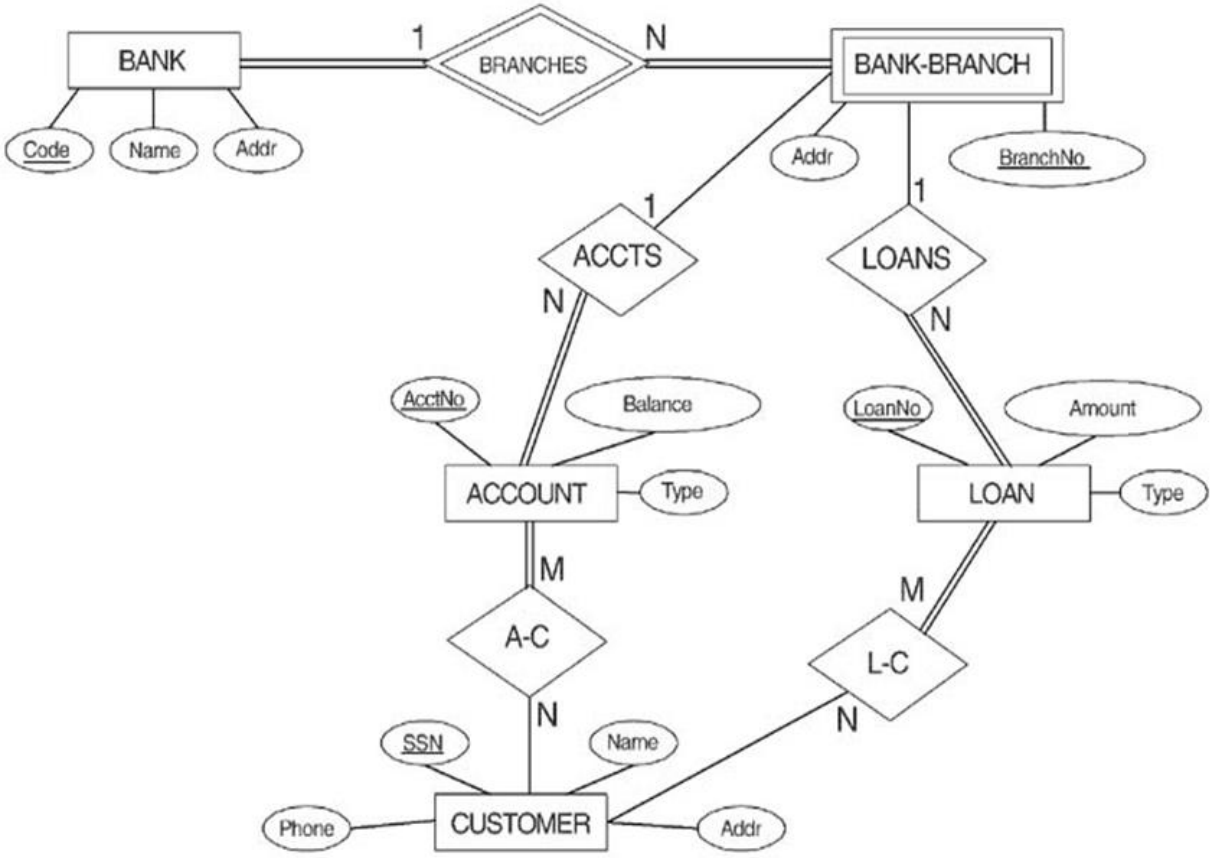
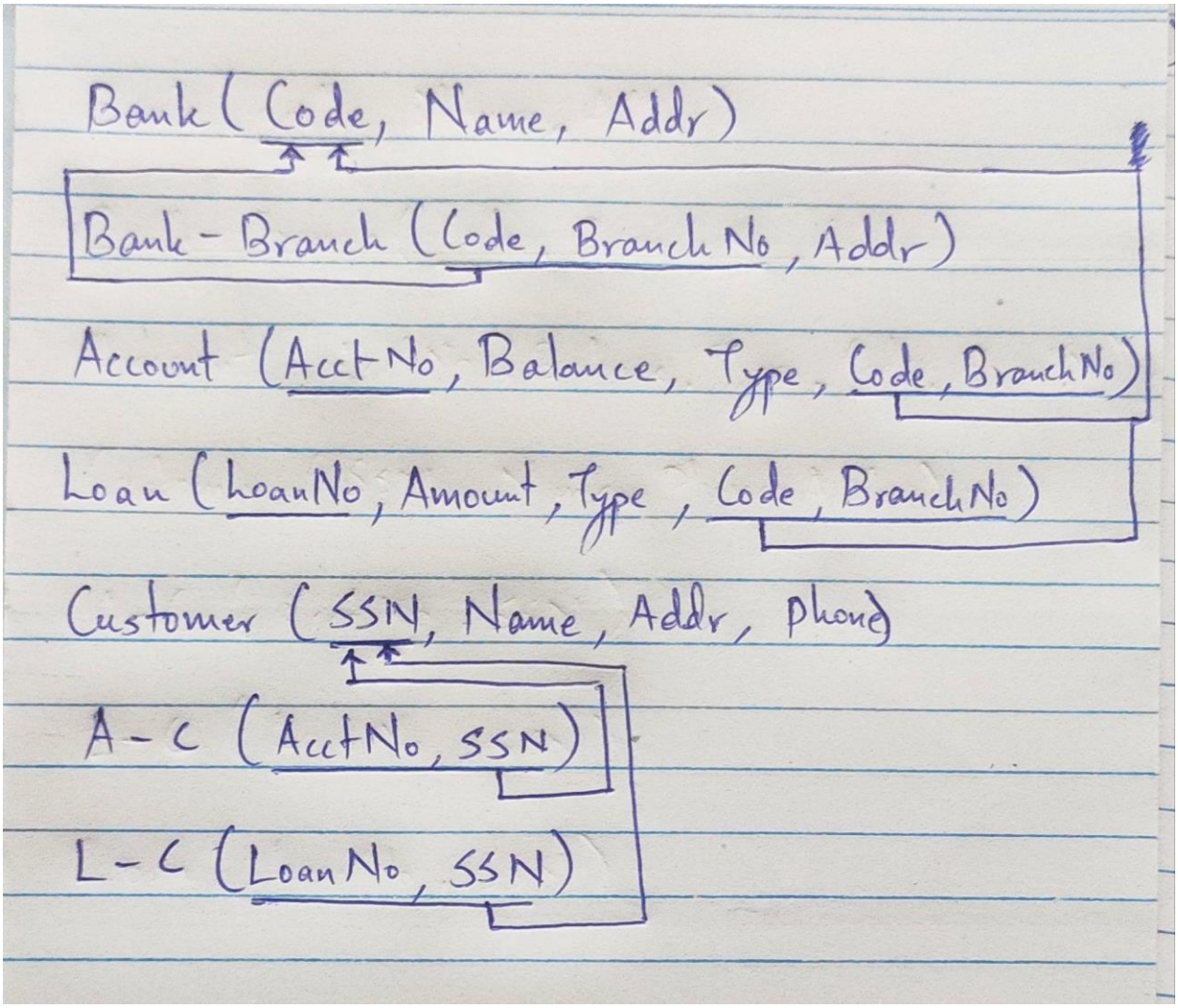
Name – SOUMYA BAIRAGYA

