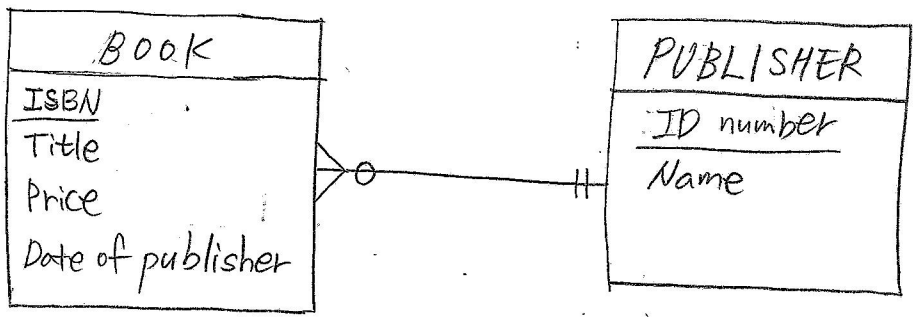
〈Assignment 1〉

(2-24)

2019.6004 김민준

a.



✓ Degree : binary relationship

✓ Cardinality : One to Many

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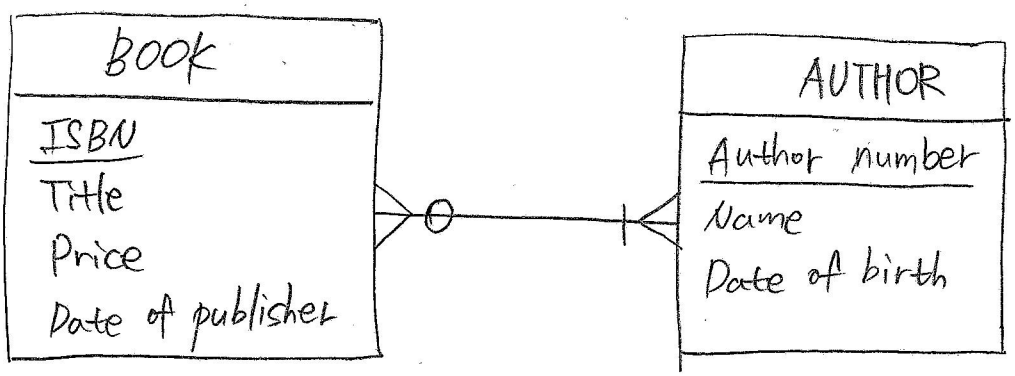
b.



✓ Degree : binary relationship

✓ Cardinality : Many to Many

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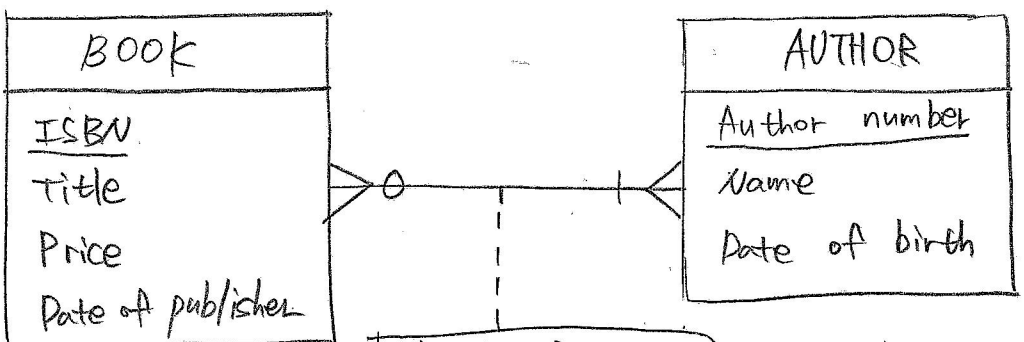
c.



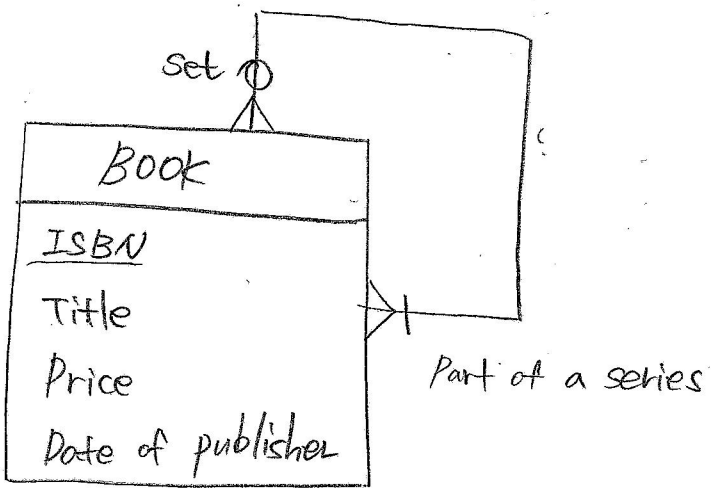
binary relationship

Many to Many

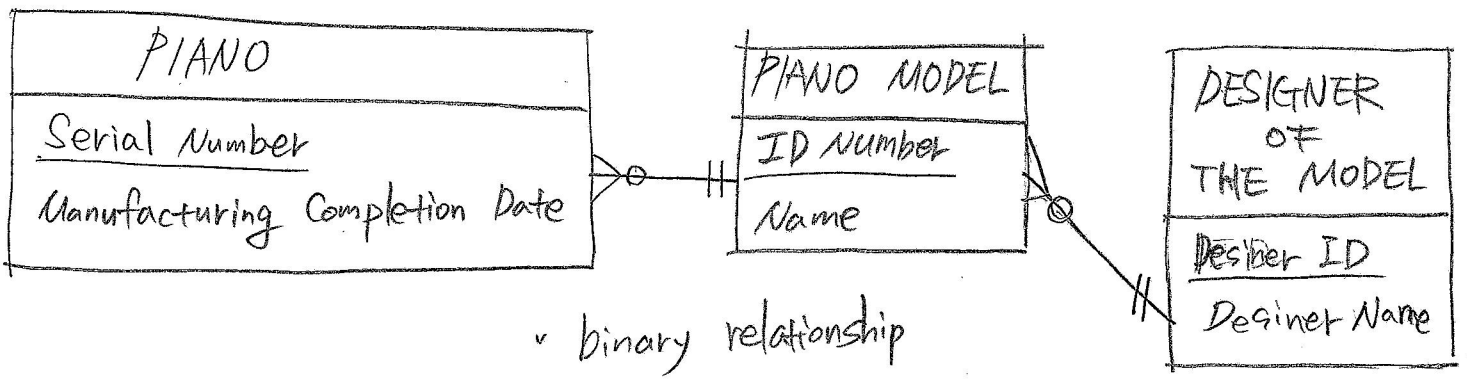
(2-24)

d.

