Ex2:

Initial table:

school	teacher	course	room	grade	book	publisher	IoanDate
Horizon Educatio n Institute	Chad Russell	Logical thinking	1.A01	1st grade	Learning and teaching in early childhood	BOA Editions	09/09/20 10
Horizon Educatio n Institute	Chad Russell	Wrtting	1.A01	1st grade	Preschool,N 56	Taylor & Francis Publishin g	05/05/20 10
Horizon Educatio n Institute	Chad Russell	Numeric al Thinking	1.A01	1st grade	Learning and teaching in early childhood	BOA Editions	05/05/20 10
Horizon Educatio n Institute	E.F.Codd	Spatial, Temporal and Causal Thinking	1.B01	1st grade	Early Childhood Education N9	Prentice Hall	06/05/20 10
Horizon Educatio n Institute	E.F.Codd	Numeric al Thinking	1.B01	1st grade	Learning and teaching in early childhood	BOA Editions	06/05/20 10
Horizon Educatio n Institute	Jones Smith	Wrtting	1.A01	2nd grade	Learning and teaching in early childhood	BOA Editions	09/09/20 10
Horizon Educatio n Institute	Jones Smith	English	1.A01	2nd grade	Know how to educate: guide for Parents and	McGraw Hill	05/05/20 10
Bright Institutio n	Adam Baker	Logical thinking	1.B01	1st grade	Know how to educate: guide for Parents and	McGraw Hill	18/12/20 10
Bright Institutio n	Adam Baker	Numeric al Thinking	1.B01	1st grade	Learning and teaching in early childhood	BOA Editions	06/05/20 10

3NF:

LoanTable:

course	teacherid	grade	bookid	IoanDate
Logical thinking	1	1st grade	1	09/09/2010
Writing	1	1st grade	2	05/05/2010
Numerical Thinking	1	1st grade	1	05/05/2010
Spatial, Temporal and Causal Thinking	2	1st grade	3	06/05/2010
Numerical Thinking	2	1st grade	1	06/05/2010
Writing	3	2nd grade	1	09/09/2010
English	3	2nd grade	4	05/05/2010
Logical thinking	4	1st grade	4	18/12/2010
Numerical Thinking	5	1st grade	1	06/05/2010

Books:

bookid	bookname	publisher
1	Learning and teaching in early childhood	BOA Editions
2	Preschool,N56	Taylor & Francis Publishing
3	Early Childhood Education N9	Prentice Hall
4	Know how to educate: guide for Parents and	McGraw Hill

Teachers:

teacherid	teachername	school	room
1	Chad Russell	Horizon Education Institute	1.A01
2	E.F.Codd	Horizon Education Institute	1.B01
3	Jones Smith	Horizon Education Institute	1.A01
4	Adam Baker	Bright Institution	1.B01

Queries:

select school, publisher, count(publisher)
from LoanTable
full join Books on LoanTable.bookid=Books.bookid
full join Teachers on LoanTable.teacherid=Teachers.teacherid
group by school, publisher

2) with mindates as (select school, min(loanDate) as md from LoanTable full join Books on LoanTable.bookid=Books.bookid full join Teachers on LoanTable.teacherid=Teachers.teacherid GROUP BY school), withnames as (select school, MIN(loanDate) as md, bookname, teachername from LoanTable full join Books on LoanTable.bookid=Books.bookid full join Teachers on LoanTable.teacherid=Teachers.teacherid group by school, bookname, teachername select withnames.school, withnames.md, bookname, teachername from withnames inner join mindates on mindates.school=withnames.school and mindates.md=withnames.md group by withnames.school, withnames.md, bookname, teachername;