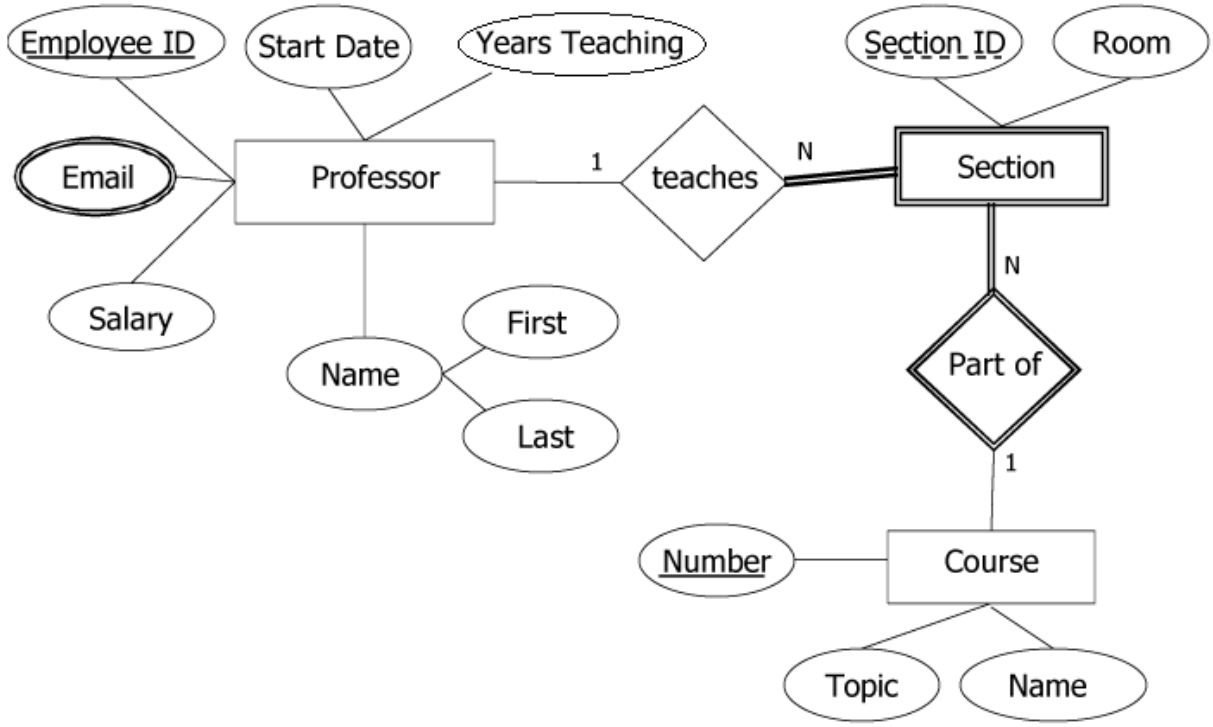
ER to Relational Models

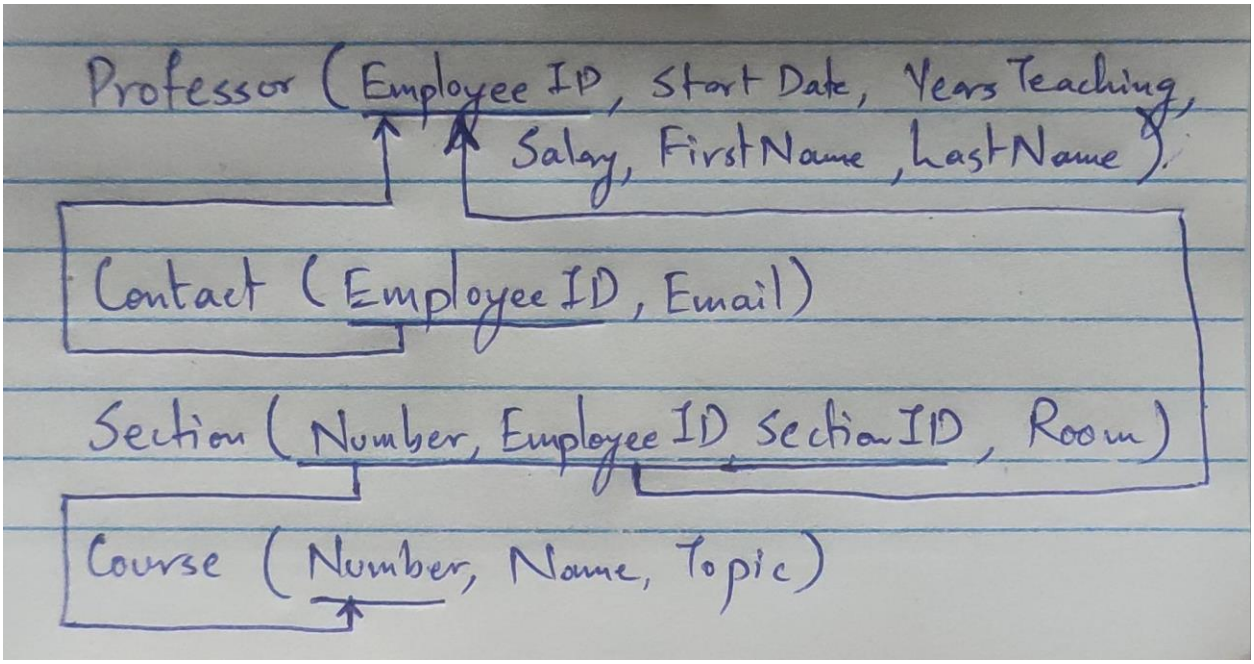
1.



