## **Table of Contents**

Normalization	2
UNF	2
1NF	4
2NF	7
3NF	13
Entity Relationship Diagram	19

# Normalization

UNF

MemberID	Member	IC	Contact Number	Email	Address	BookID	ISBN	BookTitle	Author	Quantity	TotalSold	OrderQuantity	PublisherID	PublisherName	PublishedDate	POrderID	POrderDate
	Name																
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan Gemilang,	B00001	9780748736447	Essential Maths	Sean	46	2	2	P0001	Nelson	15 January	S00001	2 December
				gmail.com	85000 Segamat, Johor.				McArdle					Thornes Ltd	2019		2019
						B00002	9780520248618	Of sugar and snow: a history	Jeri Quinzio	46	1	1	P0002	Berkeley:	4 April 2019	S00002	6 January
								of ice cream making						University of			2020
														California			
														Press			
						B00003	9780471822066	Biology	Grover C.	46	4	4	P0003	Wiley	7 March 2020	S00003	18 April
									Stephens								2020
M00002	Moham	981018065207	+60182225655	mohammad	4, Jalan Sunsuria,	B00002	9780520248618	Of sugar and snow: a history	Jeri Quinzio	46	4	3	P0002	Berkeley:	15 January	S00002	6 January
	mad			@gmail.co	43900 Sepang,			of ice cream making							2019		2020
				m	Selangor.									California			
														Press			
						B00004	9780764112737	Accounting	Peter J. Eisen	43	2	2	P0004	Barron's	5 November	S00004	21 April
															2019		2020
M00003	Eden	000506145601	+60127705454	eden5454@		B00001	9780748736447	Essential Maths	Sean	46	2	2	P0001	Nelson	15 January	S00001	2 December
				yahoo.com	Ferringhi, 11100 Batu				McArdle					Thornes Ltd	2019		2019
					Ferringhi, Pulau												
					Pinang.	D00004	05005(4110505		D . I.D'	42			Pood	D 1	5 N 1	000004	21 4 11
						B00004	9780764112737	Accounting	Peter J. Eisen	43	2	3	P0004	Barron's	5 November 2019	S00004	21 April 2020
						B00005	9780520939356	The Unending Frontier: An	John F	46	1	4	P0002	Berkeley:	19 December	S00005	12 May 2020
						B00003	9780320939330	Environmental History of the	Richards	40	1	4	P0002		2019	500003	12 May 2020
								Early Modern World	Richards					California	2019		
								Larry World						Press			
														11000			
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan Gemilang,	B00004	9780764112737	Accounting	Peter J. Eisen	43	2		P00004	Barron's	5 November	S00004	21 April
14100001	Jack	770200143103	1001110220012	gmail.com	85000 Segamat, Johor.		7700704112737	Accounting	Tetel J. Lisen	13	2		1 00004	Darrons	2019	500004	2020
				ginan.com	osooo segamat, sonoi.										2017		2020
							9780323998628	Principles of Economics and	D.R. Kiran				P0005				
							7100323770020	Management for	D.R. Khan				1 0003				
								Manufacturing Engineering									
								Trianulaciuming Engineering									

CartQuantitty	CartAmount	OrderID	OrderDate	PaymentMethod	DeliveryStatus	Rating	Comment	Price	OrderQuantity	Amount
		O00001	1 May 2020	Debit Card	Complete	7	It is a good book!	30	2	60
				Debit Card		5		50	1	50
				Debit Card		4		23	4	92
CartTotalAmount									Total Amount	202
		O00002	3 July 2020	Credit Card	Complete	3		50	3	150
				Credit Card		9		35	2	70
CartTotalAmount									Total Amount	220
		O00003	12 August 2020	Online Banking	Incomplete			30	2	60
				Online Banking				35	5	175
				Online Banking				45	4	180
CartTotalAmount									Total Amount	415
3	105									
CartTotalAmount	105								Total Amount	
CartTotalAmount									Total Amount	