- ✓ Unary relationship
- ✓ Many to Many



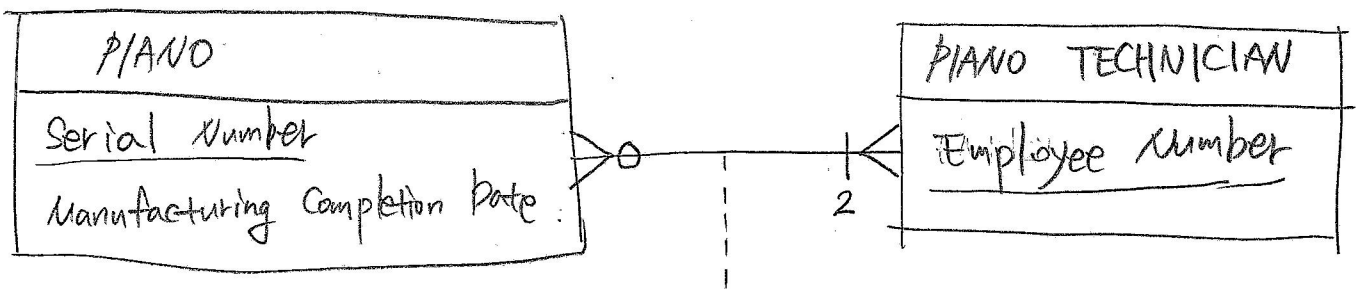
e.



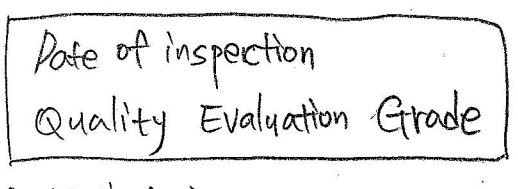
- ✓ binary relationship
- ✓ one to Many

- ✓ binary relationship
- ✓ One to Many

f.



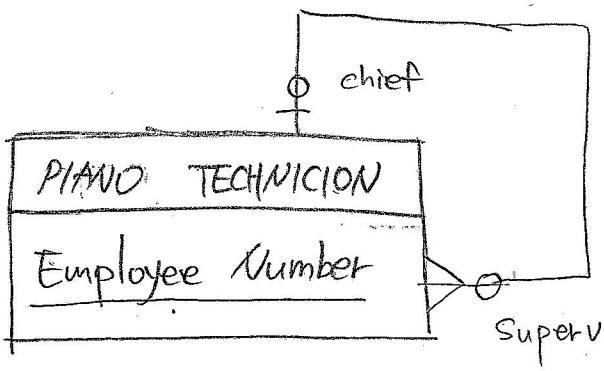
- ✓ binary relationship
- ✓ Many to Many



(attributes)

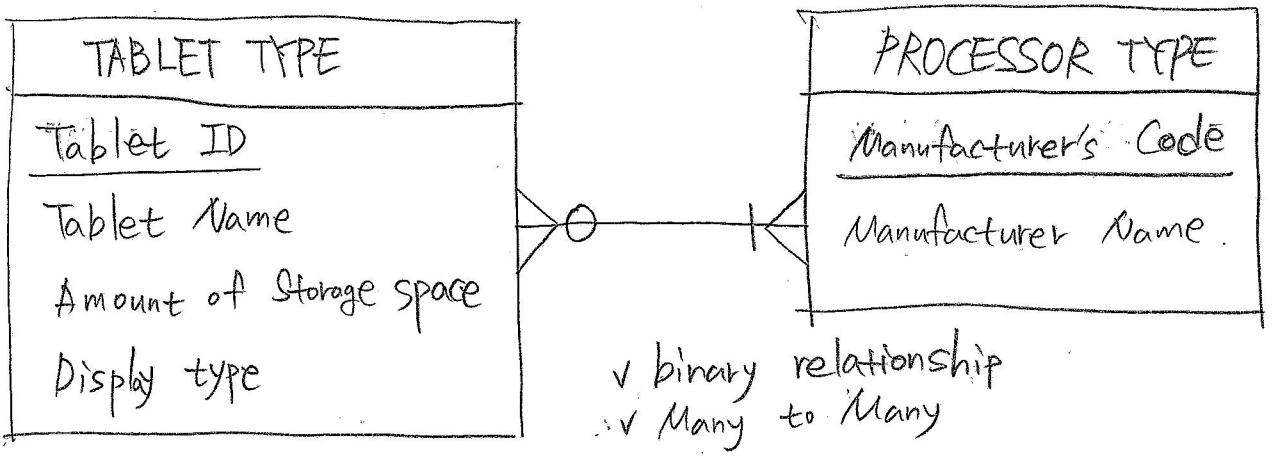
2-24

g.



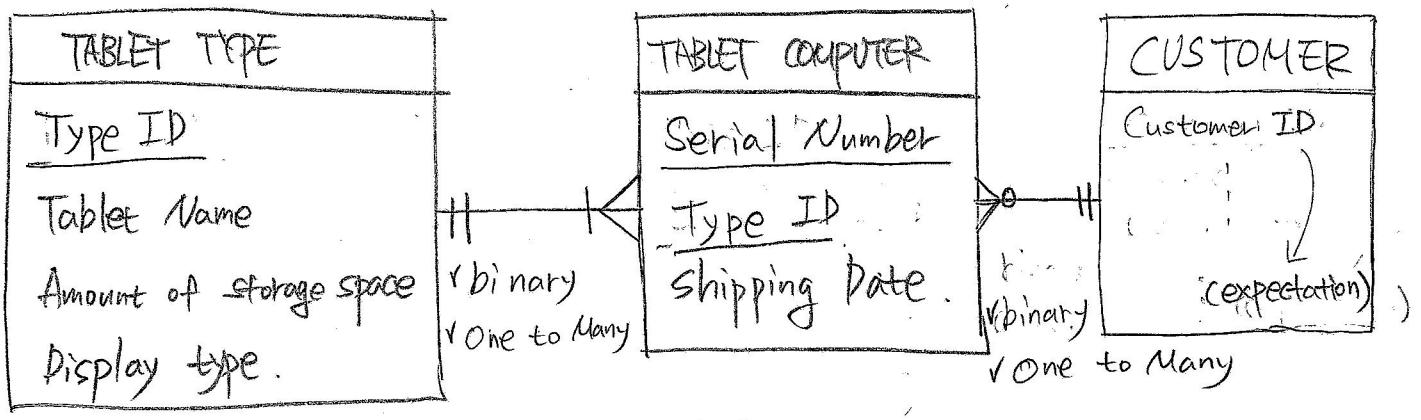
✓ unary relationship
✓ One to Many

h.



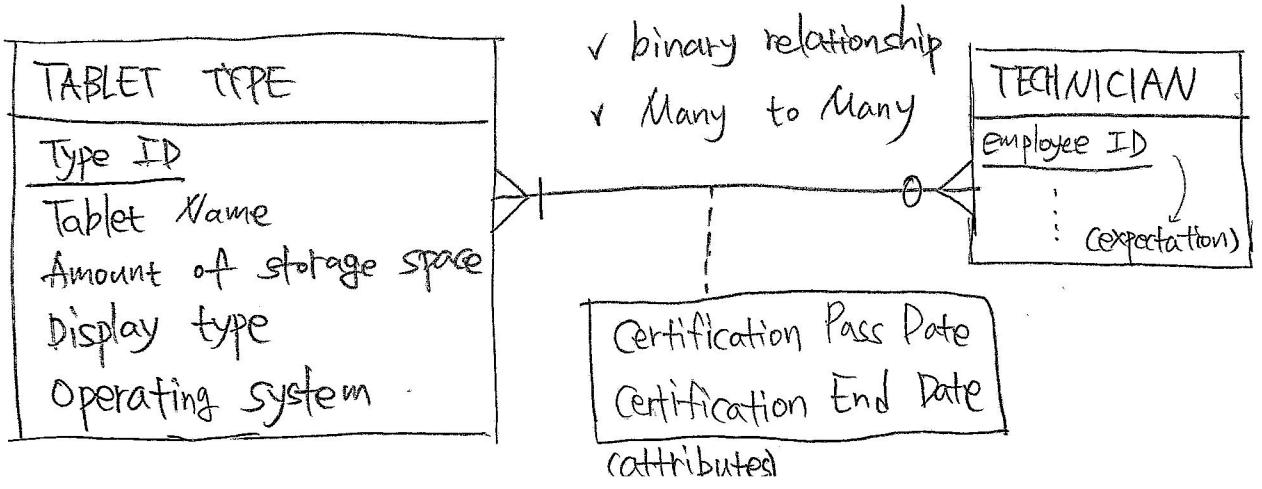
✓ binary relationship
✓ Many to Many

i.