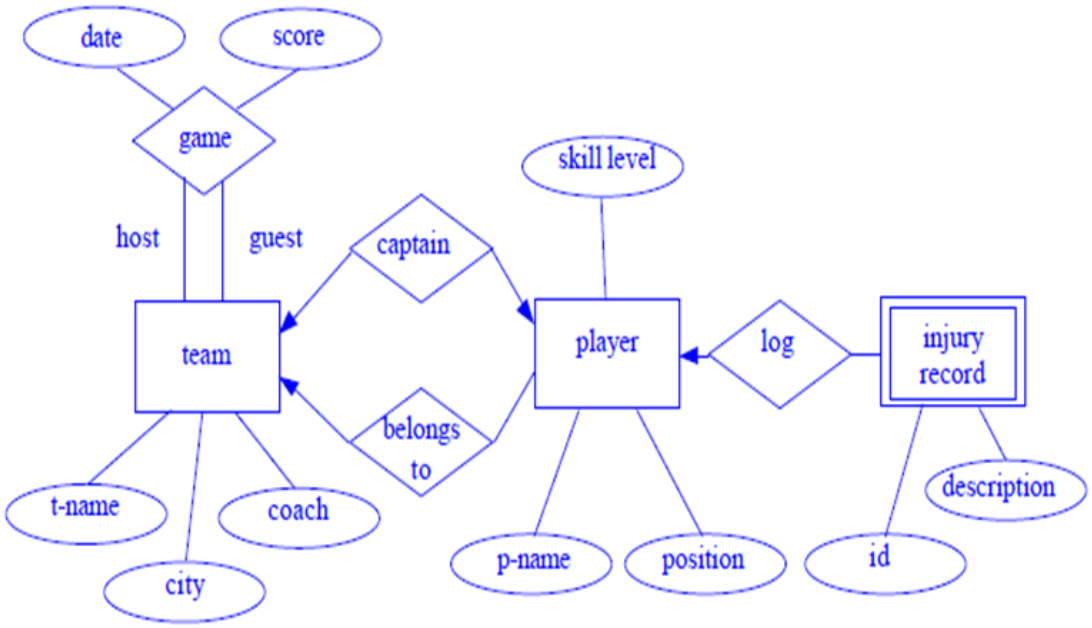

Bank (Code, Name, Addr)
Bank-Branch (Code, BranchNo, Addr)
Account (AcctNo, Balance, Type, Code, BranchNo)
Loan (LoanNo, Amount, Type, Code, BranchNo)
Customer (SSN, Name, Addr, phone)
A-C (AcctNo, SSN)
L-C (LoanNo, SSN)

2.


Employee ID
Start Date
Years Teaching
Section ID
Room
Email
Professor
1
teaches
N
Section
Salary
Name
First
Last
N
Part of
1
Number
Course
Topic
Name


Professor (Employee ID, Start Date, Years Teaching, Salary, FirstName, LastName)
Contact (Employee ID, Email)
Section (Number, Employee ID, SectionID, Room)
Course (Number, Name, Topic)

3.



