

Normalization Exercise

Original Table:

ClientNo	CName	PropertyNo	pAddress	rentStart	rentFinish	rent	ownerNo	oName
CR76	John Kay	PG4	6 lawrence st, Glasgow	1-Jul-00	31-Aug-01	350	CO40	Tina Murphy
		PG16	5 Novar Dr, Glasgow	1-Sep-02	1-Sep-02	450	CO93	Tony Shaw
CR56	Aline Stewart	PG4	6 lawrence st, Glasgow	1-Sep-99	10-Jun-00	350	CO40	Tina Murphy
		PG36	2 Manor Rd, Glasgow	10-Oct-00	1-Dec-01	370	CO93	Tony Shaw
		PG16	5 Novar Dr, Glasgow	1-Nov-02	1-Aug-03	450	CO93	Tony Shaw

Normalized form:

1NF: Each column contains only Atomic values

ClientNo	CName	PropertyNo	pAddress	rentStart	rentFinish	rent	ownerNo	oName
CR76	John Kay	PG4	6 lawrence st, Glasgow	1-Jul-00	31-Aug-01	350	CO40	Tina Murphy
CR76	John Kay	PG16	5 Novar Dr, Glasgow	1-Sep-02	1-Sep-02	450	CO93	Tony Shaw
CR56	Aline Stewart	PG4	6 lawrence st, Glasgow	1-Sep-99	10-Jun-00	350	CO40	Tina Murphy
CR56	Aline Stewart	PG36	2 Manor Rd, Glasgow	10-Oct-00	1-Dec-01	370	CO93	Tony Shaw
CR56	Aline Stewart	PG16	5 Novar Dr, Glasgow	1-Nov-02	1-Aug-03	450	CO93	Tony Shaw

2NF: Removing partial dependencies

Client Table:

ClientNo	CName
CR76	John Kay
CR56	Aline Stewart

Property Table:

ownerNo	Owner Name	PropertyNo	pAddress	rent
CO40	Tina Murphy	PG4	6 lawrence st, Glasgow	350
CO93	Tony Shaw	PG36	2 Manor Rd, Glasgow	370
CO93	Tony Shaw	PG16	5 Novar Dr, Glasgow	450

Rent Table:

ClientNo(fk)	PropertyNo(fk)	rentStart	rentFinish
CR76	PG4	1-Jul-00	31-Aug-01
CR76	PG16	1-Sep-02	1-Sep-02
CR56	PG4	1-Sep-99	10-Jun-00
CR56	PG36	10-Oct-00	1-Dec-01
CR56	PG16	1-Nov-02	1-Aug-03

3NF: Removing transitive dependencies

Owner Table

ownerNo	oName
CO40	Tina Murphy
CO93	Tony Shaw

Property Table:

OwnerNo (fk)	PropertyNo	pAddress	rent
CO40	PG4	6 lawrence st, Glasgow	350
CO93	PG36	2 Manor Rd, Glasgow	370
CO93	PG16	5 Novar Dr, Glasgow	450

Client Table:

ClientNo	CName
CR76	John Kay
CR56	Aline Stewart

Rent Table:

ClientNo (fk)	PropertyNo (fk)	rentStart	rentFinish
CR76	PG4	1-Jul-00	31-Aug-01
CR76	PG16	1-Sep-02	1-Sep-02
CR56	PG4	1-Sep-99	10-Jun-00
CR56	PG36	10-Oct-00	1-Dec-01
CR56	PG16	1-Nov-02	1-Aug-03