ISDS 555 - Team Project Part One The Fullerton Café

Team 4:

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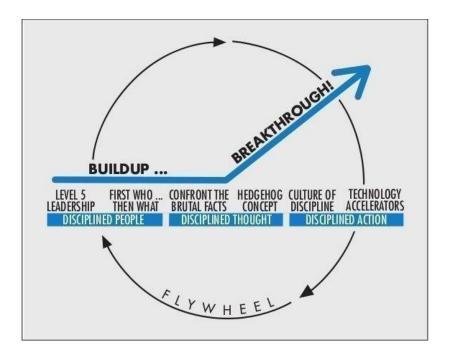
ISDS 555 Project 1

II. Introduction

The Fullerton Café located in downtown Fullerton offers patrons coffee, tea, a full service bakery, and sandwiches, soups, and salads. The café which I inherited from my grandfather was a local hotspot for many years. However, business has been declining over the last five years. My goal is to define a new business strategy to turn this business around. There is a lot of competitive pressure from the national coffee chain franchises. My goal would be to develop a competitive advantage for the Fullerton Café which would enable it to compete effectively and grow business in a very competitive environment.

III. Business Strategy

As The Fullerton Café is located in the heart of downtown Fullerton with a lot of businesses around it including a major university within walking distance, it needs to connect to businesses around it to generate revenue through promotions and online ordering. It also needs to provide loyalty program and mobile payment options for consumers. We can leverage the flywheel effect introduced by Jim Collins and adopted by Amazon and Starbucks within their business strategy. The flywheel effect is all about building the momentum by focusing on key areas which would in fact feed each other to provide a continuous cycle of improvement and help eventually provide a breakthrough for business. Please see the illustration that follows:



Our flywheel strategy will focus on two key areas:

- Experience
- Product

Within Experience we will focus on these four areas:

- Rewards/Loyalty Program
- Mobile Payments
- Promotions
- Online Ordering

Consumer purchasing behavior will affect business purchasing behavior and vice versa and build the momentum to support the flywheel strategy. Please see the illustration that follows:

Consumers



Businesses

We will also use geo-fencing where we would provide tips and discounts to the customers based on their proximity within the store. We will leverage partnerships with online food delivery services like Uber Eats and GrubHub as well to help grow business with the consumers who are too busy to visit the store or are traveling and do not have easy access to transportation.

As for the product, we will have blogs and articles about our key products like coffee and sandwiches to promote our products. We will also upgrade store with new signage and student friendly design to entice our customers. Lastly, we will extend hours of our café to be open late at night to cater to the student community around our store while offering happy hours with discounts on coffee and/or snacks during that time.

IV. Business Plan for Fullerton Cafe

Strategic Objectives:

- 1) #1 Cafe of choice for Fullerton
- 2) Avg. Revenue per customer increases from \$10 to \$30 per month
- 3) Customer retention increases from 30% to 70% after 3 months

Financial Objectives:

- 1) Revenue Growth 50% Year 1, 30% Year 2, 30% Year 3
- 2) Cost Reduction 20%
- Cost Reduction dollars to be employed in Customer Loyalty through points and promotions

Return on IT Investment:

- 1) Benefits = \$5MUSD and IT Cost = \$150K.
- 2) Total Return on IT investment = 33 Times
- 3) Return on IT investment after 3 months = 26.7 times

Risks and Mitigation:

 Risk 1: Business Outlook: Software plan will not generate growth - Customer survey has been carried and the customer survey has called out that they need new modes of payment and loyalty

- 2) Risk 2: Technology Plan: Software costs will be too high and software will be obsolete:

 The software is purchased on PaaS and the payment is linked to consumption and
 business benefits. The software will be updated periodically by the provider.
- 3) Risk 3: Vendor Management: The vendor will not be able to deliver the work A local contractor is identified who will be long term working on a part time basis. He will be invested in the long term partnership. The local contractor will manage the outsourcing of work to other contractors. The local contractor will be offered a large daily discount and bonus if the cafe sales pick up.

