

Problem 4

For the big order database table in Table 3, you should list FDs with the column *OrdNo* as the determinant. For each FD, you should identify at least one pair of sample rows that falsify it or indicate that no falsification example exists for the FD. Remember that it takes two rows to falsify an FD in which the LHS is the same in both rows, but the RHS is different in both rows.

Table 3: Sample Rows for the Big Order Database Table

<u>OrdNo</u>	<u>ItemNo</u>	QtyOrd	CustNo	CustBal	CustDisc	ItemPrice	OrdDate
O1	I1	10	C1	100	0.10	10	1/15/2014
O1	I2	10	C1	100	0.10	20	1/15/2014
O2	I3	5	C2	200	0.05	30	1/16/2014
O2	I4	10	C2	200	0.05	40	1/16/2014
O3	I1	10	C1	100	0.10	10	1/17/2014

Solution:

OrdNo FDs and sample rows that falsify the FDs. The rows refer to the sample data above.

FD	Falsifications
$OrdNo \rightarrow ItemNo$	(1,2), (3,4)
$OrdNo \rightarrow QtyOrd$	(3,4)
$OrdNo \rightarrow CustNo$	None
$OrdNo \rightarrow CustBal$	None
$OrdNo \rightarrow CustDisc$	None
$OrdNo \rightarrow ItemPrice$	(1,2), (3,4)
$OrdNo \rightarrow OrdDate$	None