MemberID	MemberName	IC	ContactNumber	Email	Address	BookID	ISBN	BookTitle	Author	Quantity		TotalSold	Price	Amount	Total	Publisher	PublisherName	PublishedDate
											Quantity				Amount	ID		
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	30	60	202	P0001	Nelson	15 January 2019
				gmail.com	Gemilang, 85000												Thornes Ltd	
					Segamat, Johor.													
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan	B00002	9780520248618	Of sugar and snow: a history	Jeri Quinzio	46	1	1	50	50	202	P0002	Berkeley:	4 April 2019
				gmail.com	Gemilang, 85000			of ice cream making									University of	
					Segamat, Johor.												California	
7.500001					1.2.7.1						1.						Press	
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan	B00003	9780471822066	Biology	Grover C.	46	4	4	23	92	202	P0003	Wiley	7 March 2020
				gmail.com	Gemilang, 85000				Stephens									
7.50000			50400000000		Segamat, Johor.						1			1.50				1.7.7
M00002	Mohammad	981018065207	+60182225655	mohammad	4, Jalan Sunsuria,	B00002	9780520248618	Of sugar and snow: a history	Jeri Quinzio	46	3	4	50	150	220	P0002	Berkeley:	15 January 2019
				@gmail.co	43900 Sepang,			of ice cream making									University of	
				m	Selangor.												California	
1400002	M 1 1	001010075207	160102225655	1 1	4 1 1 6 .	D00004	07007(4112727	A	D. L.E.	42		2	25	70	220	D0004	Press	5 N 1 2010
M00002	Mohammad	981018065207	+60182225655	mohammad	4, Jalan Sunsuria,	B00004	9780764112737	Accounting	Peter J. Eisen	43	2	2	35	70	220	P0004	Barron's	5 November 2019
				@gmail.co	43900 Sepang, Selangor.													
M00002	E.J.,	000506145601	160127705454			D00001	0790749726447	Essential Moths	Casa Manalla	16	2	2	20	60	415	D0001	Nalsan	15 January 2010
M00003	Eden	000506145601	+60127705454	eden5454@	9, Jalan Batu Ferringhi, 11100	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	30	60	415	P0001	Nelson Thornes Ltd	15 January 2019
				yahoo.com	Batu Ferringhi,												Thornes Ltd	
					Pulau Pinang.													
M00003	Eden	000506145601	+60127705454	eden5454@	9, Jalan Batu	P00004	9780764112737	Accounting	Peter J. Eisen	43	5	2	35	175	415	P0004	Barron's	5 November 2019
11100003	Eden	000300143001	100127703434	yahoo.com	Ferringhi, 11100	B00004	9/80/04112/3/	Accounting	reter J. Eisen	43			33	173	413	10004	Darrons	3 November 2019
				yanoo.com	Batu Ferringhi,													
					Pulau Pinang.													
					8													
M00003	Eden	000506145601	+60127705454	eden5454@	9, Jalan Batu	B00005	9780520939356	The Unending Frontier: An	John F Richards	46	4	1	45	180	415	P0002	Berkeley:	19 December 2019
				yahoo.com	Ferringhi, 11100			Environmental History of the									University of	
					Batu Ferringhi,			Early Modern World									California	
					Pulau Pinang.												Press	
M00001	Jack	990208145103	+601110220812	jack0812@	12, Jalan	B00004	9780764112737	Accounting	Peter J. Eisen	43	NULL	2	35	NULL	NULL	P0004	Barron's	5 November 2019
				gmail.com	Gemilang, 85000													
					Segamat, Johor.													
NULL	NULL	NULL	NULL	NULL	NULL	NULL	9780323998628	Principles of Economics and	D.R. Kiran	NULL	NULL	NULL	NUL	NULL	NULL	P0005	Butterworth-	NULL
								Management for					L				Heinemann	
								Manufacturing Engineering										

CartQuantitty	CartAmount	CartTotalAmount	POrderID	POrderDate	OrderID	OrderDate	PaymentMethod	DeliveryStatus	Rating	Comment
NULL	NULL	NULL	S00001	2 December 2019	O00001	1 May 2020	Debit Card	Complete	7	It is a good book!
NULL	NULL	NULL	S00002	6 January 2020	O00001	1 May 2020	Debit Card	Complete	5	NULL
NULL	NULL	NULL	S00003	18 April 2020	O00001	1 May 2020	Debit Card	Complete	4	NULL
NULL	NULL	NULL	S00002	6 January 2020	O00002	3 July 2020	Credit Card	Complete	3	NULL
NULL	NULL	NULL	S00004	21 April 2020	O00002	3 July 2020	Credit Card	Complete	9	NULL
NULL	NULL	NULL	S00001	2 December 2019	O00003	12 August 2020	Online Banking	Incomplete	NULL	NULL
NULL	NULL	NULL	S00004	21 April 2020	O00003	12 August 2020	Online Banking	Incomplete	NULL	NULL
NULL	NULL	NULL	S00005	12 May 2020	O00003	12 August 2020	Online Banking	Incomplete	NULL	NULL
3	105	105	S00004	21 April 2020	NULL	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

