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Normalization

UNF

MemberID	Member Name	IC	Contact Number	Email	Address	BookID	ISBN	BookTitle	Author	Quantity	TotalSold	OrderQuantity	PublisherID	PublisherName	PublishedDate	POrderID	POrderDate
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	P0001	Nelson Thornes Ltd	15 January 2019	S00001	2 December 2019
						B00002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio	46	1	1	P0002	Berkeley: University of California Press	4 April 2019	S00002	6 January 2020
						B00003	9780471822066	Biology	Grover C. Stephens	46	4	4	P0003	Wiley	7 March 2020	S00003	18 April 2020
M00002	Moham mad	981018065207	+60182225655	mohammad@gmail.com	4, Jalan Sunsuria, 43900 Sepang, Selangor.	B00002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio	46	4	3	P0002	Berkeley: University of California Press	15 January 2019	S00002	6 January 2020
						B00004	9780764112737	Accounting	Peter J. Eisen	43	2	2	P0004	Barron’s	5 November 2019	S00004	21 April 2020
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	P0001	Nelson Thornes Ltd	15 January 2019	S00001	2 December 2019
						B00004	9780764112737	Accounting	Peter J. Eisen	43	2	5	P0004	Barron’s	5 November 2019	S00004	21 April 2020
						B00005	9780520939356	The Unending Frontier: An Environmental History of the Early Modern World	John F Richards	46	1	4	P0002	Berkeley: University of California Press	19 December 2019	S00005	12 May 2020
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00004	9780764112737	Accounting	Peter J. Eisen	43	2		P00004	Barron’s	5 November 2019	S00004	21 April 2020
							9780323998628	Principles of Economics and Management for Manufacturing Engineering	D.R. Kiran				P0005				

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	

INF

MemberID	MemberName	IC	ContactNumber	Email	Address	BookID	ISBN	BookTitle	Author	Quantity	Order Quantity	TotalSold	Price	Amount	Total Amount	Publisher ID	PublisherName	PublishedDate
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	30	60	202	P0001	Nelson Thornes Ltd	15 January 2019
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio	46	1	1	50	50	202	P0002	Berkeley: University of California Press	4 April 2019
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00003	9780471822066	Biology	Grover C. Stephens	46	4	4	23	92	202	P0003	Wiley	7 March 2020
M00002	Mohammad	981018065207	+60182225655	mohammad@gmail.com	4, Jalan Sunsuria, 43900 Sepang, Selangor.	B00002	9780520248618	Of sugar and snow: a history of ice cream making	Jeri Quinzio	46	3	4	50	150	220	P0002	Berkeley: University of California Press	15 January 2019
M00002	Mohammad	981018065207	+60182225655	mohammad@gmail.com	4, Jalan Sunsuria, 43900 Sepang, Selangor.	B00004	9780764112737	Accounting	Peter J. Eisen	43	2	2	35	70	220	P0004	Barron’s	5 November 2019
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.	B00001	9780748736447	Essential Maths	Sean McArdle	46	2	2	30	60	415	P0001	Nelson Thornes Ltd	15 January 2019
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.	B00004	9780764112737	Accounting	Peter J. Eisen	43	5	2	35	175	415	P0004	Barron’s	5 November 2019
M00003	Eden	000506145601	+60127705454	eden5454@yahoo.com	9, Jalan Batu Ferringhi, 11100 Batu Ferringhi, Pulau Pinang.	B00005	9780520939356	The Unending Frontier: An Environmental History of the Early Modern World	John F Richards	46	4	1	45	180	415	P0002	Berkeley: University of California Press	19 December 2019
M00001	Jack	990208145103	+601110220812	jack0812@gmail.com	12, Jalan Gemilang, 85000 Segamat, Johor.	B00004	9780764112737	Accounting	Peter J. Eisen	43	NULL	2	35	NULL	NULL	P0004	Barron’s	5 November 2019
NULL	NULL	NULL	NULL	NULL	NULL	NULL	9780323998628	Principles of Economics and Management for Manufacturing Engineering	D.R. Kiran	NULL	NULL	NULL	NUL L	NULL	NULL	P0005	Butterworth- Heinemann	NULL

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

- 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.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, 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

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