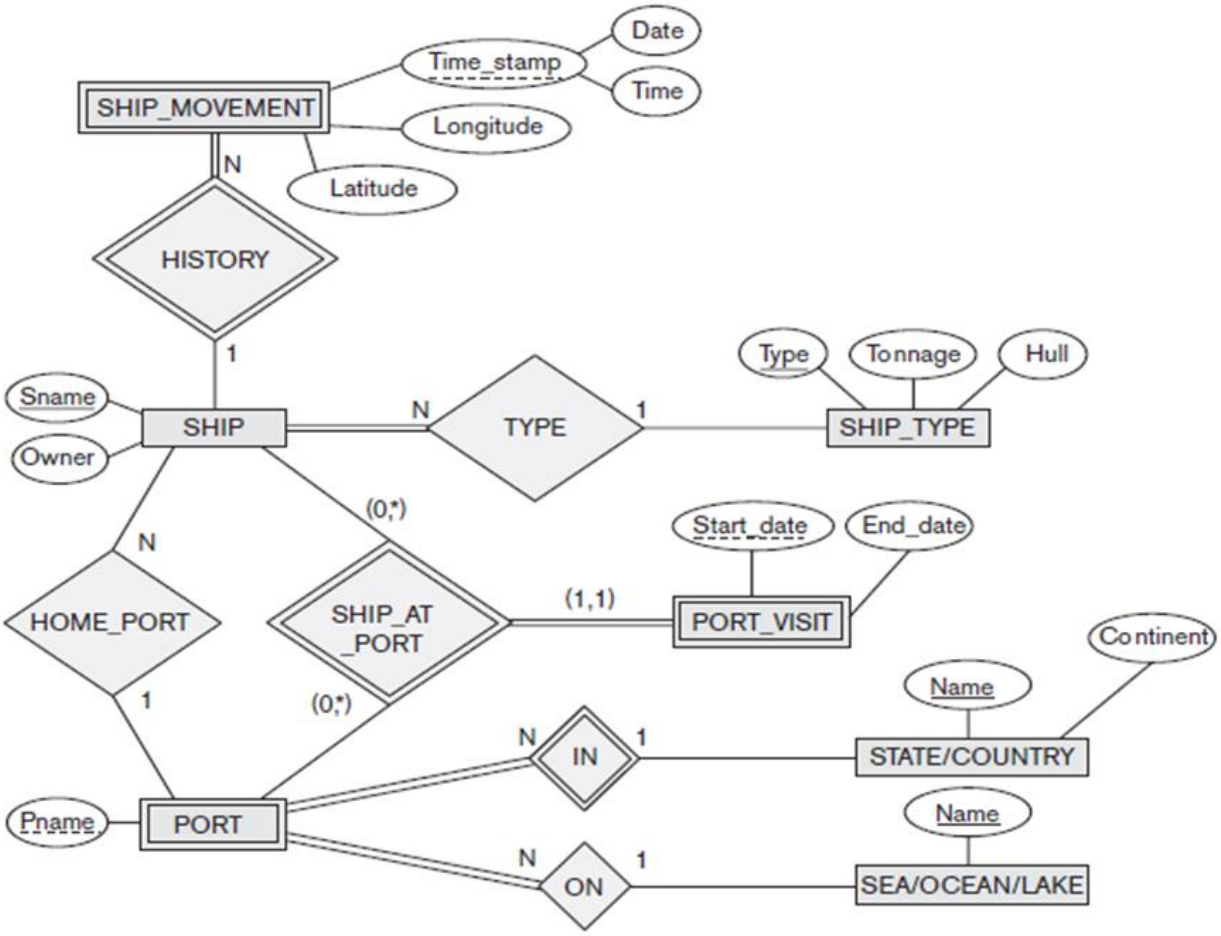
Team (t-name, captain, coach, city)

