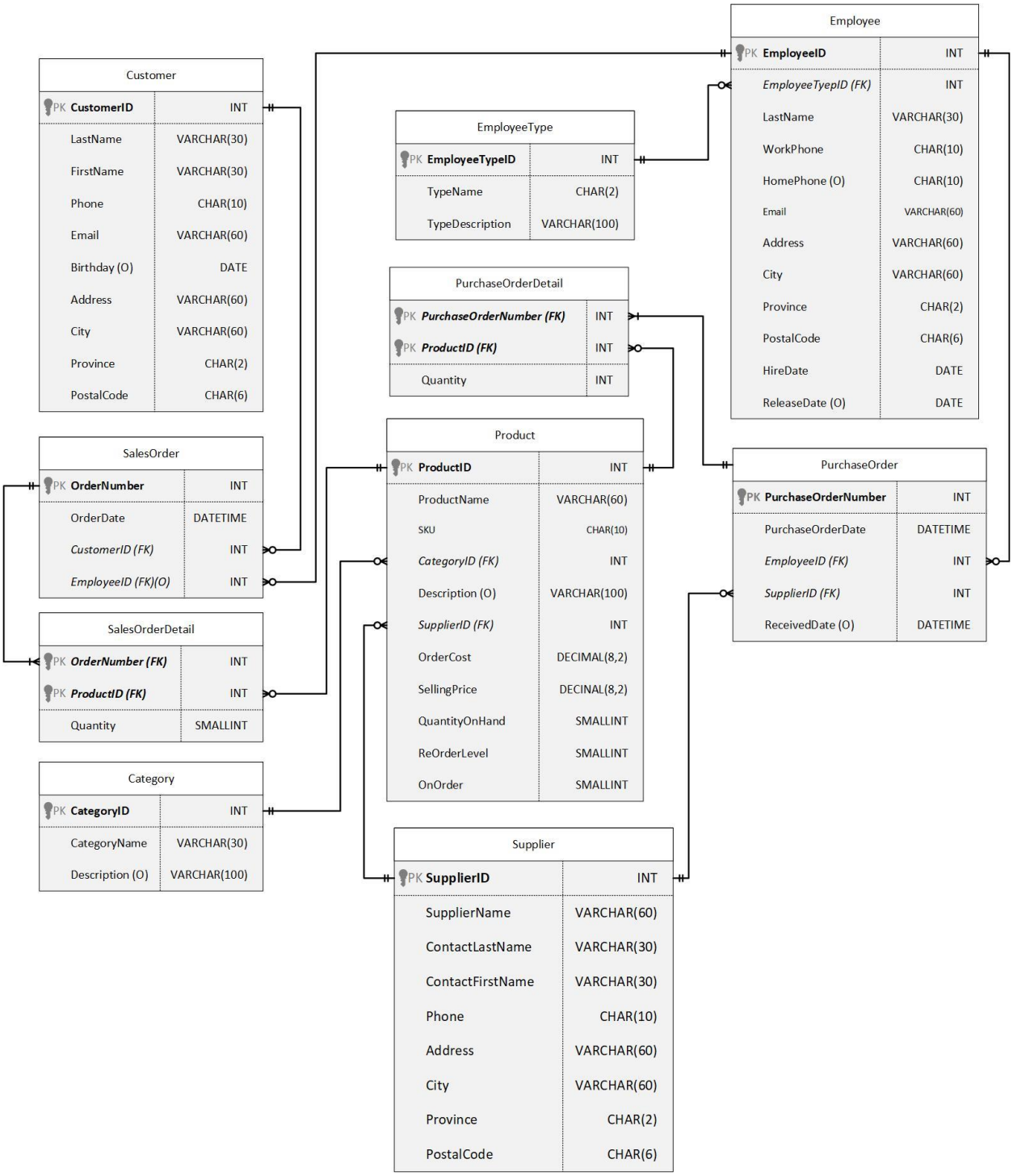
Quiz 3 Review – eStore Database

eStore ERD



Requirements

Create the following stored procedure as described:

- Do not add any functionality or validation not asked for
- Make sure procedures as maintainable and efficient as possible (i.e., avoid selecting the same data more than once from the database, clear logic, etc.).
- Ensure that transactions are only used where required.
- Raise a user-friendly error if:
    - Required parameters were not passed to the procedure - if any parameters are missing, you may raise a single error
    - A DML statement fails
    - Records to be updated or deleted do not exist

Questions

Use the supplied **eStore.sql** file to create the database for this review exercise. You may wish to add/remove/update the data in the tables to fully test your stored procedures.