Project details:

#	Area	Priority/Impact	Phase
1	Customer Loyalty and Marketing Program	Н	1
2	Online inventory management	Н	1
3	Online Payment (including apple pay/Paypal etc)	Н	1

Business impact:

#	Area	Revenue Upside	Time for revenue upside	
1	Customer Loyalty and Marketing Program	\$2M	3 Months	
2	Online inventory management	\$1 M	1 Year	
3	Online Payment (including apple pay/Paypal etc)	\$1.5M	1 Month	

Cost and Time

#	Area	IT and Resources Cost	Time to implement
1	Customer Loyalty and Marketing Program	\$60K	3 Months
2	Online inventory management	\$40K	2 Months
3	Online Payment (including apple pay/Paypal etc)	\$20K	3 Weeks

Risks of not taking up the project:

- 1) There has been a steady decline of customers year on year
- 2) Stockouts, inventory loss is eating into the margins
- 3) Rent and fixed costs are going up
- 4) Unless a radical action is taken to grow the business. It will go bust in next 2 years.

V. <u>User Requirement Document</u>

Functional Requirements:

1. Customer Loyalty

- 1.1. Keep a database of customer information including name, email address, and current membership level.
- 1.2. Allow for customer loyalty points to be assigned to customers based on repeat business.
- 1.3. Track customer loyalty points assigned to each customer.
- 1.4. Email electronic coupons to customers that can be exchanged in store or online.
- 1.5. Allow for more loyalty points to translate into a higher membership level, resulting in more rewards.

2. Online Payment

- 2.1. Allow for payment in store and on the store's website using standard payment methods (Cash, Check, Credit/Debit card).
- 2.2. Allow for payment via online methods (Paypal, Apple Pay, Google Wallet) for orders made both in the store and on the store's website.
- 2.3. Allow for orders online or through a mobile app to be available for pick-up in store.
- 2.4. Make it possible to refund payments.
- 2.5. Allow for customers to make partial payments and use multiple payment methods for a single order.

3. Inventory Management

- 3.1. Track inventory of ingredients by brand and item attributes (i.e. strong, mild, decaf, etc.)
- 3.2. Track lot number to trace batch and recalls.
- 3.3. Track inventory by location in store.

V. Statement of Work for The Fullerton Cafe

Background/Introduction:

The Fullerton Cafe is a coffee shop and full service bakery located in downtown Fullerton. Services include sale of coffee/tea as well as sandwiches, soups, salads, and baked goods. In an effort to stay competitive in the market the goal is to develop an IT system to allow for online payment methods as well as electronic inventory management, management of marketing programs, and management of the customer loyalty program.

Requirements:

The following tasks will be performed to meet the objectives listed above.

1. Customer Loyalty

- a. Keep a database of customer information including name, email address, and current membership level.
- b. Track loyalty points assigned to the customer based on repeat business.
- c. Allow for electronic coupons to be emailed to customers.
- d. More loyalty points translates to a higher membership level which results in more rewards.

2. Online Payment

- a. Allow for payment in store and on the store's website using standard payment methods (Cash, Check, Credit/Debit card).
- b. Allow for payment via online methods (Paypal, Apple Pay, Google Wallet) for orders made both in the store and on the store's website.
- c. Allow for orders online or through a mobile app to be available for pick-up in store.
- d. Make it possible to refund payments.
- e. Allow for customers to make partial payments and use multiple payment methods for a single order.

3. Inventory Management

- a. Track inventory of ingredients by brand and item attributes (i.e. strong, mild, decaf, etc.)
- b. Track lot number to trace batch and recalls.
- c. Track inventory by location in store.

Schedule

The schedule for task completion is as follows.

- 1. Customer Loyalty Program
 - a. Estimated resources cost of \$60,000.
 - b. Estimated implementation time of 3 months.
- 2. Online Payment
 - a. Estimated resources cost of \$20,000.
 - b. Estimated implementation time of 3 weeks.
- 3. Inventory Management
 - a. Estimated resources cost of \$40,000.
 - b. Estimated implementation time of 2 months.

A weekly report on the status of each task will be requested.