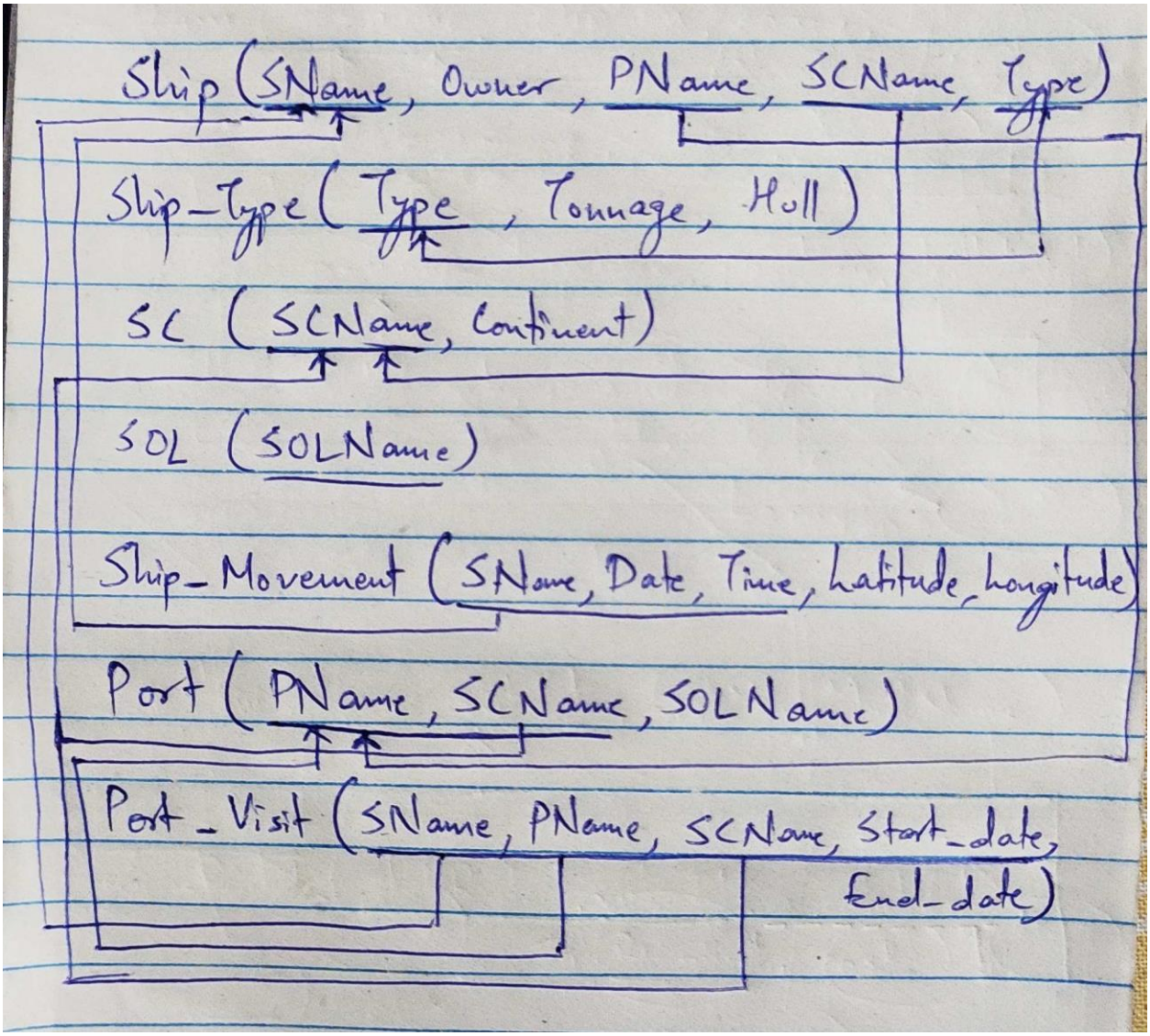
Game (date, score, host, guest)