1. Write a procedure **ProductsByCategory** that will accept a category name as a parameter. Display all columns of the ProductTable sorted by selling price descending.

2. Write a procedure **AddCategory** that will add a new category. The procedure will accept a category name as a parameter. Raise an error if the category name already exists in the database. If there are no errors, select the new CategoryID.

3. Write a procedure **UpdateProduct** that will accept all the columns of the Product table as parameters, except Description. Raise an error and do not perform the update on the following conditions:
    a. An invalid product ID
    b. An invalid category ID
    c. An invalid supplier ID

    Otherwise, perform the update.

4. Write a procedure **CustomerSalesByDate** that will accept a 4-digit year, and a 2-digit month as parameters. Display the full name of the customer and total of their sales orders placed.

5. Write a procedure **AddSalesOrderDetail** that will accept an order number, product ID, and quantity as parameters. Raise an error if the order number or product id do not exist. If there are no errors, update the quantity on hand for that product. (HINT: use a transaction.)

6. Write a procedure **ArchiveCustomers** that will move the Customer to a **CustomerArchive** table (this table will have the same columns as the Customer table but without the constraints). You can only archive customers if they no sales orders. Once archived, delete the customers from the Customer table. (HINT: use a transaction.)

Stored Procedure Results

1. `EXEC ProductsByCategory 'Fruit'`

Results | Messages

	ProductID	ProductName	SKU	CategoryID	Description	SupplierID	OrderCost	SellingPrice	QuantityOnHand	ReOrderLevel	OnOrder
1	353	Pineapple	F-PineA-01	10	Imported Orgainc Pineapple	214	4.75	6.25	50	60	20
2	336	Banana	F-Banan-01	10	Organic bananas	214	2.34	3.99	40	20	0
3	320	Mango	F-Mango-01	10	Imported Orgainc Mango	214	2.34	3.50	40	35	0
4	321	Apple	F-Apple-03	10	Large apples	200	1.45	2.60	130	40	0
5	369	Banana	F-Banan-02	10	Imported bananas	200	1.74	2.38	67	70	0
6	303	Apple	F-Apple-02	10	Medium apples	200	1.35	2.20	140	45	0
7	300	Apple	F-Apple-01	10	Small apples	200	1.25	2.10	150	55	0

2. `EXEC AddCategory 'School Supplies'`

Results | Messages

	New Category ID
1	21

3.
```
--Before Update
SELECT * FROM Product WHERE ProductID=332
```

Results | Messages

	ProductID	ProductName	SKU	CategoryID	Description	SupplierID	OrderCost	SellingPrice	QuantityOnHand	ReOrderLevel	OnOrder
1	332	Crown Royal	A-CrwnR-01	13	Crown Royal - IMPORTED	203	12.95	35.55	10	5	0

```
EXEC UpdateProduct 332,'Crown Royale','A-CrwnR-01',13,203,13.75,42.50,10,5,0
```

Messages

```
(1 row affected)
```

```
--After update
SELECT * FROM Product WHERE ProductID=332
```

Results | Messages

	ProductID	ProductName	SKU	CategoryID	Description	SupplierID	OrderCost	SellingPrice	QuantityOnHand	ReOrderLevel	OnOrder
1	332	Crown Royale	A-CrwnR-01	13	Crown Royal - IMPORTED	203	13.75	42.50	10	5	0

4. `EXEC CustomerSalesByDate 2021,09`

Results | Messages

	Customer	Total Sales Orders
1	Ely, Ally	94.90
2	Zornes, Cameron	21.94
3	Walls, Jenna	9.70
4	Luther, Mouth	12.90

