Universität Konstanz

Introduction to Computing for the Social Sciences
Exercise Sheet for session 11

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You receive the following table from the sales department:

UserNumber	UserName	PurchaseTime	ProductName	N	ProductID	Delivered
011011	Hans	2020.03.06 11:15:55	Milk	1	011011	True
012311	Hans	2020.04.07 01:50:50	Milk	2	011011	True
011011	Hans	2020.05.06 10:05:00	Coffee	1	215511	True
405444	Marie	2020.12.06 21:15:05	Coffee	45	215511	False
556677	Peter	2021.03.06 03:50:50	Coffee	4	215511	True

a) Without adding any columns, what combination of columns can you use as a primary key? Explain the assumptions of your solution.

b) Assuming the table above is the only one of a SQL database, write a query that lists all rows that correspond to delivered purchases of more than one unit.

c) Show how to restructure the above table into the tables of a relational database that increases the efficiency of changing the name of products while keeping the same ProductID. Indicate the primary key of this new table and give it a name.

d) Based on your tables of the previous result, write a SQL query that gives the delivery status of all purchases of the product named “Milk”