Player (p-name, t-name, position, skill level)

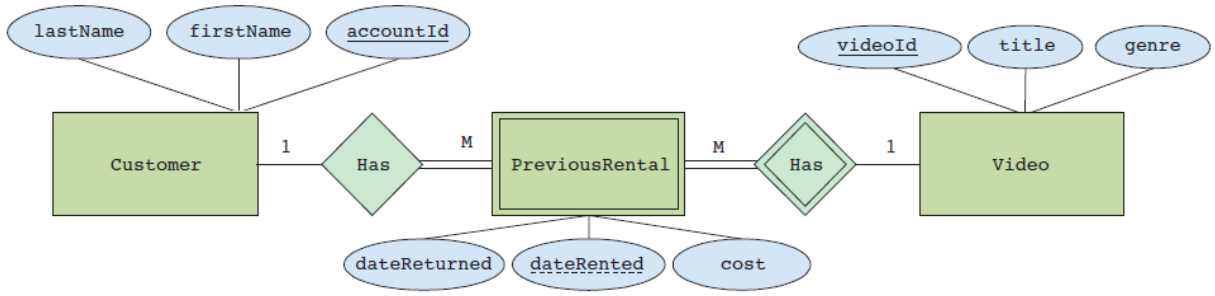
Injury Record (id, p-name, description)

4.


Date
Time_stamp
Time
SHIP_MOVEMENT
Longitude
Latitude
N
HISTORY
1
Type
Tonnage
Hull
Sname
SHIP
N
TYPE
1
SHIP_TYPE
Owner
(0,*)
Start_date
End_date
N
HOME_PORT
SHIP_AT
_PORT
(1,1)
PORT_VISIT
Continent
Name
1
(0,*)
N
IN
1
STATE/COUNTRY
Pname
PORT
Name
N
ON
1
SEA/OCEAN/LAKE


Ship (SName, Owner, PName, SCName, Type)
Ship_Type (Type, Tonnage, Hull)
SC (SCName, Continent)
SOL (SOLName)
Ship_Movement (SName, Date, Time, latitude, longitude)
Port (PName, SCName, SOLName)
Port_Visit (SName, PName, SCName, Start_date, End_date)

5.



