

De-Normalized Sales Order Dataset

	A	B	C	D	E	F	G	H	I	J
1	De-Normalized Sales Order Dataset									
2	ORDER_NUMBER	QUANTITY	ITEM PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_N
3	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.
4	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables
5	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers
6	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com
7	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas
8	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit
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Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

	A	B	C	D	E	F	G	H	I	J
1	De-Normalized Sales Order Dataset									
2	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_N
3	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.
4	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables
5	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers
6	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com
7	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas
8	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit
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◀ ▶ Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

1 1NF (First Normal Form)

2 1. Every column/attribute need to have a single value.

3 2. Each row should be unique. Either through a single or multiple columns. Not mandatory to have primary key

	A	B	C	D	E	F	G	H	I	J	K	L	M
5	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2
6	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	
7	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye	
8	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia	
9	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	6265557265	78934 Hillside Dr.	
10	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	6505551386	7734 Strong St.	
11	10106	4	780	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	6577771000	25, rue Lauriston	
12	10106	4	850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	6577771000	25, rue Lauriston	
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Definitions De-Normalized Dataset 1NF 2NF 3NF_g INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

Candidate key = Order_number Product_code														
A27	B	C	D	E	F	G	H	I	J	K	L	M		
1	2NF (Second Normal Form)													
2	1. Must be in 1NF													
3	2. All non key attributes must be fully dependent on candidate key.													
4	i.e. If a non-key column is partially dependent on candidate key (subset of columns forming candidate key) then split them into separate tables.													
5	3. Every table should have primary key and relationship between the tables should be formed using foreign key.													
6														
7	Candidate key:													
8	Set of columns which uniquely identify a record.													
9	A table can have multiple candidate keys because there can be multiple set of columns which uniquely identify a record/row in a table													
10														
11	Non-key columns:													
12	Columns which are not part of the candidate key or primary key													
13														
14	Partial Dependency:													
15	If your candidate key is a combination of 2 columns (or multiple columns) then every non key column (columns which are not part of the candidate key) should be fully dependent on all the columns.													
16	If there is any non key column which depends only on one of the candidate key columns then this results in partial dependency.													
17														
18	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	
19	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue		
20	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye		
21	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souvenirs	2121257800	27 rue du Colonel Pierre Avia		
22	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	6265557265	78934 Hillside Dr.		
23	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	6505551386	7734 Strong St.		
24	10106	4	780	3120	2005-05-07	Shipped	PRD_1004	Buses	800	Auto Canal Petit	6577771000	25, rue Lauriston		
25	10106	4	850	3400	2005-05-07	Shipped	PRD_1005	Trucks	900	Auto Canal Petit	6577771000	25, rue Lauriston		
26														
27	Candidate key = Order_number Product_code													
28														
29														
30														
31														

Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

11:37

B49 3. Every table should have primary key and relationship between the tables should be formed using foreign key.

	A	B	C	D	E	F	G	H	I	J	K
1	2NF (Second Normal Form)										
2	1. Must be in 1NF										
3	2. All non key attributes must be fully dependent on candidate key.										
4	i.e. If a non-key column is partially dependent on candidate key (subset of columns forming candidate key) then split them into separate tables.										
5	3. Every table should have primary key and relationship between the tables should be formed using foreign key.										
6											
7	Candidate key:										
8	Set of columns which uniquely identify a record.										
9	A table can have multiple candidate keys because there can be multiple set of columns which uniquely identify a record/row in a table										
10											
11	Non-key columns:										
12	Columns which are not part of the candidate key or primary key										
13											
14	Partial Dependency:										
15	If your candidate key is a combination of 2 columns (or multiple columns) then every non key column (columns which are not part of the candidate key) should be fully dependent on all the columns.										
16	If there is any non key column which depends only on one of the candidate key columns then this results in partial dependency.										
17											
18	ORDERS										
19	ORDER_ID	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	SALES_CONTACT_LASTNAME	SALES_CONTACT_FIRSTNAME	DEAL_SIZE	
20	1	10101	30	202	6060	2003-03-24	Shipped	Yu	Kwai	Small	
21	2	10102	34	550	18700	2003-07-05	Cancelled	Henriot	Paul	Medium	
22	3	10103	41	420	17220	2003-01-07	Shipped	Da Cunha	Daniel	Medium	
23	4	10104	45	780	35100	2003-08-25	On Hold	Young	Julie	High	
24	5	10105	49	850	41650	2003-10-10	Shipped	Brown	Julie	High	
25	6	10106	4780		3120	2005-05-07	Shipped	Perrier	Dominique	Small	
26	7	10106	4850		3400	2005-05-07	Shipped	Perrier	Dominique	Small	
27	PK										
28	Candidate key = Order_number Product_code										
29											
30	PRODUCTS										
31	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE								

