number, address)
Values (12345, “5supply” , “5supply@gmail.com”, “2311246789”, “76767 denver st dearborn MI”)



6.

Delete button



DELETE FROM suppliers WHERE id = 12345;

Suppliers

1 of 5 reload full table

id	name	email_addr	phone_number	address
123123	123supl	suply@supl.com	3132311217	123456 mend st ...
234258	supplysupply	supplysupply@g...	4561231234	45674 first st livo...
235245	ARsupply	arsupply@gmail.c...	134561212	23423 main st liv...
535367	Bsupply	bsupply@gmail.c...	2341237890	75754 second st ...
837454	grocerysupply	grocesupply@gm...	31312456754	53623 grove st d...

7.

Reload full table button

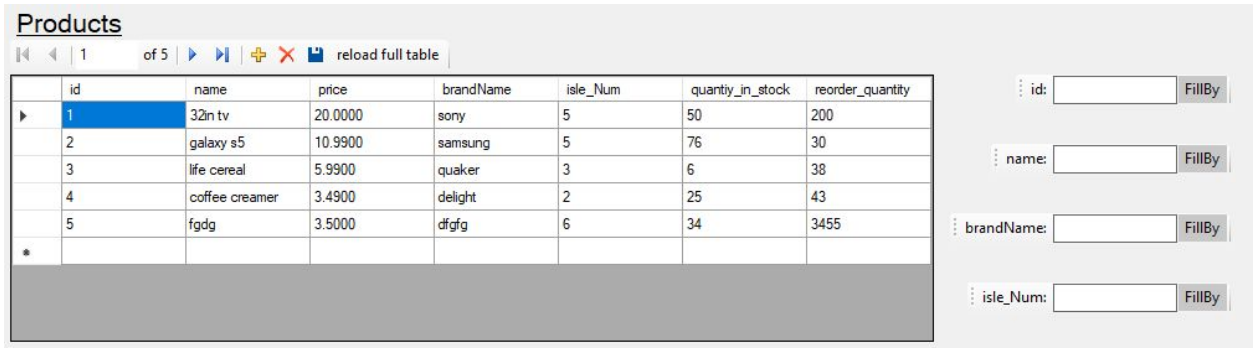
SELECT * FROM dbo.Orders

Orders

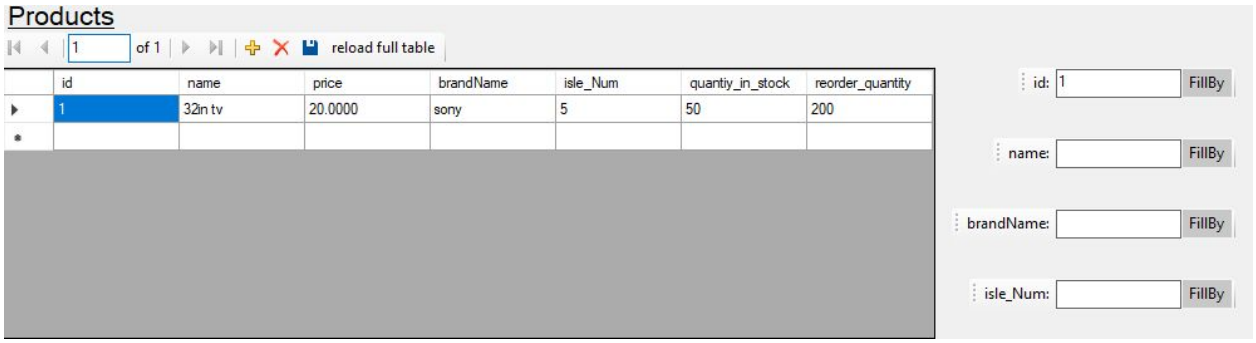
1 of 5 reload full table

order_number	supplier_id	item_id	quantity	price	delivery_date	order_date
245345	234258	4	43	140.0000	1/2/2019	12/24/2018
2345345	535367	2	30	300.0000	4/3/2019	3/3/2019
3423521	235245	3	38	220.0000	2/4/2019	2/1/2019
47576478	123123	5	600	12000.0000	4/6/2018	4/1/2018
72623373	837454	1	200	2000.0000	5/5/2019	4/4/2019

8.