Based on the above E-R diagram, answer the following questions:

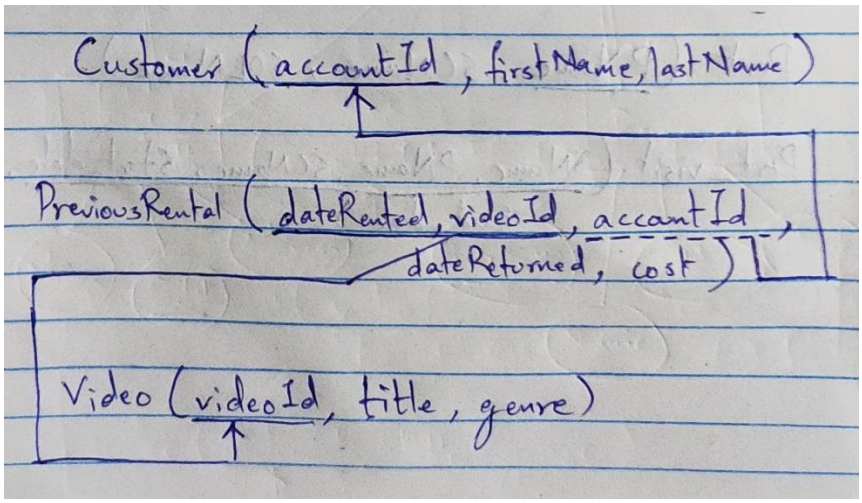
i. Name the strong and weak entity sets.
   a. Strong – Customer, Video
      Weak - PreviousRental

ii. Which is the identifying entity set, primary key and discriminator for the weak entity set?
   a. Identifying Entity Set – Video
      Primary Key – videoId, dateRented
      Discriminator - dateRented

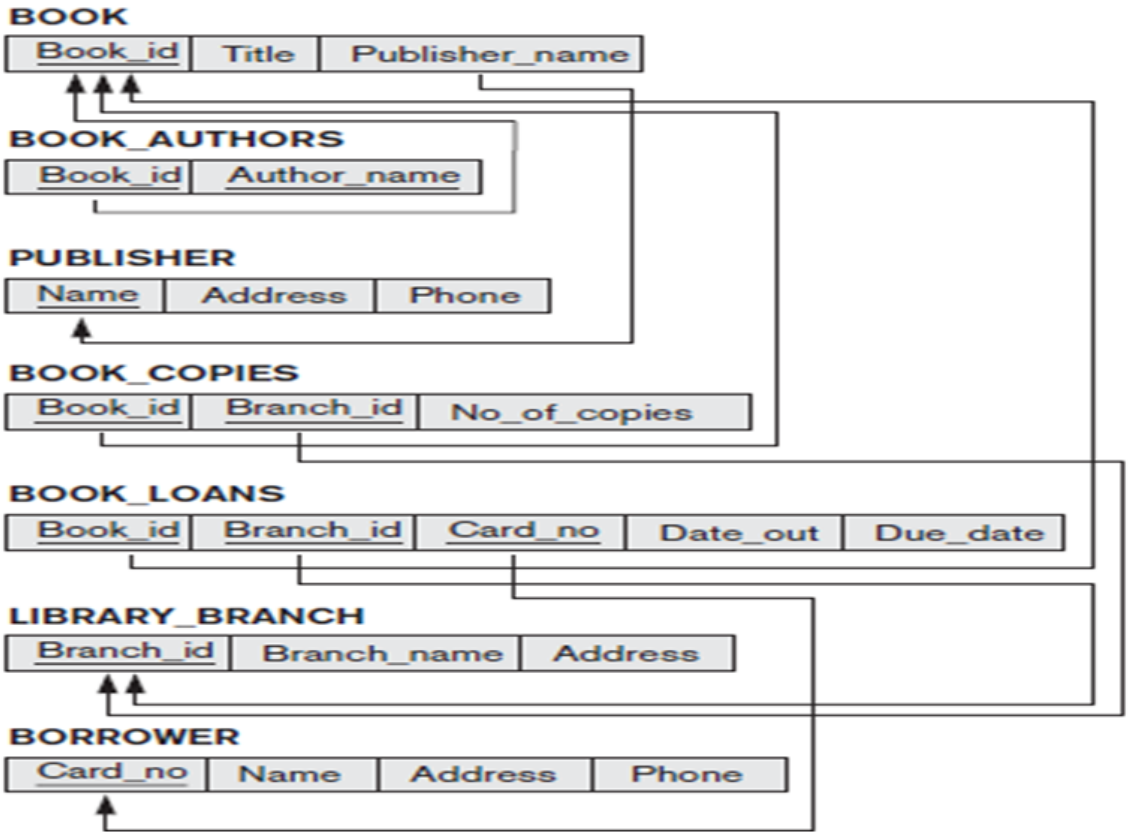
iii. Name entity sets with total and partial participation in the relationship set.
   a. Total Participation – PreviousRental
      Partial Participation – Customer, Video