5.
```
--Before insert
SELECT * FROM SalesOrderDetail WHERE OrderNumber=439
```

Results | Messages

	OrderNumber	ProductID	Quantity
1	439	332	1

```
SELECT * FROM Product WHERE ProductID=307
```

Results | Messages

	ProductID	ProductName	SKU	CategoryID	Description	SupplierID	OrderCost	SellingPrice	QuantityOnHand	ReOrderLevel	OnOrder
1	307	Smarties	S-Smrty-01	16	Smarties	207	1.65	2.40	75	50	0

```
EXEC AddSalesOrderDetail 439,307,1
```

Messages

```
(1 row affected)

(1 row affected)

Completion time: 2021-11-26T09:01:12.5920813-07:00
```

```
--After insert
SELECT * FROM SalesOrderDetail WHERE OrderNumber=439
```

Results Messages

	OrderNumber	ProductID	Quantity
1	439	307	1
2	439	332	1

```
SELECT * FROM Product WHERE ProductID=307
```

Results Messages

	ProductID	ProductName	SKU	CategoryID	Description	SupplierID	OrderCost	SellingPrice	QuantityOnHand	ReOrderLevel	OnOrder
1	307	Smarties	S-Smrty-01	16	Smarties	207	1.65	2.40	74	50	0

6.

```
-- create the ArchiveCustomer table
CREATE TABLE CustomerArchive
(
    CustomerID INT,
    LastName VARCHAR(30),
    FirstName VARCHAR(30),
    Phone CHAR(10),
    Email VARCHAR(60),
    Address VARCHAR(60),
    City VARCHAR(60),
    Province CHAR(2),
    PostalCode CHAR(6),
    Birthday DATE
)
GO
-- pre-procedure test
SELECT * FROM CustomerArchive
```

Results Messages

CustomerID	LastName	FirstName	Phone	Email	Address	City	Province	PostalCode	Birthday

```
SELECT * FROM Customer
```