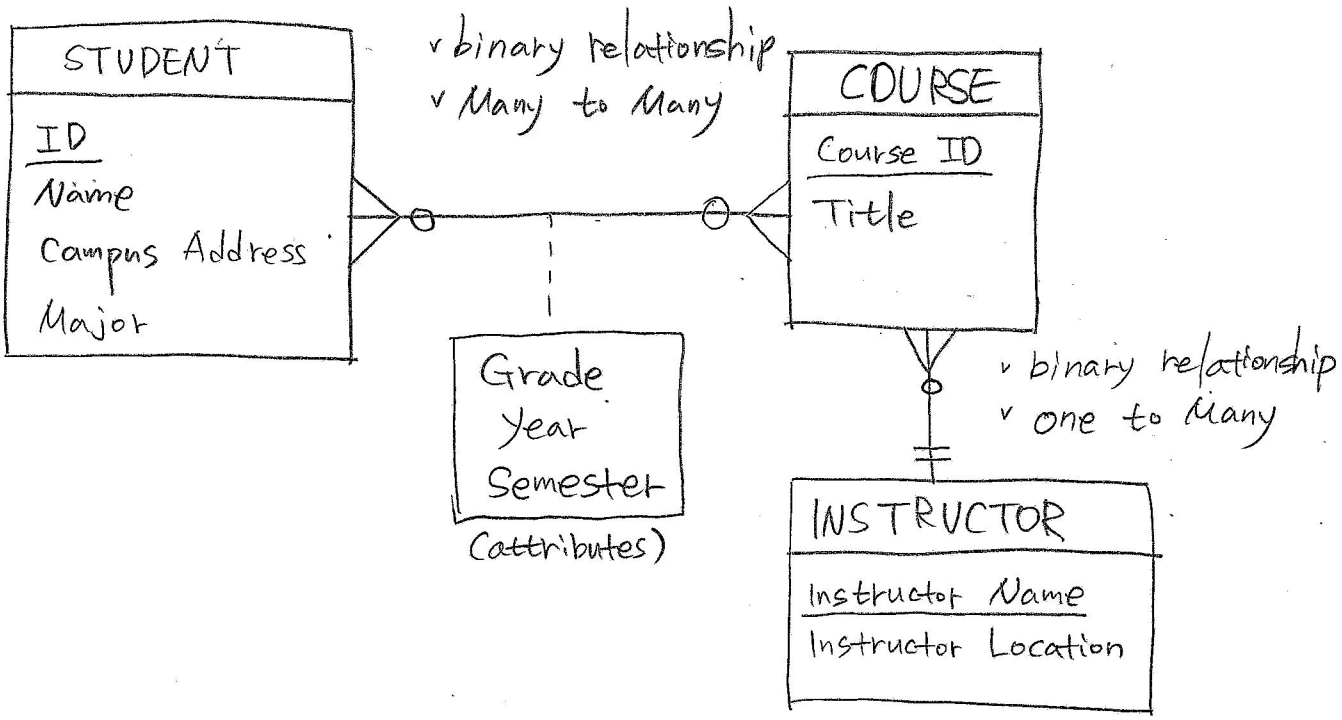
✓ binary
✓ One to Many
✓ binary
✓ One to Many

j.



✓ binary relationship
✓ Many to Many

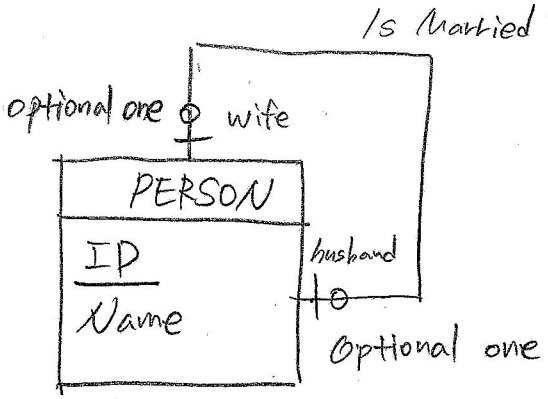
2-32



: Identifier attribute of student entity is 'student ID'.
Identifier attribute of Course entity is 'Course ID'
Identifier attribute of Instructor is 'Instructor Name'
Reason for choosing above identifier attributes is
their's unique in Figure 2-26 Grade report.
But in the real world, Instructor entity can have
the same instructor name. So in this case,
We could choose Instructor ID as it's identifier attribute.
because it is real unique.

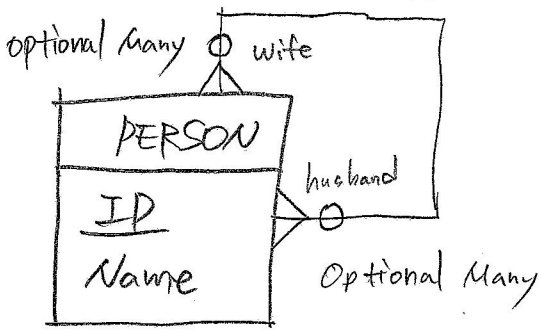
2-34

a.



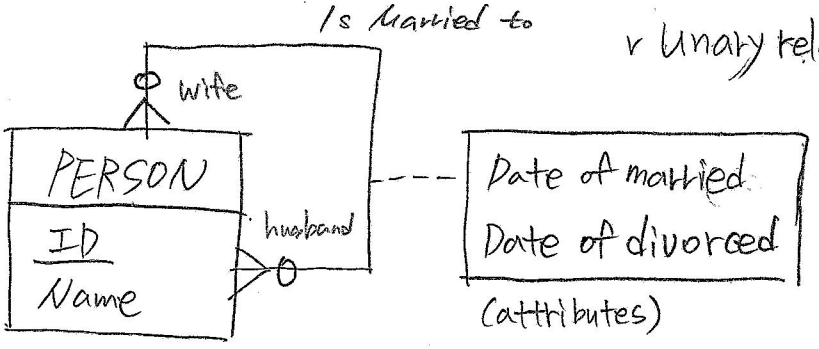
- Unary relationship (degree)
- One to One relationship (cardinality)
- Identifier of the person entity is 'ID'. And attribute is 'Name'

b.