VI. Fullerton Café Entity Relationship Diagram

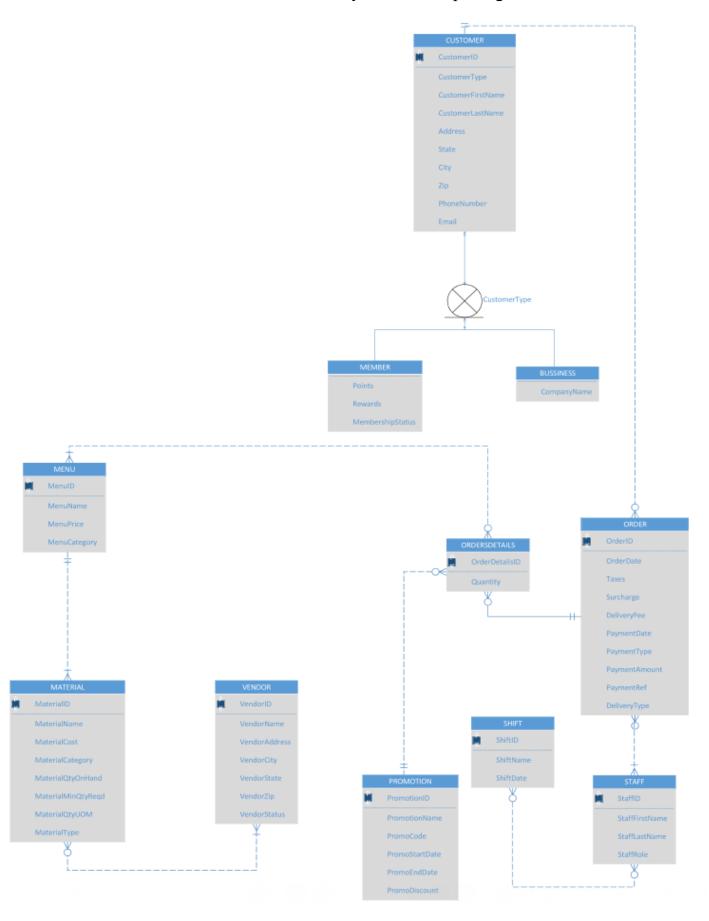


TABLE NAME	COLUMN NAME	DATA TYPE	DATA LENGTH	CONSTRAINT NAME	CONSTRAINT TYPE	ALLOW NULL
BUSINESS	CompanyName	char	100	NULL	NULL	YES
BUSINESS	CustomerID	int	NULL	CustomerBusinessFK	FOREIGN KEY	NO
BUSINESS	CustomerID	int	NULL	PK_BUSINESS	PRIMARY KEY	NO
CUSTOMER	Address	char	100	NULL NULL	NULL	YES
CUSTOMER	City	char	50	NULL	NULL	YES
CUSTOMER	CustomerFirstName	char	50	NULL	NULL	YES
CUSTOMER	CustomerID	int	NULL	PKCUSTOMERA4AE64B83B88DE0D	PRIMARY KEY	NO
CUSTOMER	CustomerLastName	char	50	NULL	NULL	YES
CUSTOMER	CustomerType	char	10	NULL	NULL	NO
CUSTOMER	Email	char	50	NULL	NULL	YES
CUSTOMER	PhoneNumber	char	20	NULL	NULL	YES
CUSTOMER	State	char	2	NULL	NULL	YES
CUSTOMER	Zip	char	10	NULL	NULL	YES
MATERIAL	MaterialCategory	char	30	NULL	NULL	YES
MATERIAL	MaterialCost	numeric	5,2	NULL	NULL	YES
MATERIAL	MaterialID	int	NULL	PKMaterialBEAEB27A2C99A08B	PRIMARY KEY	NO
MATERIAL	MaterialMinQtyReqd	numeric	3,0	NULL	NULL	YES
MATERIAL	MaterialQtyOnHand	numeric	3,0	NULL	NULL	YES
MATERIAL	MaterialQtyUOM	char	10	NULL	NULL	YES
MATERIAL	MaterialName	char	30	NULL	NULL	NO
MATERIAL	MaterialType	char	10	NULL	NULL	NO
MATERIAL	MenulD	int	NULL	MenuMaterialFK	FOREIGN KEY	NO
MEMBER	CustomerID	int	NULL	CustomerMemberFK	FOREIGN KEY	NO
MEMBER	CustomerID	int	NULL	PK_MEMBER	PRIMARY KEY	NO
MEMBER	MembershipStatus	char	10	NULL	NULL	YES
MEMBER	Points	float	NULL	NULL	NULL	YES
MEMBER	Rewards	float	NULL	NULL	NULL	YES
MENU	MenuCategroy	char	30	NULL	NULL	YES
MENU	MENUID	int	NULL	PKMENU8D2299AF54222036	PRIMARY KEY	NO
MENU	MenuName	char	30	NULL	NULL	NO
MENU	MenuPrice	numeric	5,2	NULL	NULL	YES
MENUORDERDETAIL INT	MenulD	int	NULL	MenuMenuOrderDetail IntFK	FOREIGN KEY	NO
MENUORDERDETAIL INT	MENUORDERDETAILID	int	NULL	PKMENUORDEA67DD64D3B8DB2B5	PRIMARY KEY	NO
MENUORDERDETAIL INT	OrderDetailID	int	NULL	OrderDetailMenuOrderDetail IntFK	FOREIGN KEY	NO
ORDER	CustomerID	int	NULL	CustomerOrderFK	FOREIGN KEY	NO
ORDER	DeliveryFee	numeric	18,0	NULL	NULL	YES
ORDER	DeliveryType	char	10	NULL	NULL	YES
ORDER	OrderDate	datetime	NULL	NULL	NULL	NO
ORDER	ORDERID	int	NULL	PK ORDER 491E4192B2D37B02	PRIMARY KEY	NO
ORDER	PaymentAmount	numeric	5,2	NULL	NULL	NO
ORDER	PaymentDate	datetime	NULL	NULL	NULL	NO
ORDER	PaymentRef	char	100	NULL	NULL	YES
ORDER	PaymentType	char .	10	NULL	NULL	NO
ORDER	Surcharge	numeric	5,2	NULL	NULL	YES
ORDER	Taxes	numeric	5,2	NULL	NULL	YES
ORDERDETAIL	ORDERDETAILID	int	NULL	PKORDERDET5999A0EDDBA6E770	PRIMARY KEY	NO