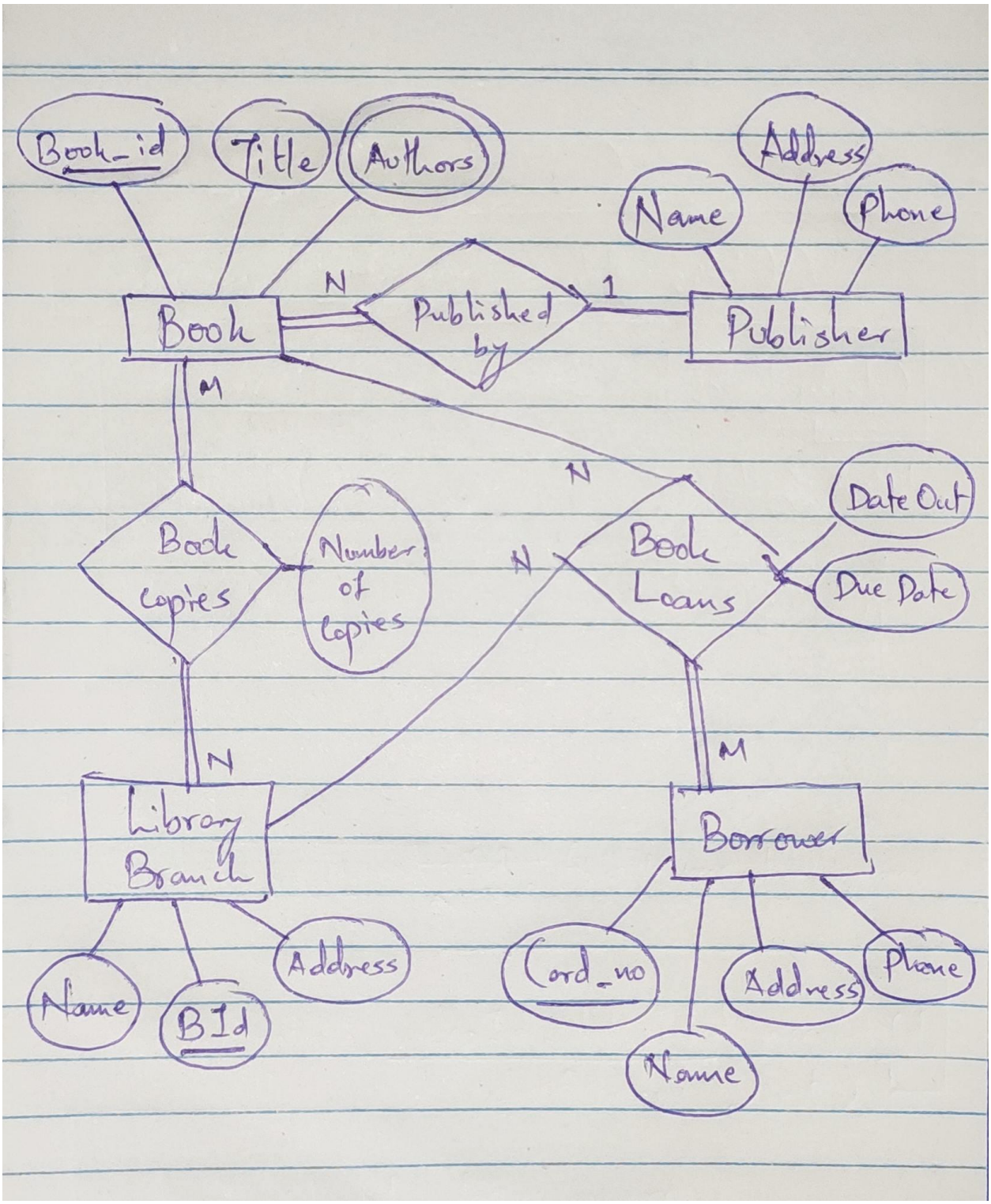
iv. Draw schema diagram.

a.



6. Map the relational schema in Figure into an ER schema




Book_id
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Authors
Book
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Published by
1
Publisher
Name
Address
Phone
M
N
Book Copies
Number of Copies
Book Loans
Date Out
Due Date
N
M
Library Branch
Borrower
Name
BId
Address
Card_no
Address
Phone
Name