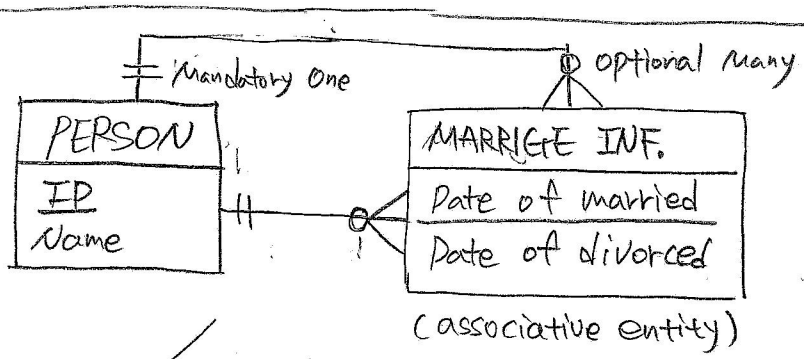
- Unary relationship
- Many to Many
- The appropriate cadinality is 'optional Many'.

c.



- Unary relationship with an attribute.
- In order to know dates (married, divorced), it needs to add attributes such as 'Date of married, divorced'

d.



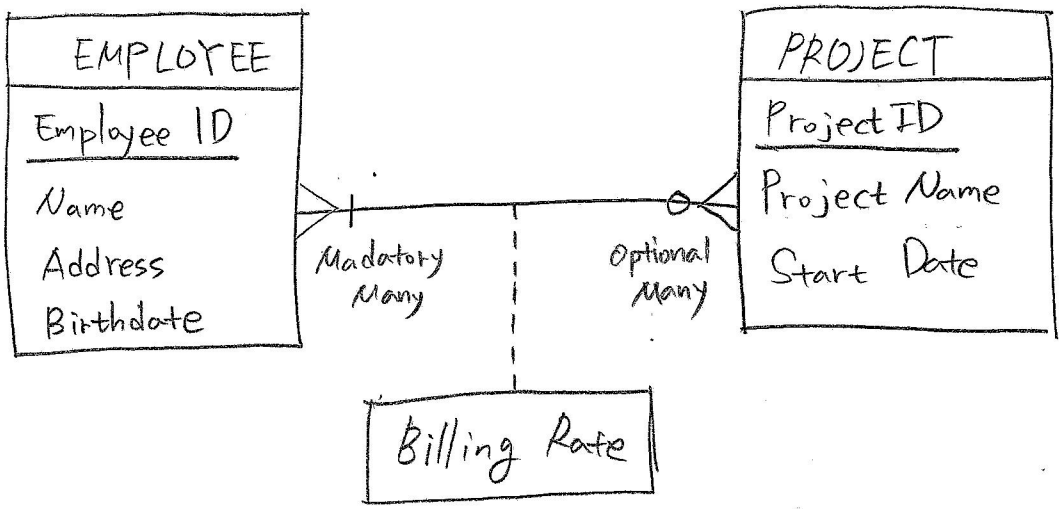
- two One to Many relationships with the associative entity.

e.

Exercise 'd'. ERD is sufficient for this situation. There are no restrictions found about the number of marriages that can be done by number of persons.

2-39

a.



Answer)

- I follow the guidelines to satisfy company needs.
- There is no any associative entity on my ERD. It has only new attribute.
- NO. Without assigning the Employee my ERD can not create any project.
- In order to solve Many to Many relationship on this binary entity, I added 'Billing Rate' attribute between two entities.

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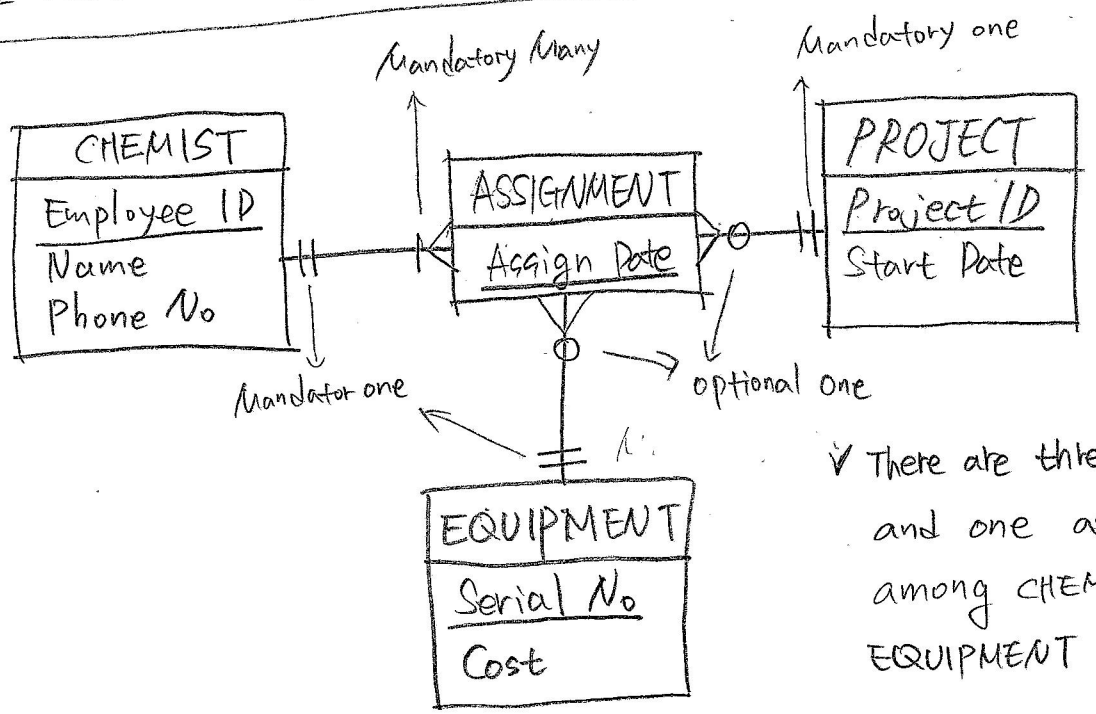
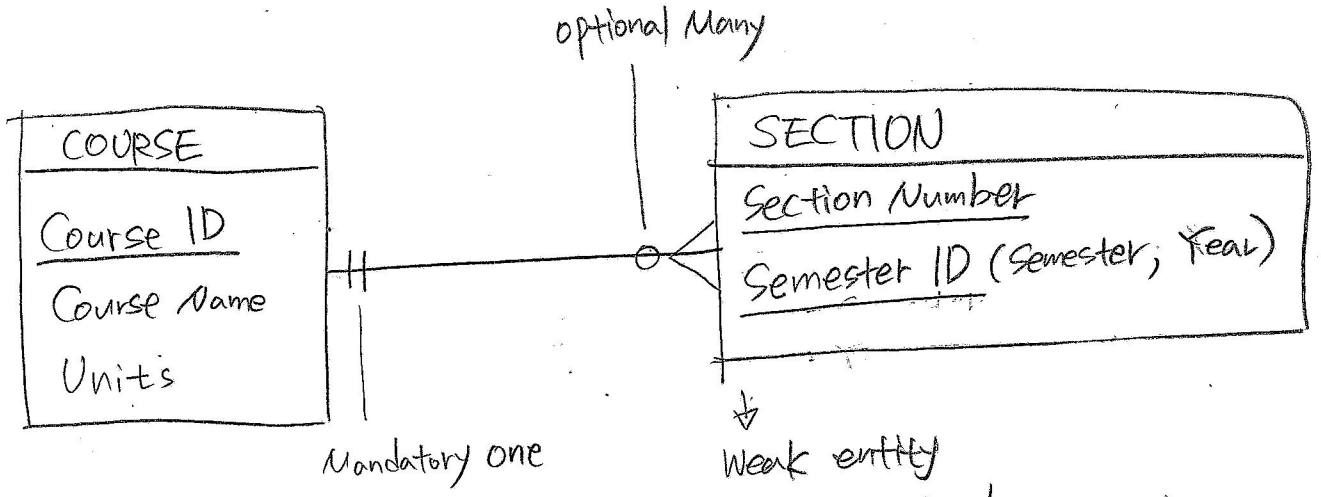
b.