B49 Definitions De-Normalized Dataset 1NF 2NF 3NF Insertion Anomalies Deletion Anomalies Update Anomalies +

Calibri (Body) 14 A A = Wrap Text General Conditional Format as Table Normal Good Neutral Insert Delete Format Fill Clear Sort & Filter Find & Select Analyse Data

A5 3. Every table should have primary key and relationship between the tables should be formed using foreign key.

A6 If there is any non key column which depends only on one of the candidate key columns then this results in partial dependency.

ORDERS

ORDER_ID	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	SALES_CONTACT_LASTNAME	SALES_CONTACT_FIRSTNAME	DEAL_SIZE
1	10101	30	202	6060	2003-03-24	Shipped	Yu	Kwai	Small
2	10102	34	550	18700	2003-07-05	Cancelled	Henriot	Paul	Medium
3	10103	41	420	17220	2003-01-07	Shipped	Da Cunha	Daniel	Medium
4	10104	45	780	35100	2003-08-25	On Hold	Young	Julie	High
5	10105	49	850	41650	2003-10-10	Shipped	Brown	Julie	High
6	10106	4 780		3120	2005-05-07	Shipped	Perrier	Dominique	Small
7	10106	4 850		3400	2005-05-07	Shipped	Perrier	Dominique	Small

PK

Candidate key = Order_number || Product_code

PRODUCTS

PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE
PRD_1001	Motorcycles	200
PRD_1002	Vintage Cars	500
PRD_1003	Classic Cars	400
PRD_1004	Buses	800
PRD_1005	Trucks	900

CUSTOMERS

CUSTOMER_ID	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY	STATE	POSTALCODE	COUNTRY	TERRITORY
C1	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC	NY		10022 USA	NA
C2	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims			51100 France	EMEA
C3	Lyon Souvenirs	2121257800	27 rue du Colonel Pierre Avia		Paris			75508 France	EMEA
C4	Toys4GrownUps.com	6265557265	78934 Hillside Dr.		Pasadena	CA		90003 USA	NA
C5	Corporate Gift Ideas Co.	6505551386	7734 Strong St.		San Francisco	CA			NA
C6	Auto Canal Petit	6577771000	25, rue Lauriston		Paris			75016 France	EMEA

Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

Calibri (Body) 12 A A = Wrap Text General Conditional Format as Table Insert Delete Format Fill Clear Sort & Filter Find & Select Analyse Data

B54 fx PRD_1004

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A	B	C	D	E	F	G	H	I	J	K
PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE								
32 PRD_1001	Motorcycles	200								
33 PRD_1002	Vintage Cars	500								
34 PRD_1003	Classic Cars	400								
35 PRD_1004	Buses	800								
36 PRD_1005	Trucks	900								
37 PK										
38										
39										
40 CUSTOMERS										
41 CUSTOMER_ID	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	
42 C1	Land of Toys Inc.	2125557818	897 Long Airport Avenue		NYC	NY	10022	USA	NA	
43 C2	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims		51100	France	EMEA	
44 C3	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia		Paris		75508	France	EMEA	
45 C4	ToysAGrownUps.com	6265557265	78934 Hillside Dr.		Pasadena	CA	90003	USA	NA	
46 C5	Corporate Gift Ideas Co.	6505551386	7734 Strong St.		San Francisco	CA		USA	NA	
47 C6	Auto Canal Petit	6577771000	25, rue Lauriston		Paris		75016	France	EMEA	
48										
49 RELATIONSHIPS										
50 ORDER_ID	PRODUCT_CODE	CUSTOMER_ID								
51 1	PRD_1001	C1								
52 2	PRD_1002	C2								
53 3	PRD_1003	C3								
54 4	PRD_1004	C4								
55 5	PRD_1005	C5								
56 6		C6								
57 7		C6								
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Definitions De-Normalized Dataset 1NF 2NF 3NF_g INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

