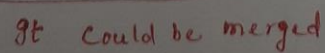


Bid	Roll	Date
001	1	
010	1	
002	1	
013	2	
014	3	
027	4	
039	2	
122	4	

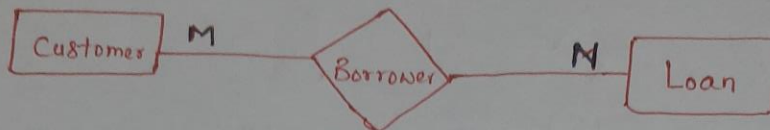
Serial	<u>Roll</u>	Attd	Mobile	

2500 entries



Many-to-Many

Page-2



<u>Cid</u>
1
2
3
4
5
10000

FK FK		
Cid	Lid	Date
1	0001	
2	0001	
1	0003	
4	0002	
4	0003	
1	0005	
2	0004	

Not  
Unique

Not  
Unique

<u>Lid</u>
0001
0002
0003
0004
0005

But Cid, Lid : Unique

```

graph LR
    Student[Student] -- 1 --> Issue{Issue}
    Issue -- 1 --> Book[Book]

```

<u>Sid</u>	

2000 extrier

PK	FK
Sid	Bid
17	AAA
19	BBB
201	ABA
1998	ABB

P.W.

P. K.

Bid	

4000 entries

Qn (Should we merge these two table?)

NO

```

graph LR
    Driver[Driver] -- 1 --> owns{owns}
    owns -- 1 --> License[License]

```

D. id	
1	
2	
3	
1	
1	

4,00,000

Did	Lid	-
1	00AB	
2	00AC	
3	00AD	
1	1	
1	2	
1	3	

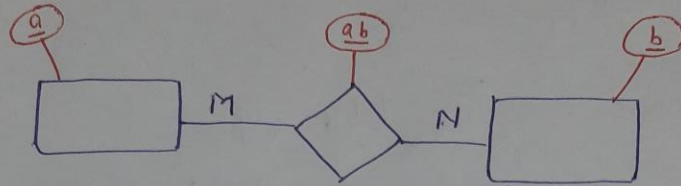
4,000,000

L. id	
00AB	
00AC	
00AD	
?	
(	
f	

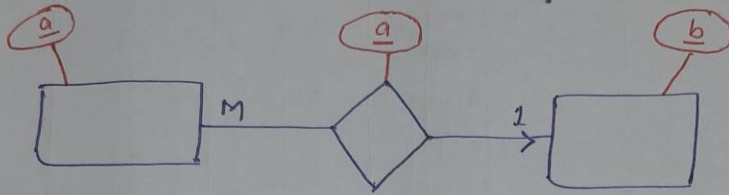
4,00,000

↓ we can merge all three tables.

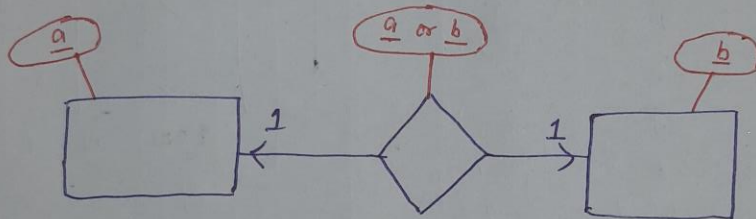
①



②



③



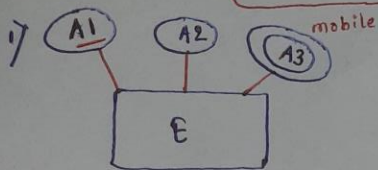
==



\*\*\*

# E-R Model : Tables (Schemas)

Page-9

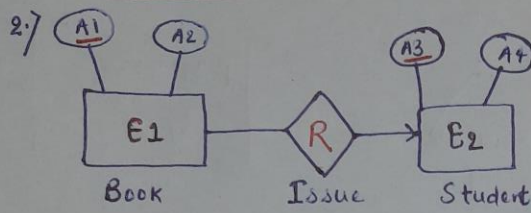


EXISTENCE  
Dependency

CARDINALITY

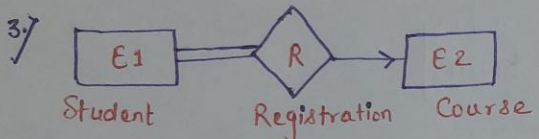
Resultant Tables

$E1(\underline{A1}, A2), E2(\underline{A1}, A3)$



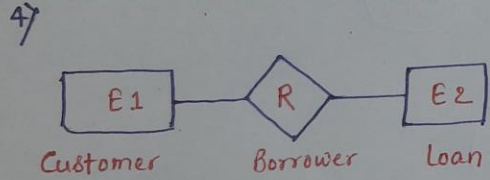
X  
N:1

$E1(\underline{A1}, A2),$   
 $E2(\underline{A3}, A4),$   
 $R(\underline{A1}, A3)$   
Foreign key