✓ There are three entities and one associative entity among CHEMIST, PROJECT, EQUIPMENT entities.

2-39

c.



Because it has multi valued attribute
In order to resolve, We need to add attribute. then it will become single attribute.

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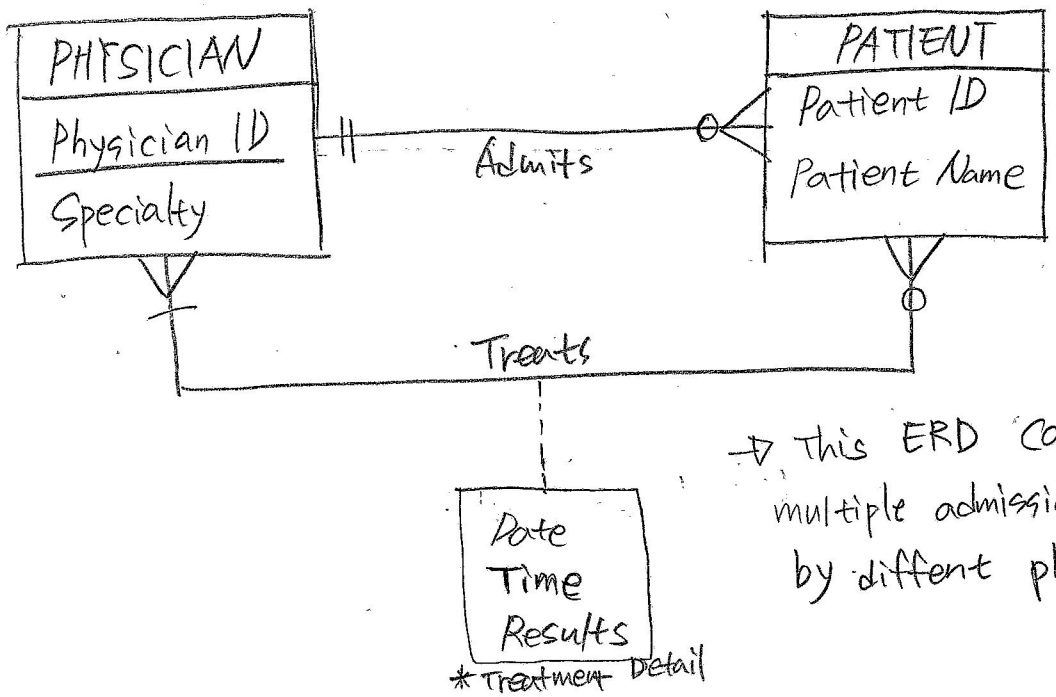
d.



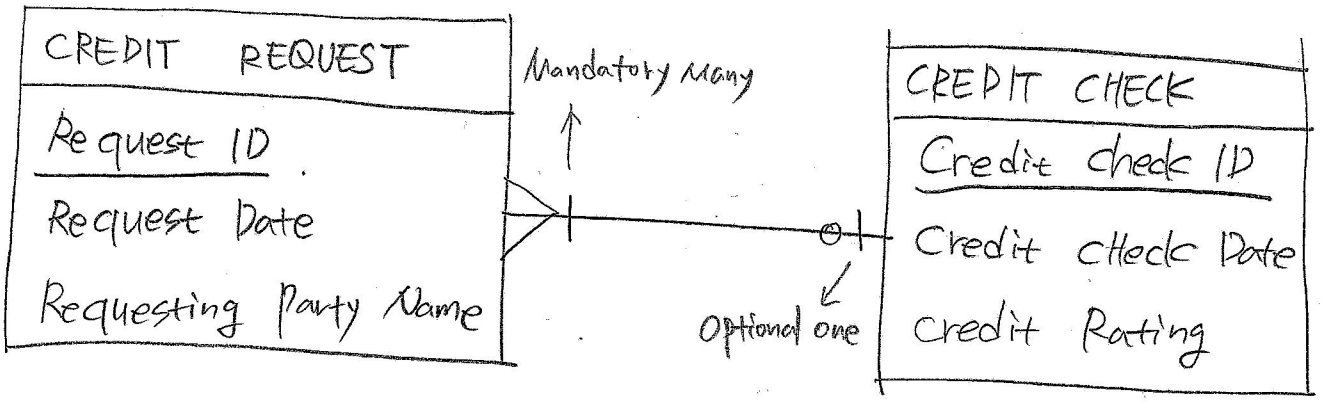
→ This ERD can not track multiple admissions over time by diffent physicians.

- I draw two degrees relationship such as Admits, Treats. Because patient should be treat by physician and physician can admit patient.
- This scenario don't have unique attribute on Treatment detail, so we can not associate entity.

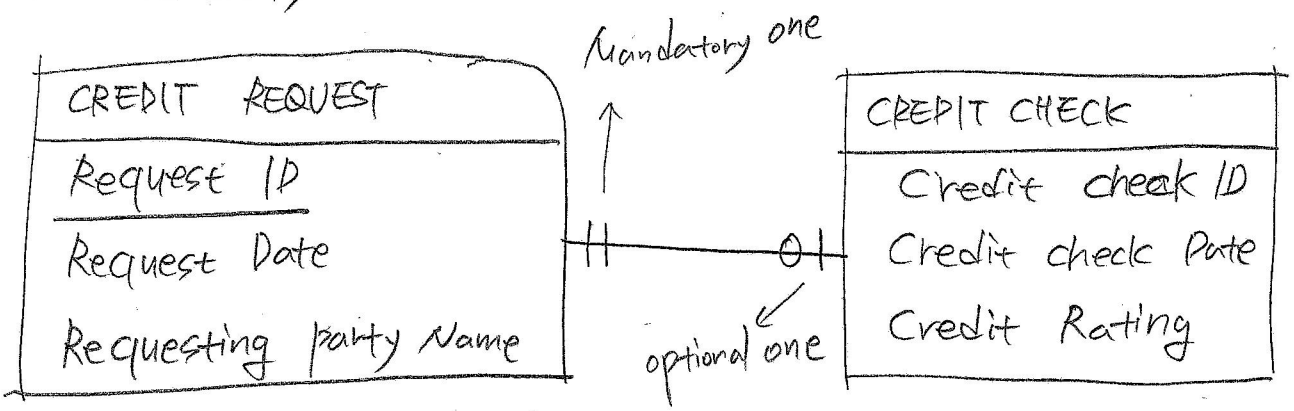
2-39

e.