ORDERDETAIL	OrderID	int	NULL	OrderOrderDetailFK	FOREIGN KEY	NO
ORDERDETAIL	PromotionID	int	NULL	PromoOrderDetailFK	FOREIGN KEY	YES
ORDERDETAIL	Quantity	numeric	4,0	NULL	NULL	YES
PROMOTION	PromoCode	char	10	NULL	NULL	YES
PROMOTION	PromoDiscount	numeric	5,2	NULL	NULL	YES
PROMOTION	PromoEndDate	date	NULL	NULL	NULL	YES
PROMOTION	PromoStartDate	date	NULL	NULL	NULL	YES
PROMOTION	PROMOTIONID	int	NULL	PKPROMOTIOCCED4C2676044F32	PRIMARY KEY	NO
PROMOTION	PromotionName	char	50	NULL	NULL	YES
SHIFT	ShiftDate	datetime	NULL	NULL	NULL	YES
SHIFT	ShiftID	int	NULL	PK_SHIFT	PRIMARY KEY	NO
SHIFT	ShiftName	char	20	NULL	NULL	NO
STAFF	StaffFirstName	char	20	NULL	NULL	NO
STAFF	StaffID	int	NULL	PK_STAFF	PRIMARY KEY	NO
STAFF	StaffLastName	char	20	NULL	NULL	NO
STAFF	StaffRole	char	10	NULL	NULL	YES
STAFFORDER_INT	OrderID	int	NULL	OrderStaffFK	FOREIGN KEY	NO
STAFFORDER_INT	StaffID	int	NULL	StaffOrderFK	FOREIGN KEY	YES
STAFFORDER_INT	StaffOrderID	int	NULL	PK_STAFFORDER_INT	PRIMARY KEY	NO
STAFFSHIFT_INT	ShiftID	int	NULL	ShiftStaffShift_IntFK	FOREIGN KEY	YES
STAFFSHIFT_INT	StaffID	int	NULL	StaffStaffShift_IntFK	FOREIGN KEY	YES
STAFFSHIFT_INT	StaffShiftID	int	NULL	PK_STAFFSHIFT_INT	PRIMARY KEY	NO
VENDOR	VendorAddress	char	100	NULL	NULL	YES
VENDOR	VendorCity	char	50	NULL	NULL	YES
VENDOR	VENDORID	int	NULL	PKVENDOR905531B640D9A8F5	PRIMARY KEY	NO
VENDOR	VendorName	char	50	NULL	NULL	NO
VENDOR	VendorState	char	2	NULL	NULL	YES
VENDOR	VendorStatus	char	10	NULL	NULL	YES
VENDOR	VendorZip	char	10	NULL	NULL	YES
VENDORMATERIAL_INT	MaterialID	int	NULL	MaterialVendorMaterial_IntFK	FOREIGN KEY	NO
VENDORMATERIAL_INT	VendorID	int	NULL	VendorVendorMaterial_IntFK	FOREIGN KEY	NO
VENDORMATERIAL_INT	VendorMaterialID	int	NULL	PK_VENDORMATERIAL_INT	PRIMARY KEY	NO