5

- Identify partially dependencies
- Identify transitive dependencies

#### **Partially dependencies**

BookID > Book Title, Price, PublishedDate, Author, TotalSold

PublisherID > PublisherName

PublisherID > ISBN, BookTitle, Author

POrderID > POrderDate, PublisherID

POrderID > ISBN, BookID, Quantity

MemberID > MemberName, IC, ContactNumber, Email, Address

MemberID > BookID, CartQuantity, CartAmount, CartRotalAmount

OrderID > OrderDate, MemberID, Address, ContactNumber, TotalAmount, PaymentMethod, DeliveryStatus

OrderID > BookID, OrderQuantity, Amount

MemberID, BookID > Rating, Comment

#### **Transitive Dependencies**

MemberID > Address, ContactNumber

2NF

## No partially dependencies

### **Book Table**

BookID	BookTitle	PublisherID	Author	Price	Published Date	Quantity	TotalSold
B00001	Essential Maths	P00001	Sean McArdle	30	15 January 2019	46	4
B00002	Of sugar and snow: a history of ice cream making	P00002	Jeri Quinzio	50	4 April 2019	46	4
B00003	Biology	P00003	Grover C. Stephens	23	7 March 2020	46	4
B00004	Accounting	P00004	Peter J. Eisen	35	5 November 2019	43	7
B00005	The Unending Frontier: An Environmental History of the Early Modern World	P00002	John F Richards	45	19 December 2019	46	4

BookID > BookTitle, Author, Price, PublishedDate, Quantity, TotalSold

#### **Publisher Table**

PublisherID	Publisher Name
P0001	Nelson Thornes Ltd
P0002	Berkeley: University of California Press
P0003	Wiley
P0004	Barron's
P0005	Butterworth-Heinemann

PublisherID > PublisherName

### **Publisher Books Table**

PublisherID	ISBN	BookTitle	Author
P0001	9780748736447	Essential Maths	Sean McArdle
P0002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio
P0003	9780471822066	Biology	Grover C. Stephens
P0004	9780764112737	Accounting	Peter J. Eisen
P0002	9780520939356	The Unending Frontier: An Environmental History of the Early Modern World	John F Richards
P0005	9780323998628	Principles of Economics and Management for Manufacturing Engineering	D.R. Kiran

PublisherID > ISBN, BookTitle, Author

# **Supply Order Table**

POrderID	POrderDate	PublisherID
S00001	2 December 2019	P0001
S00002	6 January 2020	P0002
S00003	18 April 2020	P0003
S00004	21 April 2020	P0004
S00005	12 May 2020	P0002

POrderID > POrderDate, PublisherID

## **Supply Order Details Table**

POrderID	ISBN	BookID	Quantity
S00001	9780748736447	B00001	50
S00002	9780520248618	B00002	50
S00003	9780471822066	B00003	50
S00004	9780764112737	B00004	50
S00005	9780520939356	B00005	50

POrderID > ISBN, BookID, Quantity

#### **Member Table**

MemberID	Member Name	IC	Contact Number	Email	Address
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan
					Gemilang, 85000
					Segamat, Johor.
M00002	Mohammad	981018065207	+60182225655	mohammad@gmail.co	4, Jalan Sunsuria,
				m	43900 Sepang,
					Selangor.
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu
					Ferringhi, 11100
					Batu Ferringhi,
					Pulau Pinang.

MemberID > MemberName, IC, ContactNumber, Email, Address

### **Shopping Cart Table**

MemberID	BookID	CartQuantity	CartAmount	CartTotalAmount
M00001	B00004	3	105	105

MemberID > BookID, CartQuantity, CartAmount, CartRotalAmount

### **Sales Order Table**

OrderID	OrderDate	MemberID	Address	ContactNumber	TotalAmount	PaymentMethod	DeliveryStatus
O00001	1 May 2020	M00001	12, Jalan Gemilang, 85000 Segamat, Johor.	+601110220812	202	Debit Card	Complete
O00002	3 July 2020	M00002	4, Jalan Sunsuria, 43900 Sepang, Selangor.	+60182225655	220	Credit Card	Complete
O00003	12 August 2020	M00003	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.	+60127705454	415	Online Banking	Incomplete

OrderID > OrderDate, MemberID, Address, ContactNumber, TotalAmount, PaymentMethod, DeliveryStatus

### **Sales Order Details table**

OrderID	BookID	OrderQuantity	Amount
O00001	B00001	2	60
O00001	B00002	1	50
O00001	B00003	4	92
O00002	B00002	3	150
O00002	B00004	2	70
O00003	B00001	2	60