A3 2. Avoid Transitive dependencies.

1 3NF (Third Normal Form)

2 1. Must be in 2NF

2. Avoid Transitive dependencies.

4

5 **Transitive Dependency:**

6 Lets say you have a table T which has 3 columns namely A, B and C.

7 If A is functionally dependent on B and B is functionally dependent on C then we can say that A is functionally dependent on C.

8

9 ORDERS

10 ORDER_ID ORDER_NUMBER QUANTITY ITEM_PRICE TOTAL_COST ORDER_DATE STATUS SALES_CONTACT_LASTNAME SALES_CONTACT_FIRSTNAME DEAL

11 1 10101 30 202 6060 2003-03-24 Shipped Yu Kwai Small

12 2 10102 34 550 18700 2003-07-05 Cancelled Henriot Paul Medium

13 3 10103 41 420 17220 2003-01-07 Shipped Da Cunha Daniel Medium

14 4 10104 45 780 35100 2003-08-25 On Hold Young Julie High

15 5 10105 49 850 41650 2003-10-10 Shipped Brown Julie High

16 6 10106 4 780 3120 2005-05-07 Shipped Perrier Dominique Small

17 7 10106 4 850 3400 2005-05-07 Shipped Perrier Dominique Small

18 PK

19

20 PRODUCTS

21 PRODUCT_CODE PRODUCT_NAME PRODUCT_PRICE

22 PRD_1001 Motorcycles 200

23 PRD_1002 Vintage Cars 500

24 PRD_1003 Classic Cars 400

25 PRD_1004 Buses 800

26 PRD_1005 Trucks 900

27 PK

28

29

30 CUSTOMERS

31 CUSTOMER_ID CUSTOMER_NAME PHONE ADDRESSLINE1 ADDRESSLINE2 CITY STATE POSTALCODE COUNTRY TERRITORY

32 C1 Land of Toys Inc. 2125557818 897 Long Airport Avenue NYC NY 10022 USA NA

33 C2 Raime's Collectables 2123255666 59 rue de l'Abbaye Paris FR 75110 France EMEA

Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

Power BI Data Editor

EMP_ID

A	B	C	D	E	F	G	H	I	J	
Z6 PRD_1005	TRUCKS		900							
Z7 PK										
Z8										
Z9										
30 CUSTOMERS										
31 CUSTOMER_ID	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	
32 C1	Land of Toys Inc.	2125557818	897 Long Airport Avenue		NYC	NY		10022	USA	NA
33 C2	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims			51100	France	EMEA
34 C3	Lyon Souvenirs	2121257800	27 rue du Colonel Pierre Avia		Paris			75508	France	EMEA
35 C4	Toys4GrownUps.com	6265557265	78934 Hillside Dr.		Pasadena	CA		90003	USA	NA
36 C5	Corporate Gift Ideas Co.	6505551386	7734 Strong St.		San Francisco	CA			USA	NA
37 C6	Auto Canal Petit	6577771000	25, rue Lauriston		Paris			75016	France	EMEA
38										
39 RELATIONSHIPS										
40 ORDER_ID	PRODUCT_CODE	CUSTOMER_ID								
41 1	PRD_1001	C1								
42 2	PRD_1002	C2								
43 3	PRD_1003	C3								
44 4	PRD_1004	C4								
45 5	PRD_1005	C5								
46 6	PRD_1004	C6								
47 7	PRD_1005	C6								
48										
49 EMP_ID	SALES_CONTACT_LASTNAME	SALES_CONTACT_FIRSTNAME								
50 Yu		Kwai								
51 Henriot		Paul								
52 Da Cunha		Daniel								
53 Young		Julie								
54 Brown		Julie								
55 Perrier		Dominique								
56										
57										
58										
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Definitions De-Normalized Dataset 1NF 2NF 3NF INSERTION Anomalies DELETION Anomalies UPDATION Anomalies +