Business Queries for Fullerton Café

1) Orders By Month By Year

```
SELECT CUSTOMER.CustomerType, Year([ORDER].[OrderDate]) AS OderYear,
Month([ORDER].[OrderDate]) AS OderMonth, [ORDER].DeliveryType,
    Count([ORDER].ORDERID) AS NoOfOrder, Sum([ORDER].PaymentAmount) AS TotalPayment
FROM CUSTOMER INNER JOIN [ORDER] ON CUSTOMER.CustomerID = [ORDER].CustomerID
GROUP BY CUSTOMER.CustomerType, Year([ORDER].[OrderDate]), Month([ORDER].[OrderDate]),
[ORDER].DeliveryType
ORDER BY Year([ORDER].[OrderDate]), Month([ORDER].[OrderDate]);
```

CustomerType	OderYear	OderMonth	DeliveryType	NoOfOrder	TotalPayment
Member	2017	5	delivery	2	50
Member	2018	2	inperson	3	45
Member	2018	8	inperson	3	85
Business	2018	9	delivery	3	60

2) Top Menu Items Sold

```
SELECT MENU.MenuCategroy, MENU.MenuName,
Sum(ORDERDETAIL.Quantity) AS TotalSold
FROM ((MENU INNER JOIN MENUORDERDETAIL_INT ON MENU.MENUID =
MENUORDERDETAIL_INT.MenuID)
INNER JOIN ORDERDETAIL ON MENUORDERDETAIL_INT.OrderDetailID =
ORDERDETAIL.ORDERDETAILID)
INNER JOIN [ORDER] ON ORDERDETAIL.OrderID = [ORDER].ORDERID
GROUP BY MENU.MenuCategroy, MENU.MenuName
ORDER BY Sum(ORDERDETAIL.Quantity) DESC;
```

MenuCategroy	MenuName	TotalSold
Beverages	Caffe Mocha	105
Bakery	Bagel Pack	51
Sandwiches	Tuna Salad Sandwich	40
Spread	Chive and Onion Cream Cheese	11
Beverages	Bottled Water	10
Beverages	Iced Tea	10
Beverages	Soda	10
Beverages	Caffe Latte	6
Sandwiches	Steak & Arugula Sandwich	3
Beverages	Rich Cold Cafe	1
Sandwiches	Caesar Salad with Chicken	1
Beverages	Iced Caramel Latte	1

3) Average Payment and No Of Orders By Staff

```
SELECT STAFF.StaffFirstName,
STAFF.StaffLastName,
Avg([ORDER].PaymentAmount) AS AvgOrderAmt,
Count([ORDER].ORDERID) AS NoOfOrder
FROM [ORDER] INNER JOIN
 (STAFF INNER JOIN STAFFORDER INT ON STAFF.StaffID = STAFFORDER INT.StaffID)
 ON [ORDER].ORDERID = STAFFORDER INT.OrderID
GROUP BY STAFF.StaffFirstName, STAFF.StaffLastName;
```

StaffFirstName	StaffLastName	AvgOrderAmt	NoOfOrder
kunal	badade	15	1
om	bhat	15	1
jack	rao	25	5
priyanka	rao	25	1
rohan	wani	25	1
tushar	yadav	17.5	2

4) Inventory Management System

```
SELECT MENU.MenuCategroy,
{\sf MENU.MenuName} ,
MENU.MenuPrice,
MATERIAL.MaterialName,
MATERIAL . MaterialCost,
MATERIAL . MaterialQtyOnHand,
MATERIAL.MaterialMinQtyReqd,
 [MaterialMinQtyReqd]-[MaterialQtyOnHand] AS Material_To_Order,
 MATERIAL.MaterialType,
 VENDOR. VendorName,
 VENDOR.VendorCity,
 VENDOR.VendorState
FROM (MENU INNER JOIN MATERIAL
 ON MENU.MENUID = MATERIAL.MenuID)
 INNER JOIN (VENDOR INNER JOIN
```

VENDORMATERIAL_INT ON VENDOR.VENDORID = VENDORMATERIAL_INT.VendorID) ON MATERIAL.MaterialID = VENDORMATERIAL INT.MaterialID;