### CT042-3-1-IDB (Degree Level 1)

**Group Assignment** 

O00003	B00004	5	175
O00003	B00005	4	180

OrderID > BookID, OrderQuantity, Amount

## **Rating Table**

MemberID	BookID	Rating	Comment
M00001	B00001	7	It is a good book!
M00001	B00002	5	NULL
M00001	B00003	4	NULL
M00002	B00002	3	NULL
M00002	B00004	9	NULL
M00003	B00001	NULL	NULL
M00003	B00004	NULL	NULL
M00003	B00005	NULL	NULL

MemberID, BookID > Rating, Comment

3NF

### No transitive dependencies

### **Book Table**

BookID	BookTitle	PublisherID	Author	Price	Published Date	Quantity	TotalSold
B00001	Essential Maths	P00001	Sean McArdle	30	15 January 2019	46	4
B00002	Of sugar and snow: a history of ice cream making	P00002	Jeri Quinzio	50	4 April 2019	46	4
B00003	Biology	P00003	Grover C. Stephens	23	7 March 2020	46	4
B00004	Accounting	P00004	Peter J. Eisen	35	5 November 2019	43	7
B00005	The Unending Frontier: An Environmental History of the Early Modern World	P00002	John F Richards	45	19 December 2019	46	4

BookID > BookTitle, Author, Price, PublishedDate, Quantity, TotalSold

### **Publisher Table**

PublisherID	Publisher Name
P0001	Nelson Thornes Ltd
P0002	Berkeley: University of California Press
P0003	Wiley
P0004	Barron's
P0005	Butterworth-Heinemann

PublisherID > PublisherName

### **Publisher Books Table**

PublisherID	ISBN	BookTitle	Author
P0001	9780748736447	Essential Maths	Sean McArdle
P0002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio
P0003	9780471822066	Biology	Grover C. Stephens
P0004	9780764112737	Accounting	Peter J. Eisen
P0002	9780520939356	The Unending Frontier: An Environmental History of the Early Modern World	John F Richards
P0005	9780323998628	Principles of Economics and Management for Manufacturing Engineering	D.R. Kiran

PublisherID > ISBN, BookTitle, Author

## **Supply Order Table**

POrderID	POrderDate	PublisherID
S00001	2 December 2019	P0001
S00002	6 January 2020	P0002
S00003	18 April 2020	P0003
S00004	21 April 2020	P0004
S00005	12 May 2020	P0002

POrderID > POrderDate, PublisherID

### **Supply Order Details Table**

POrderID	ISBN	BookID	Quantity
S00001	9780748736447	B00001	50
S00002	9780520248618	B00002	50
S00003	9780471822066	B00003	50
S00004	9780764112737	B00004	50
S00005	9780520939356	B00005	50

POrderID > ISBN, BookID, Quantity

### **Member Table**

MemberID	Member Name	IC	Contact Number	Email	Address
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.
M00002	Mohammad	981018065207	+60182225655	mohammad@gmail.com	4, Jalan Sunsuria, 43900 Sepang, Selangor.
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.

MemberID > MemberName, IC, ContactNumber, Email, Address

### **Shopping Cart Table**

MemberID	BookID	CartQuantity	CartAmount	CartTotalAmount
M00001	B00004	3	105	105

MemberID > BookID, CartQuantity, CartAmount, CartTotalAmount

### **Sales Order Table**

OrderID	OrderDate	MemberID	TotalAmount	PaymentMethod	DeliveryStatus
O00001	1 May 2020	M00001	202	Debit Card	Complete
O00002	3 July 2020	M00002	220	Credit Card	Complete
O00003	12 August 2020	M00003	415	Online Banking	Incomplete

OrderID > OrderDate, MemberID, TotalAmount, PaymentMethod, DeliveryStatus

### **Sales Order Details table**

OrderID	BookID	OrderQuantity	Amount
O00001	B00001	2	60
O00001	B00002	1	50
O00001	B00003	4	92
O00002	B00002	3	150
O00002	B00004	2	70
O00003	B00001	2	60
O00003	B00004	5	175
O00003	B00005	4	180

OrderID > BookID, OrderQuantity, Amount

## **Rating Table**

MemberID	BookID	Rating	Comment
M00001	B00001	7	It is a good book!
M00001	B00002	5	NULL
M00001	B00003	4	NULL
M00002	B00002	3	NULL
M00002	B00004	9	NULL
M00003	B00001	NULL	NULL
M00003	B00004	NULL	NULL
M00003	B00005	NULL	NULL

MemberID, BookID > Rating, Comment

### **Entity Relationship Diagram**