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1	Scenario 1: Data redundancy															
2	De-Normalized Dataset															
3	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY		
4	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
5	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims		
6	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia		Paris		
7	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	626557265	78934 Hillside Dr.		Pasaden		
8	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	650551386	7734 Strong St.		San Fran		
9	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	657771000	25, rue Lauriston		Paris		
10	10107	22	202	4444	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
11	10108	32	202	6464	2003-03-24	Shipped	PRD_1002	Vintage Cars	500	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
12	10109	33	202	6666	2003-03-24	Shipped	PRD_1003	Classic Cars	400	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
13	10110	44	202	8888	2003-03-24	Shipped	PRD_1004	Buses	800	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
14	10111	55	202	11110	2003-03-24	Shipped	PRD_1005	Trucks	900	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
15	10112	50	202	10100	2003-03-25	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
16	10113	60	202	12120	2003-03-26	Shipped	PRD_1002	Vintage Cars	500	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
17	10114	10	202	2020	2003-03-24	Shipped	PRD_1003	Classic Cars	400	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
18	10115	5	202	1010	2003-03-24	Shipped	PRD_1004	Buses	800	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
19	10116	6	202	1212	2003-03-25	Shipped	PRD_1005	Trucks	900	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
20	10117	23	202	4646	2003-03-26	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
21	10118	15	202	3030	2003-03-27	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
22																
23																
24																
25	Scenario 2: Missing data															
26	De-Normalized Dataset															
27	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY		
28	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC		
29	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims		
30	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souvenirs	2121257800	27 rue du Colonel Pierre Avia		Paris		
31	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	626557265	78934 Hillside Dr.		Pasaden		
32	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	650551386	7734 Strong St.		San Fran		
33	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	657771000	25, rue Lauriston		Paris		
34	null	null	null	null	null	null	PRD_1006	Cruise Ship	3000	null	null	null		null		
35																
36																
37																
38																
39																

Definitions De-Normalized Dataset | 1NF | 2NF | 3NF | INSERTION Anomalies | DELETION Anomalies | UPDATION Anomalies | +

	A	B	C	D	E	F	G	H	I	J
1	3NF (Third Normal Form)									
2	1. Must be in 2NF									
3	2. Avoid Transitive dependencies.									
4										
5	Transitive Dependency:									
6	Lets say you have a table T which has 3 columns namely A, B and C.									
7	If A is functionally dependent on B and B is functionally dependent on C then we can say that A is functionally dependent on C.									
8										
9	ORDERS									
10	ORDER_ID	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	DEAL_SIZE		
11	1	10101	30	202	6060	2003-03-24	Shipped	Small		
12	2	10102	34	550	18700	2003-07-05	Cancelled	Medium		
13	3	10103	41	420	17220	2003-01-07	Shipped	Medium		
14	4	10104	45	780	35100	2003-08-25	On Hold	High		
15	5	10105	49	850	41650	2003-10-10	Shipped	High		
16	6	10106	4	780	3120	2005-05-07	Shipped	Small		
17	7	10106	4	850	3400	2005-05-07	Shipped	Small		
18	PK									
19										
20	PRODUCTS									
21	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE							
22	PRD_1001	Motorcycles	200							
23	PRD_1002	Vintage Cars	500							
24	PRD_1003	Classic Cars	400							
25	PRD_1004	Buses	800							
26	PRD_1005	Trucks	900							
27	PK									
28										
29										
30	CUSTOMERS									
31	CUSTOMER_ID	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY	STATE	POSTALCODE	COUNTRY	TERRITORY
32	C1	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC	NY		10022 USA	NA
33	C2	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims			51100 France	EMEA
34	C3	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia		Paris			75508 France	EMEA
35	C4	Toys4GrownUps.com	6265557265	78934 Hillside Dr.		Pasadena	CA		90003 USA	NA
36	C5	Gift Land Co.	6508554305	3324 4th St.		San Francisco	CA		94107 USA	NA