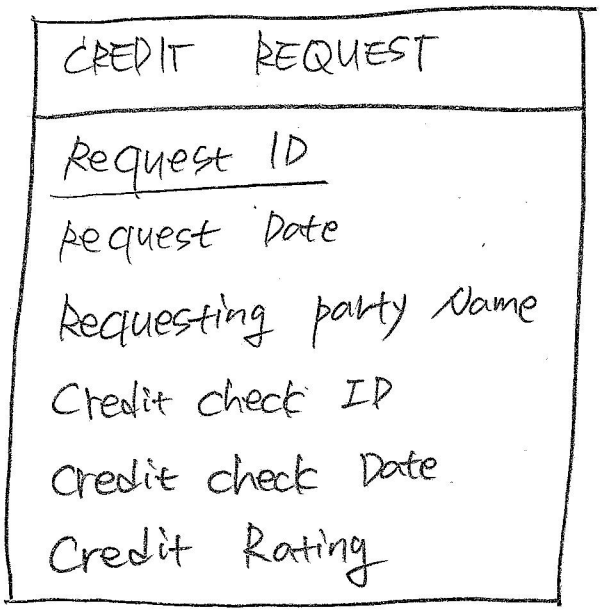
<1 situation>



<2 situation>



<3 situation>



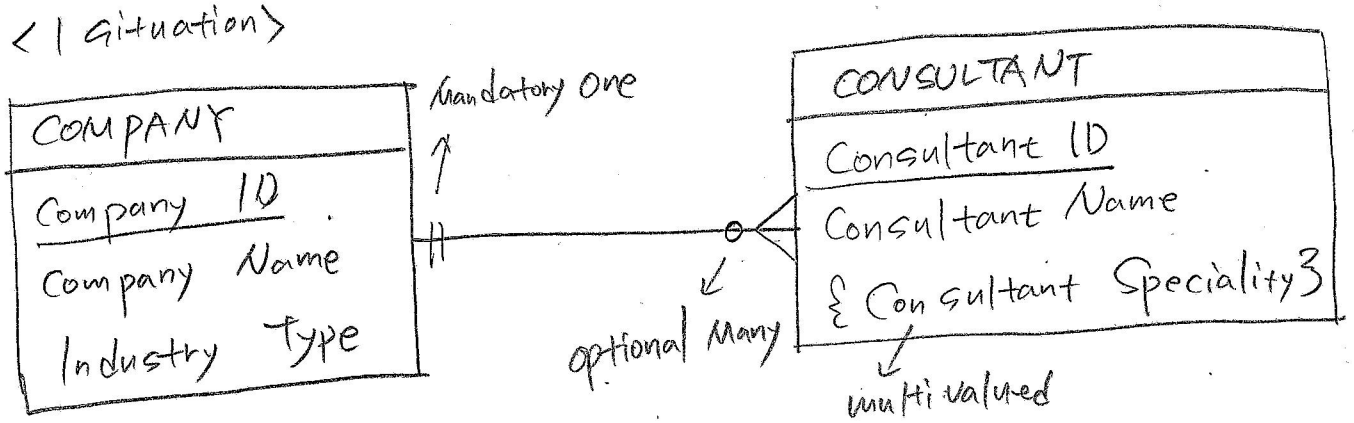
✓ I prefer 3 situation's entity type. because it is simple and easy to manage.

But there are some blank in credit check ID, Date, Rating attributes untill CREDIT CHECK is received.

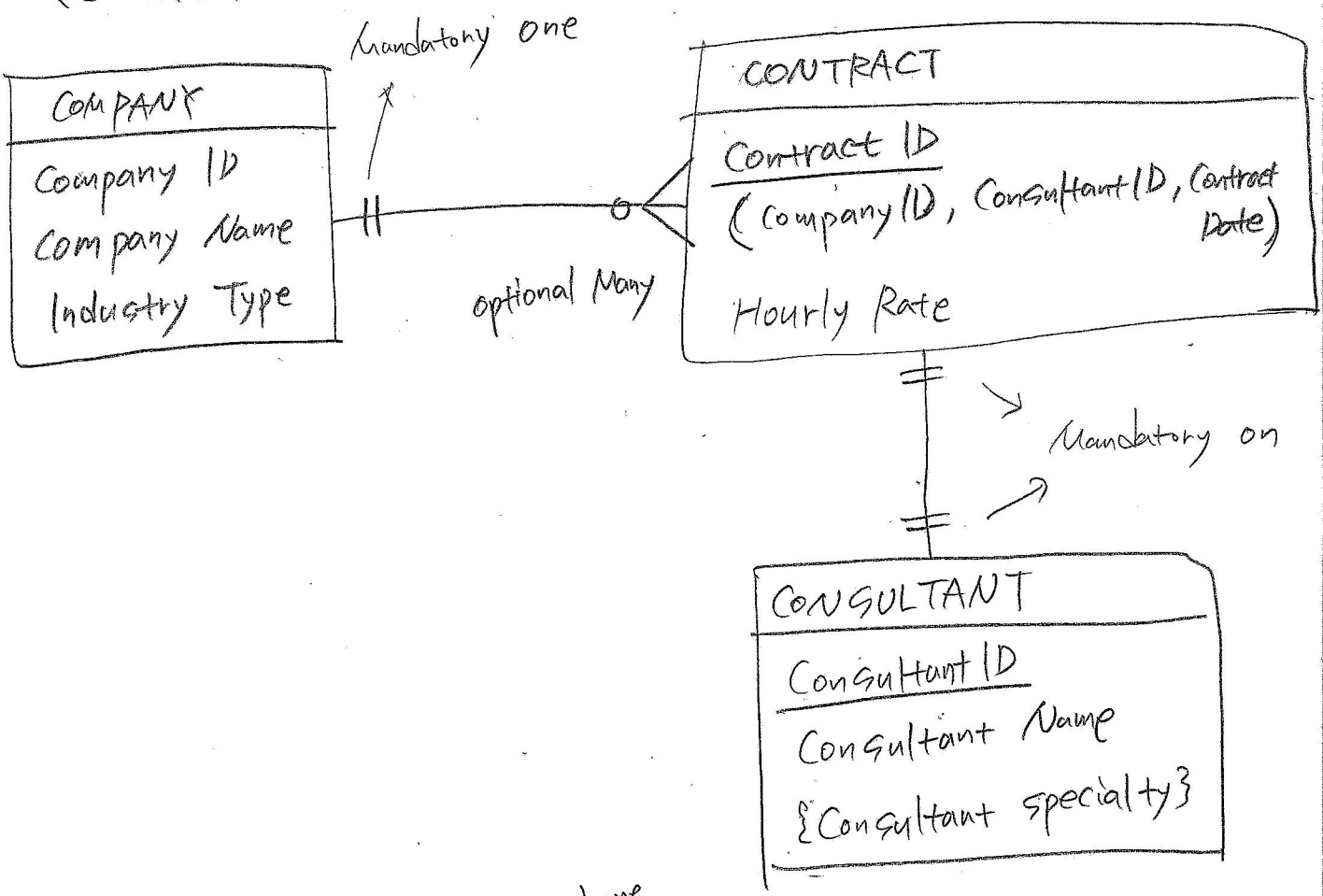
2-39

f.