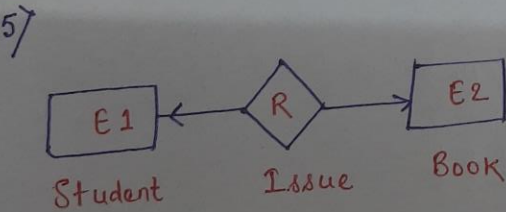
✓  
N:1

$(E1 \cup R), (E2)$   
 $E1(\underline{A1}, A2, A3)$  Foreign key  
 $E2(\underline{A3}, A4)$



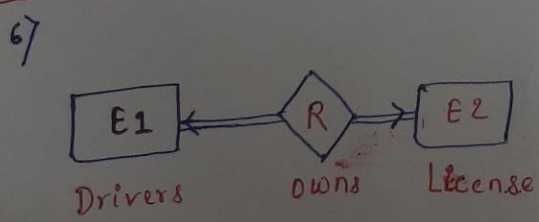
✓ OR X  
N:M

$E1(\underline{A1}, A2)$   
 $E2(\underline{A3}, A4)$   
 $R \equiv E3(\underline{A1}, \underline{A3})$  F.K



X  
1:1

$E1(\underline{A1}, A2)$   
 $E2(\underline{A3}, A4)$   
 $R \equiv E3(\underline{A1}, \underline{A3})$  F.K

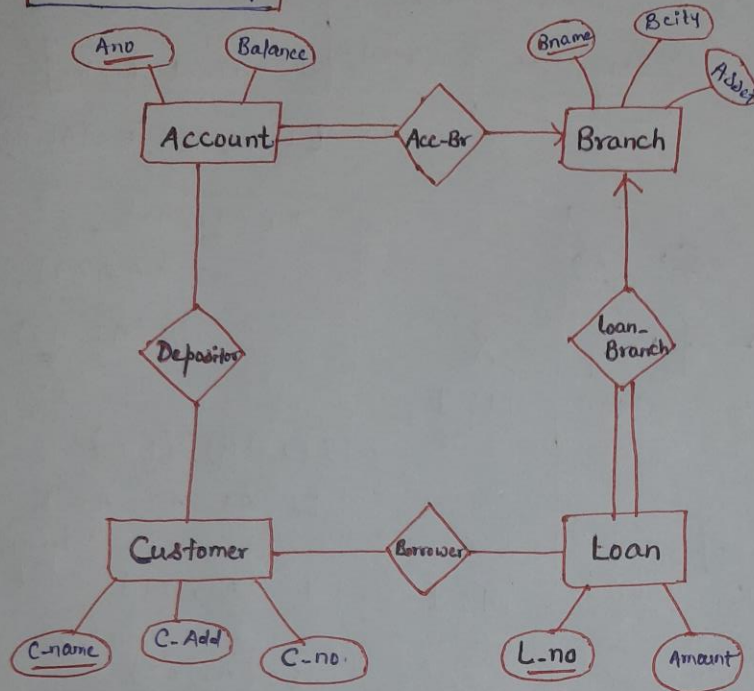


✓  
1:1

$(E1 \cup R \cup E2) \equiv E1$   
 $E1(\underline{A1}, A2, \underline{A3}, A4)$   
Either / both primary key.

# CASE STUDY

Page-10



BANKING  
SYSTEM

- \* Account (Ano, Bname, Balance)  
F.K
- \* Branch (Bname, Bcity, Assets)
- \* Customer (Cname, C-Add, C-No)
- \* Loan (L-no, Bname, Amount)  
F.K
- \* Depositor (Cname, Ano)  
F.K F.K
- \* Borrower (Cname, Lno)  
F.K F.K