Results Messages

	CustomerID	LastName	FirstName	Phone	Email	Address	City	Province	PostalCode	Birthday
1	100	Gandy	Trista	7899231209	trishag@outlook.com	Box 234	Gibbons	AB	T0A1N0	1969-08-28
2	101	Luther	Mouth	7802389876	mouthl@outlook.com	Box 27	Leduc	AB	T9E2W9	1969-09-09
3	102	Hazlett	Anthony	7802291095	anthonyh@outlook.com	13104 Sherbrooke Ave.	Edmonton	AB	T5L4G2	1969-10-17
4	103	Natkin	Ruby	7802382381	rubyn@outlook.com	920 Graham Wynd	Edmonton	AB	T5T6L5	1969-12-02
5	104	Miao	Wei	5879998888	weimiao@outlook.cn	Box 999	Bon Accord	AB	T0B1B0	1970-02-28
6	105	Langford	Cesar	5871234567	cesarl@outlook.com	12345 121 St.	Edmonton	AB	T5L4Y7	1970-06-06
7	106	Oleary	Nancy	7804971038	nancyol@outlook.com	825 Breckinridge Bay	Edmonton	AB	T5T6J8	1970-09-14
8	107	Cone	Kylie	7804971063	kyliec@outlook.com	14309 92A Ave.	Edmonton	AB	T5R5E3	NULL
9	108	Tompkins	Victoria	7802389001	victoriat@outlook.com	9120 Connors Rd.	Edmonton	AB	T6C4P9	NULL
10	109	Dregots	Willis	5879991209	willisd@outlook.com	13104 122A Ave.	Edmonton	AB	T5L2W6	1970-10-19
11	110	Bain	Paige	7804560007	paigeb@outlook.com	703 Burley Dr.	Edmonton	AB	T6R1Y2	1970-11-20
12	111	Arndt	Lorraine	7802388888	lorrainea@outlook.com	555 Lessard Dr. NW	Edmonton	AB	T6M1A9	1971-07-23
13	112	Mulhollen	Elizabeth	7802387777	elizabethm@outlook.com	#5 15710 Beaumaris Rd.	Edmonton	AB	T5X5E2	1971-10-13
14	113	Mosley	Arielle	7809993636	ariellem@outlook.com	8737 178 Ave.	Edmonton	AB	T5Z0B8	NULL
15	114	Ely	Ally	7809994646	allye@outlook.com	767 Hooke Rd.	Edmonton	AB	T5A5E8	1972-03-09
16	115	Hutchison	Amber	5872381207	amberh@outlook.com	10421 64 Ave.	Edmonton	AB	T6H1S8	1972-06-01
17	116	Hedge	Laurel	7802334576	laurelh@outlook.com	5729 118 Ave.	Edmonton	AB	T5W1E2	1972-07-20
18	117	Surkont	Samuel	7802386541	samuels@outlook.com	136 Fraser Way	Edmonton	AB	T5Y3M8	1972-07-24
19	118	Player	Dabney	7804552239	dabneyp@outlook.com	211 Dunvegan Rd.	Edmonton	AB	T5L5C6	1972-08-02
20	119	Donelow	Del	7802381077	deld@outlook.com	9327 104 Ave.	Edmonton	AB	T5H0H9	NULL
21	120	Ren	Tao	4038887777	taoren@outlook.cn	123-44Ave	Red Deer	AB	T9B4B5	NULL
22	121	Ayres	Lahoma	7802281987	lahomaa@outlook.com	420 Wilkin Way	Edmonton	AB	T6M2H8	1973-01-17
23	122	Strand	Flo	7802388761	flos@outlook.com	13548 Victoria Tr.	Edmonton	AB	T5A5C9	1973-01-23
24	123	Hufford	Craig	5871202098	craigh@outlook.com	260 Wakina Dr.	Edmonton	AB	T5T2X7	1973-03-02
25	124	Li	Ming Yue	4037778888	mingli@outlook.cn	4403 22 Ave	Red Deer	AB	T8B3C4	NULL
26	125	Walls	Jenna	2509992307	jennaw@outlook.com	729 4th Ave.	Prince Ge...	BC	V2L3H4	1973-05-22
27	126	Herbin	Colleen	7809992307	colleenh@outlook.com	12804 82 St.	Edmonton	AB	T5E2T2	1973-05-29
28	127	Sharon	Michelle	5575555555	michelles@outlook.com	Box 127	Beaumont	AB	T4X1L2	1973-06-06
29	128	Zornes	Cameron	7802382323	cameronz@outlook.com	5 Galaxy Pl.	St. Albert	AB	T8N1Z6	1973-10-26
30	129	Algere	Jennifer	5572381209	jennifera@outlook.com	230 Bancroft Cl.	Edmonton	AB	T5T6B5	1974-02-08
31	130	Willie	Olivia	7804512209	oliviaw@outlook.com	36 Hummingbird Rd.	Sherwoo...	AB	T8A0A2	1974-03-11
32	131	Hagerty	Lincoln	3062291905	lincolnh@outlook.com	Box 123	Meadow ...	SK	S9X1L2	1974-04-25

```
EXEC ArchiveCustomers
```

Messages

```
(7 rows affected)

(7 rows affected)
```

```
-- post-procedure test
SELECT * FROM CustomerArchive
```

Results Messages

	CustomerID	LastName	FirstName	Phone	Email	Address	City	Province	PostalCode	Birthday
1	111	Lorraine	Arndt	7802388888	lorrainea@outlook.com	555 Lessard Dr. NW	Edmonton	AB	T6M1A9	1971-07-23
2	112	Elizabeth	Mulhollen	7802387777	elizabethm@outlook.com	#5 15710 Beaumaris Rd.	Edmonton	AB	T5X5E2	1971-10-13
3	119	Del	Donelow	7802381077	deld@outlook.com	9327 104 Ave.	Edmonton	AB	T5H0H9	NULL
4	121	Lahoma	Ayres	7802281987	lahomaa@outlook.com	420 Wilkin Way	Edmonton	AB	T6M2H8	1973-01-17
5	126	Colleen	Herbin	7809992307	colleenh@outlook.com	12804 82 St.	Edmonton	AB	T5E2T2	1973-05-29
6	129	Jennifer	Algere	5572381209	jennifera@outlook.com	230 Bancroft Cl.	Edmonton	AB	T5T6B5	1974-02-08
7	130	Olivia	Willie	7804512209	oliviaw@outlook.com	36 Hummingbird Rd.	Sherwood Park	AB	T8A0A2	1974-03-11

```
SELECT * FROM Customer
```