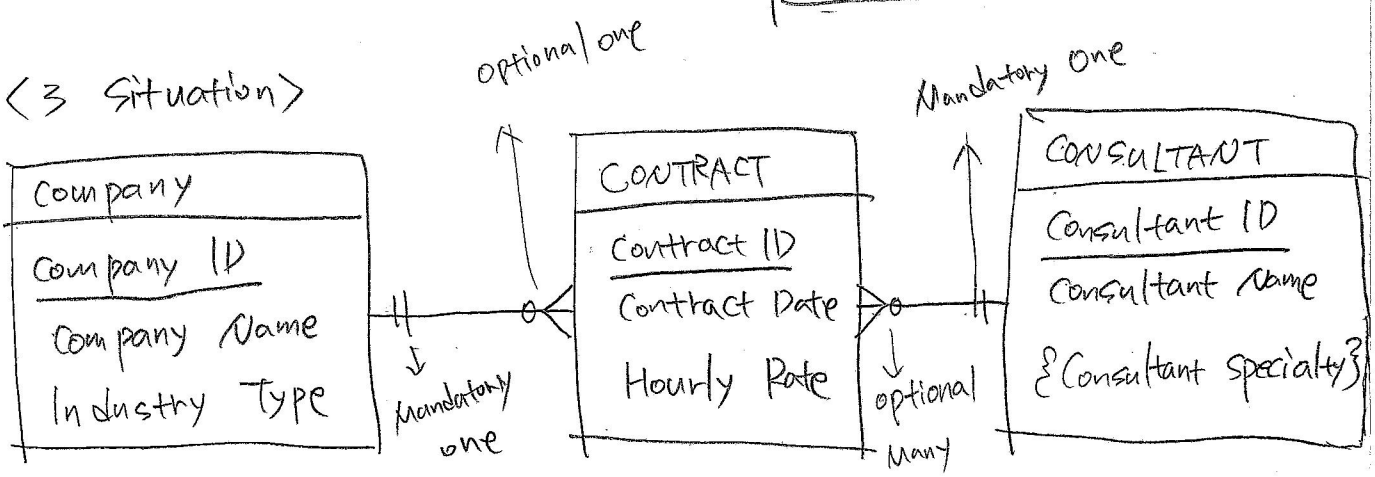
<1 situation>



<2 situation>

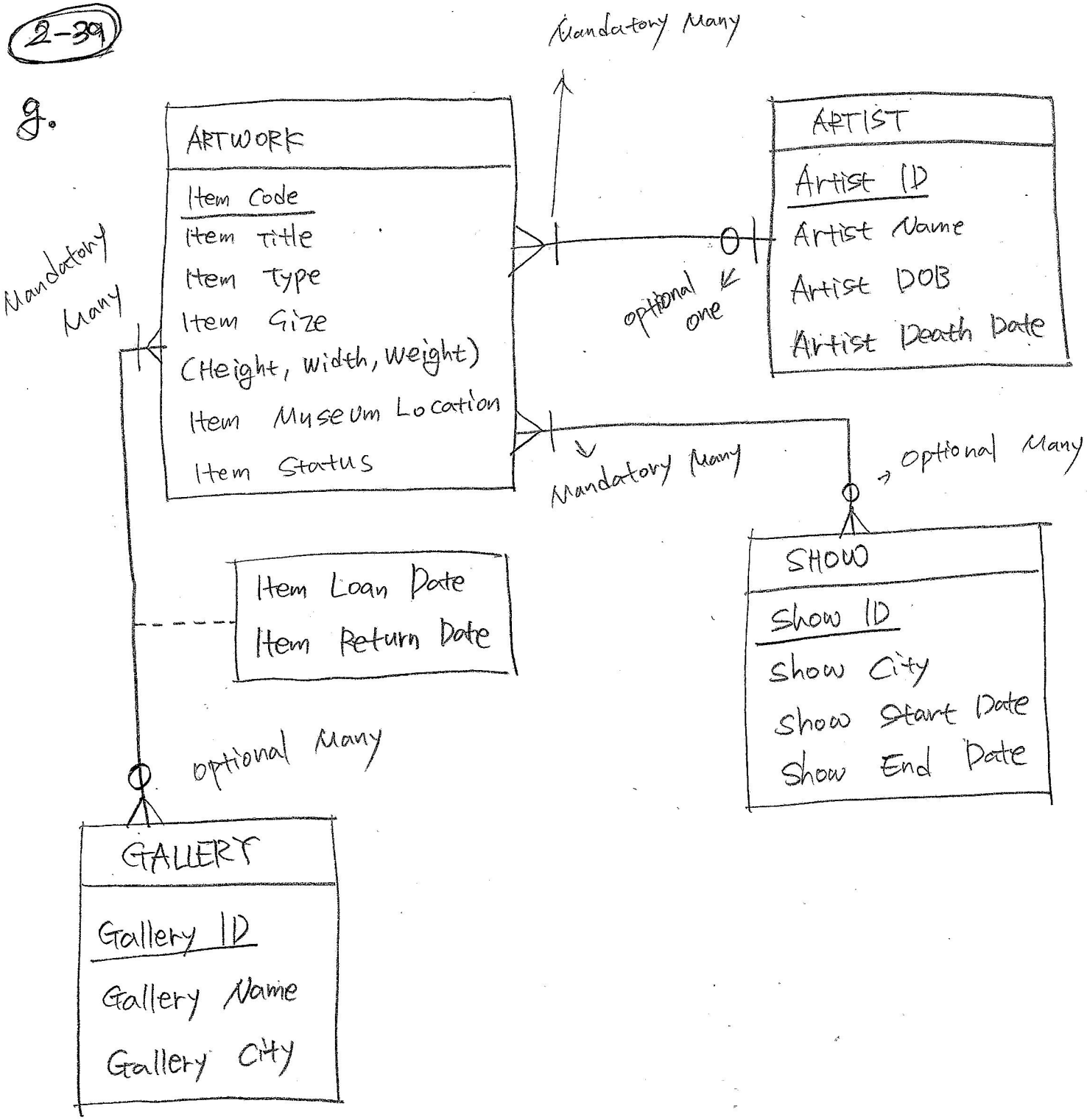


<3 Situation>



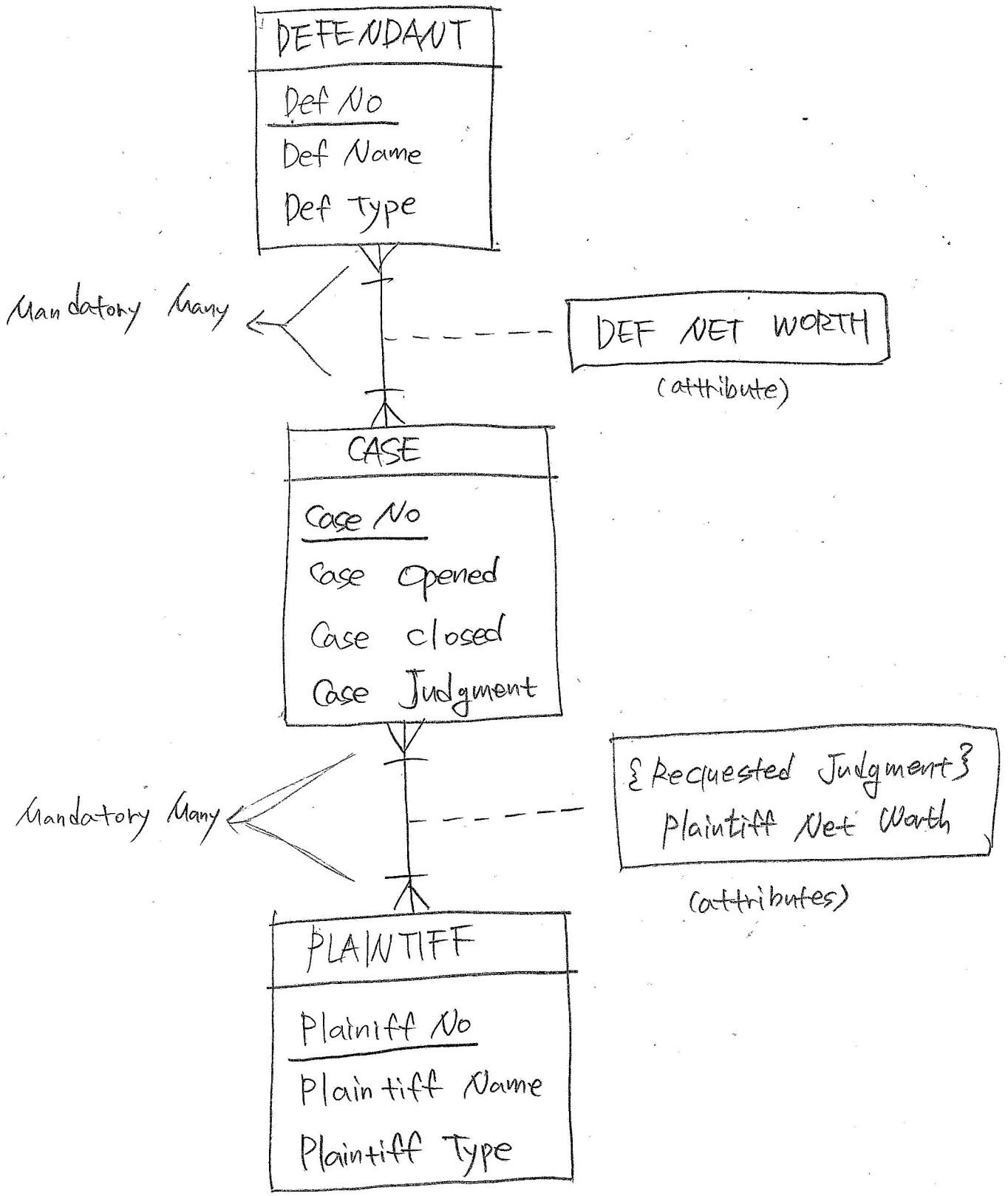
2-39

g.


Mandatory Many
ARTWORK
Item Code
Item Title
Item Type
Item Size
(Height, Width, Weight)
Item Museum Location
Item Status
ARTIST
Artist ID
Artist Name
Artist DOB
Artist Death Date
optional one
Mandatory Many
Mandatory Many
optional Many
Item Loan Date
Item Return Date
SHOW
Show ID
Show City
Show Start Date
Show End Date
optional Many
GALLERY
Gallery ID
Gallery Name
Gallery City

2-39

h.


DEFENDANT
Def No
Def Name
Def Type
Mandatory Many
DEF NET WORTH
(attribute)
CASE
Case No
Case Opened