Select * from dbo.products where id = 1



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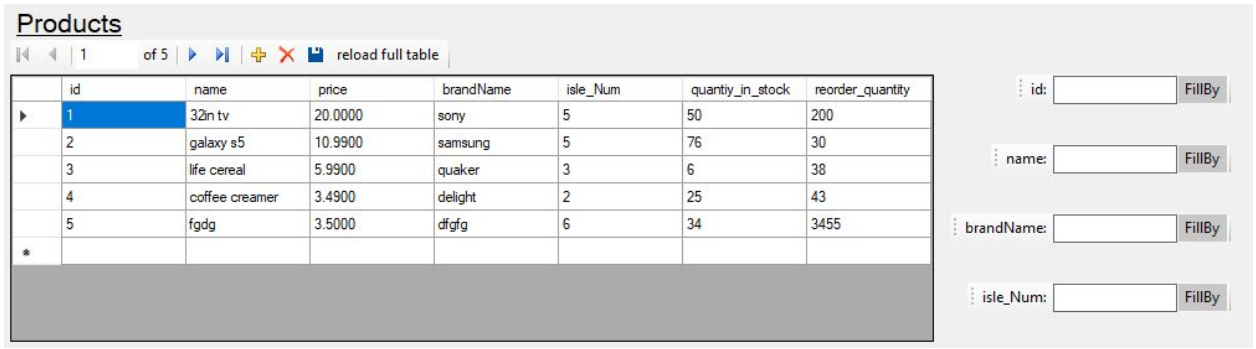
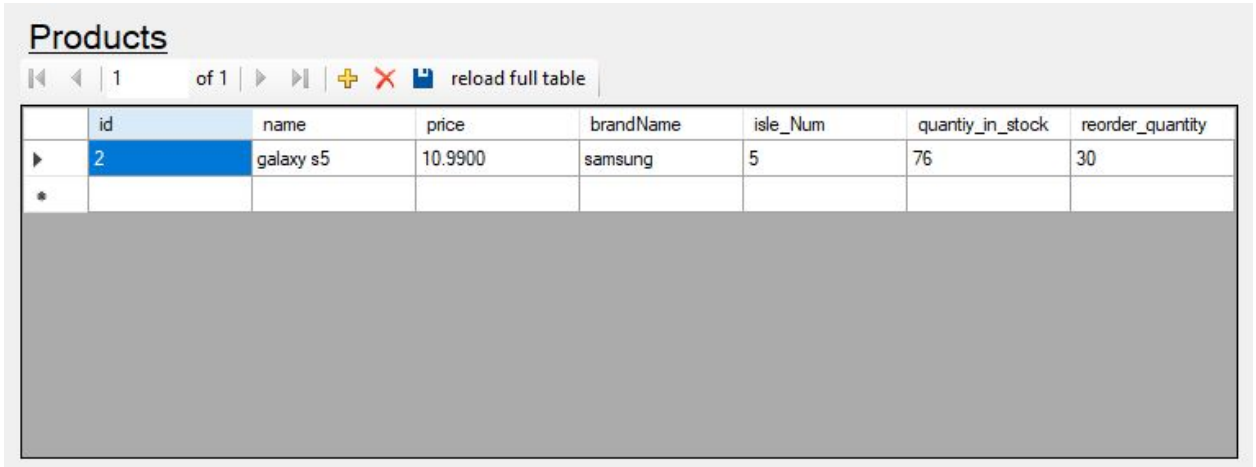
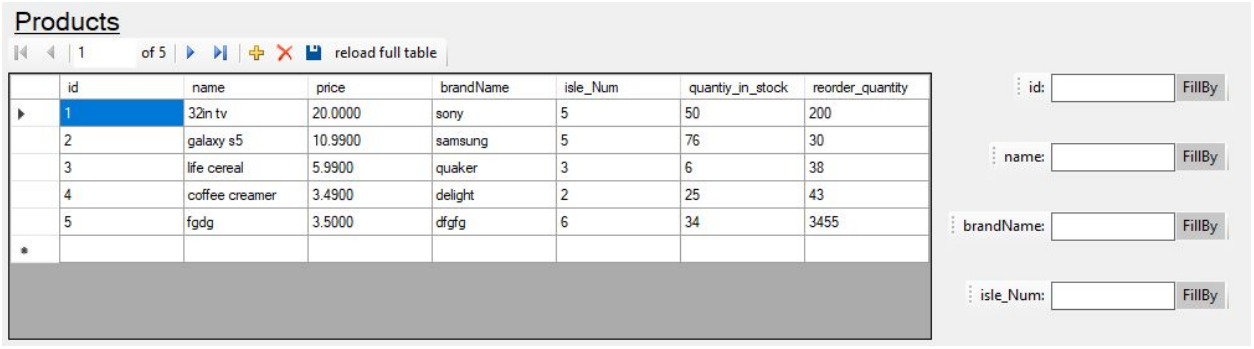


Select * from dbo.products where brandName = samsung



10.



Select * from dbo.products where name = 32in tv