How to delete just a specific order information without loosing customer and product data ?

De-Normalized Dataset

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	ORDER_NUMBER	QUANTITY	ITEM_PRICE	TOTAL_COST	ORDER_DATE	STATUS	PRODUCT_CODE	PRODUCT_NAME	PRODUCT_PRICE	CUSTOMER_NAME	PHONE	ADDRESSLINE1	ADDRESSLINE2	CITY
2	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	212557818	897 Long Airport Avenue		NYC
3	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye		Reims
4	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia		Paris
5	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	626557265	78934 Hillside Dr.		Pasaden
6	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	650551386	7734 Strong St.		San Fran
7	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	6577771000	25, rue Lauriston		Paris
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Update the price of a product "Motorcycles"													
2	De-Normalized Dataset													
3	ORDER_NUMBER QUANTITY ITEM_PRICE TOTAL_COST ORDER_DATE STATUS PRODUCT_CODE PRODUCT_NAME PRODUCT_PRICE CUSTOMER_NAME PHONE ADDRESSLINE1 ADDRESSLINE2 CITY													
4	10101	30	202	6060	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
5	10102	34	550	18700	2003-07-05	Cancelled	PRD_1002	Vintage Cars	500	Reims Collectables	2123356666	59 rue de l'Abbaye	Reims	
6	10103	41	420	17220	2003-01-07	Shipped	PRD_1003	Classic Cars	400	Lyon Souveniers	2121257800	27 rue du Colonel Pierre Avia	Paris	
7	10104	45	780	35100	2003-08-25	On Hold	PRD_1004	Buses	800	Toys4GrownUps.com	6265557265	78934 Hillside Dr.	Pasaden	
8	10105	49	850	41650	2003-10-10	Shipped	PRD_1005	Trucks	900	Corporate Gift Ideas Co.	6505551386	7734 Strong St	San Fran	
9	10106	4, 4	780, 850	6520	2005-05-07	Shipped	PRD_1004, PRD_1005	Buses, Trucks	800, 900	Auto Canal Petit	6577771000	25, rue Lauriston	Paris	
10	10107	22	202	4444	2003-03-24	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
11	10108	32	202	6464	2003-03-24	Shipped	PRD_1002	Vintage Cars	500	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
12	10109	33	202	6666	2003-03-24	Shipped	PRD_1003	Classic Cars	400	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
13	10110	44	202	8888	2003-03-24	Shipped	PRD_1004	Buses	800	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
14	10111	55	202	11110	2003-03-24	Shipped	PRD_1005	Trucks	900	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
15	10112	50	202	10100	2003-03-25	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
16	10113	60	202	12120	2003-03-26	Shipped	PRD_1002	Vintage Cars	500	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
17	10114	10	202	2020	2003-03-24	Shipped	PRD_1003	Classic Cars	400	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
18	10115	5	202	1010	2003-03-24	Shipped	PRD_1004	Buses	800	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
19	10116	6	202	1212	2003-03-25	Shipped	PRD_1005	Trucks	900	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
20	10117	23	202	4646	2003-03-26	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
21	10118	15	202	3030	2003-03-27	Shipped	PRD_1001	Motorcycles	200	Land of Toys Inc.	2125557818	897 Long Airport Avenue	NYC	
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Definitions De-Normalized Dataset 1NF 2NF 3NF₀ INSERTION Anomalies DELETION Anomalies UPDATION Anomalies