Case closed
Case Judgment
Mandatory Many
{Requested Judgment}
Plaintiff Net Worth
(attributes)
PLAINTIFF
Plainiff No
Plaintiff Name
Plaintiff Type

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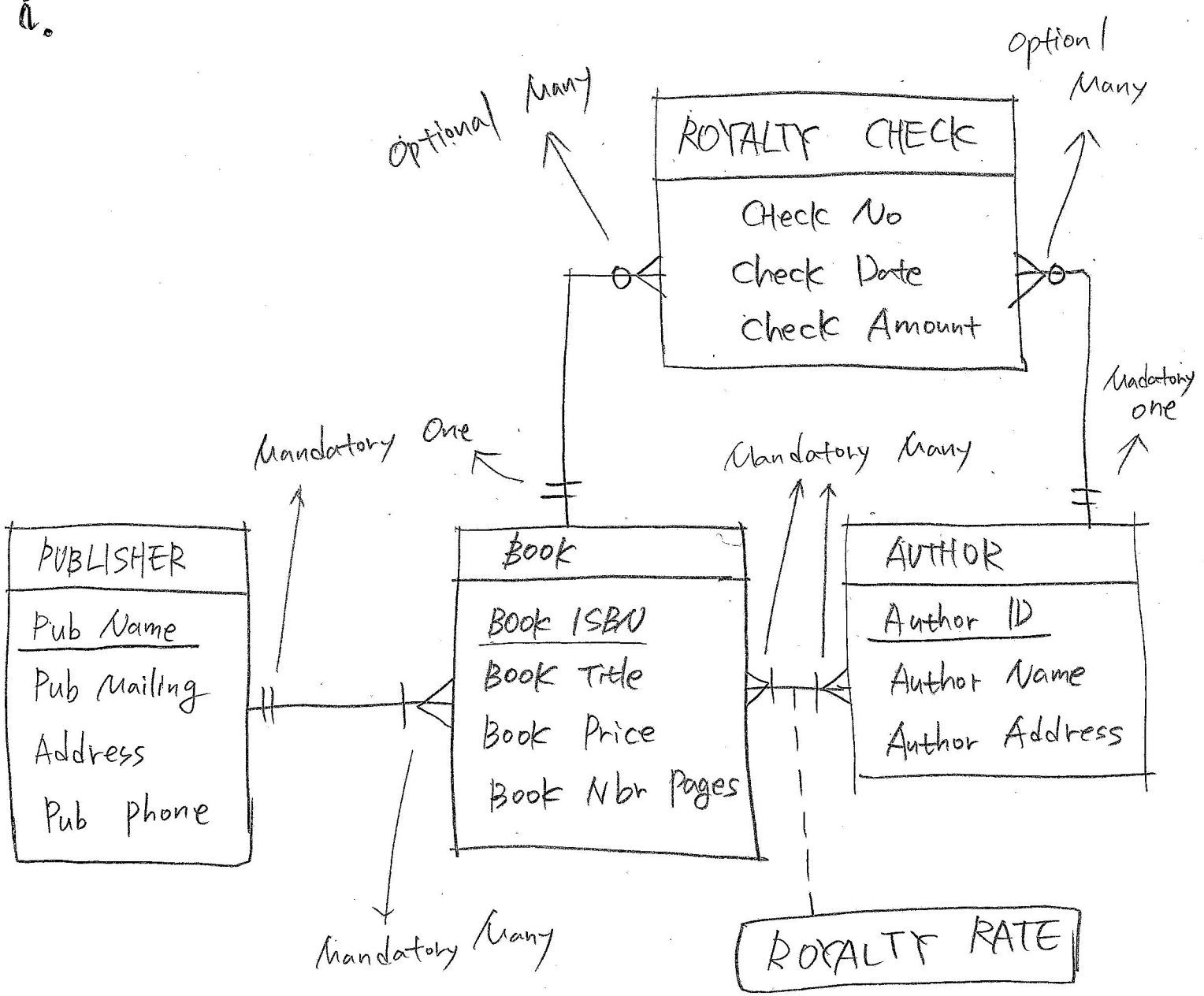
i.


optional Many
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ROYALTY CHECK
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Mandatory one
Mandatory One
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PUBLISHER
Pub Name
Pub Mailing Address
Pub phone
Book
Book ISBN
Book Title
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Book Nbr Pages
AUTHOR
Author ID
Author Name
Author Address
Mandatory Many
ROYALTY RATE