	AL THUCCI TUTTO		IDOM IATEM			,,					
Menu Categroy	Menu Name	Menu Price		Material Cost		Material MinQtyRegd	Material_ To Order	Material Type	Vendor Name	Vendor City	Vendor State
	Steak & Arugula Sandwich	8.5	Bread Crumbs	70	• •		_		Millar smith	-	
Sandwiches	Steak & Arugula Sandwich		Bread Crumbs	70	15	20	5	ingrediant	Lily White	Brea	CA
Beverages	Rich Cold Cafe	3.5	milk	13	15	20	5	ingredient	sofia clark	riverside	CA
Sandwiches	Caesar Salad with Chicken	10.19	eggs	2	30	35	5	ingredient	Alex Brown	San diego	CA
Beverages	Bottled Water	1.5	water bottle	1	50	50	0	product	Zoey thomas	anaheim	CA
Sandwiches	Caesar Salad with Chicken	10.19	chiken	5	30	30	0	ingredient	sofia clark	riverside	CA

5) Top customers for Fullerton Café

```
SELECT CUSTOMER.CustomerFirstName,
CUSTOMER.CustomerLastName,
CUSTOMER.PhoneNumber,
CUSTOMER.Email,
Sum([ORDER].PaymentAmount) AS TotalAmount
FROM CUSTOMER INNER JOIN [ORDER]
ON CUSTOMER.CustomerID = [ORDER].CustomerID
GROUP BY CUSTOMER.CustomerFirstName,
CUSTOMER.CustomerLastName,
CUSTOMER.PhoneNumber,
CUSTOMER.Email
ORDER BY Sum([ORDER].PaymentAmount) DESC;
```

CustomerFirstName	CustomerLastName	PhoneNumber	Email	TotalAmount
Arindam	Roy	8846459775	roygeek@gmail.com	85
Sandy	Yota	7199478945	omakr@gmail.com	60
viraj	pargaonkar	8145945765	viraj91@gmail.com	50
Akshay	Bhor	8529637415	akshay.bhor@email.com	45

6) Top Promotions

```
SELECT PROMOTION.PromotionName,
PROMOTION.PromoStartDate,
PROMOTION.PromoEndDate,
PROMOTION.PromoDiscount, COUNT(DISTINCT [ORDERDETAIL].OrderID) AS NoOfOrders
FROM PROMOTION INNER JOIN ORDERDETAIL
ON ORDERDETAIL.PromotionID=PROMOTION.PromotionID
INNER JOIN [ORDER] ON ORDERDETAIL.OrderID=[ORDER].ORDERID
GROUP BY PROMOTION.PromotionName,
PROMOTION.PromoStartDate,
PROMOTION.PromoEndDate,
PROMOTION.PromoDiscount
ORDER BY PROMOTION.PromoDiscount DESC;
```

PromotionName	PromoStartDate	PromoEndDate	PromoDiscount	NoOfOrders
buy1get1	01-10-2018	01-11-2018	50	2
member	06-12-2018	06-12-2019	10	3
beverage combo	23-11-2018	23-01-2019	5	5

VII. Summary

Due to the declining business at the Fullerton Café, we have decided to adopt a new business strategy in an effort to improve sales. By focusing on a flywheel strategy that is similar to the one adopted by companies such as Starbucks and Amazon, we will strive for a cycle of continuous improvements and breakthroughs. To do this, we will focus on improving and developing four major areas: a customer loyalty program, a promotional/marketing program, online ordering, and mobile payments. It is our hope that by improving our online and mobile payment systems, as well as partnership with companies such as UberEats and GrubHub that we will be able to increase sales through convenience and ease of access. We also will adopt an IT system to improve inventory management by tracking stock of ingredients and to allow for quick and simple restocking. By implementing an IT system into our business strategy our goal is to adapt the Fullerton Café to a more technologically-advanced world and to once again be a competitor in the neighboring businesses.

Appendix

Links to Google Drive files:
SQL Script file:
https://drive.google.com/file/d/1mfX1YvFPDQtOFIGk8UrHMgOV-j42PmJc/view
ERD Visio Diagram:
https://drive.google.com/file/d/1rgHxGpVV4j8-11zTXFxc79GBiKqzU7vf/view
Data Dictionary:
https://drive.google.com/file/d/11Bo3P0DVzSHS-ibfZH-wrbtdlafE_8pL/view