Results Messages

	CustomerID	LastName	FirstName	Phone	Email	Address	City	Province	PostalCode	Birthday
1	100	Gandy	Trista	7899231209	trishag@outlook.com	Box 234	Gibbons	AB	T0A1N0	1969-08-28
2	101	Luther	Mouth	7802389876	mouthl@outlook.com	Box 27	Leduc	AB	T9E2W9	1969-09-09
3	102	Hazlett	Anthony	7802291095	anthonyh@outlook.com	13104 Sherbrooke Ave.	Edmonton	AB	T5L4G2	1969-10-17
4	103	Natkin	Ruby	7802382381	rubyn@outlook.com	920 Graham Wynd	Edmonton	AB	T5T6L5	1969-12-02
5	104	Miao	Wei	5879998888	weimiao@outlook.cn	Box 999	Bon Accord	AB	T0B1B0	1970-02-28
6	105	Langford	Cesar	5871234567	cesarl@outlook.com	12345 121 St.	Edmonton	AB	T5L4Y7	1970-06-06
7	106	Oleary	Nancy	7804971038	nancyol@outlook.com	825 Breckinridge Bay	Edmonton	AB	T5T6J8	1970-09-14
8	107	Cone	Kylie	7804971063	kyliec@outlook.com	14309 92A Ave.	Edmonton	AB	T5R5E3	NULL
9	108	Tompkins	Victoria	7802389001	victoriat@outlook.com	9120 Connors Rd.	Edmonton	AB	T6C4P9	NULL
10	109	Dregots	Willis	5879991209	willisd@outlook.com	13104 122A Ave.	Edmonton	AB	T5L2W6	1970-10-19
11	110	Bain	Paige	7804560007	paigeb@outlook.com	703 Burley Dr.	Edmonton	AB	T6R1Y2	1970-11-20
12	113	Mosley	Arielle	7809993636	ariellem@outlook.com	8737 178 Ave.	Edmonton	AB	T5Z0B8	NULL
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14	115	Hutchison	Amber	5872381207	amberh@outlook.com	10421 64 Ave.	Edmonton	AB	T6H1S8	1972-06-01
15	116	Hedge	Laurel	7802334576	laurelh@outlook.com	5729 118 Ave.	Edmonton	AB	T5W1E2	1972-07-20
16	117	Surkont	Samuel	7802386541	samuels@outlook.com	136 Fraser Way	Edmonton	AB	T5Y3M8	1972-07-24
17	118	Player	Dabney	7804552239	dabneyp@outlook.com	211 Dunvegan Rd.	Edmonton	AB	T5L5C6	1972-08-02
18	120	Ren	Tao	4038887777	taoren@outlook.cn	123-44Ave	Red Deer	AB	T9B4B5	NULL
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20	123	Hufford	Craig	5871202098	craigh@outlook.com	260 Wakina Dr.	Edmonton	AB	T5T2X7	1973-03-02
21	124	Li	Ming Yue	4037778888	mingli@outlook.cn	4403 22 Ave	Red Deer	AB	T8B3C4	NULL
22	125	Walls	Jenna	2509992307	jennaw@outlook.com	729 4th Ave.	Prince George	BC	V2L3H4	1973-05-22
23	127	Sharon	Michelle	5575555555	michelles@outlook.com	Box 127	Beaumont	AB	T4X1L2	1973-06-06
24	128	Zornes	Cameron	7802382323	cameronz@outlook.com	5 Galaxy Pl.	St. Albert	AB	T8N1Z6	1973-10-26
25	131	Hagerty	Lincoln	3062291905	lincolnh@outlook.com	Box 123	Meadow Lake	SK	S9X1L2	1974-04-25