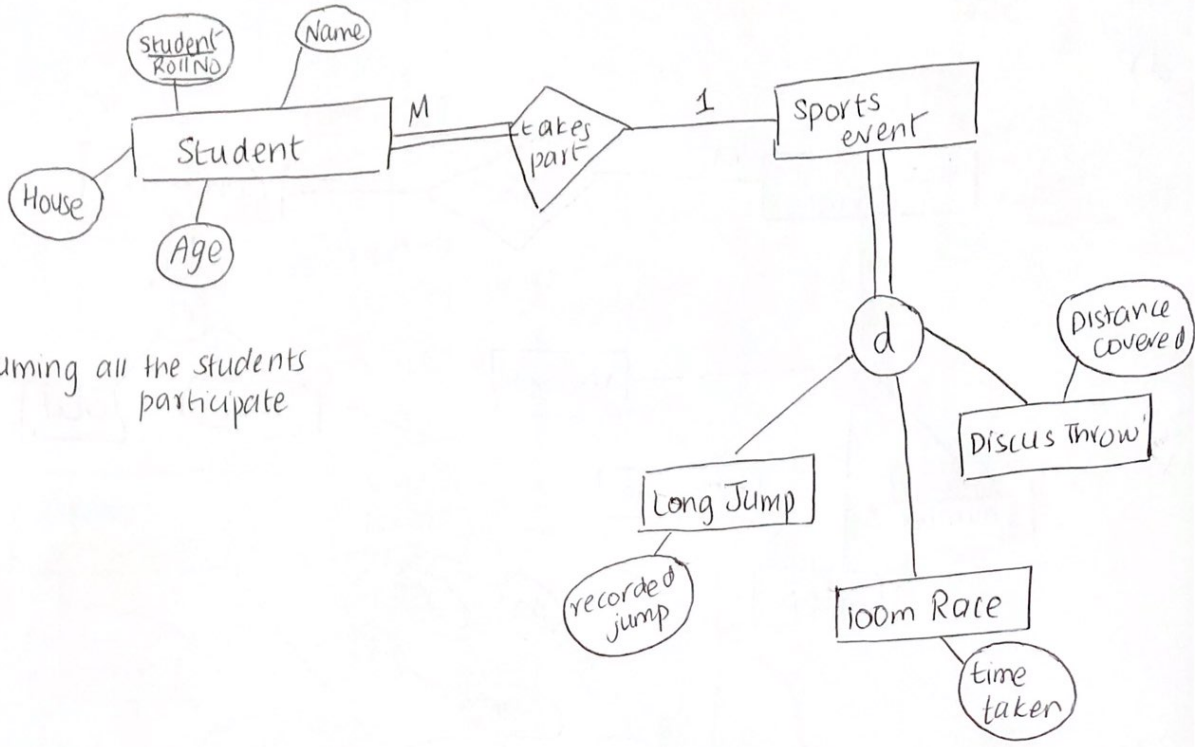
Database Systems
Assignment 7

Riva Nouman Khan
19L-1117

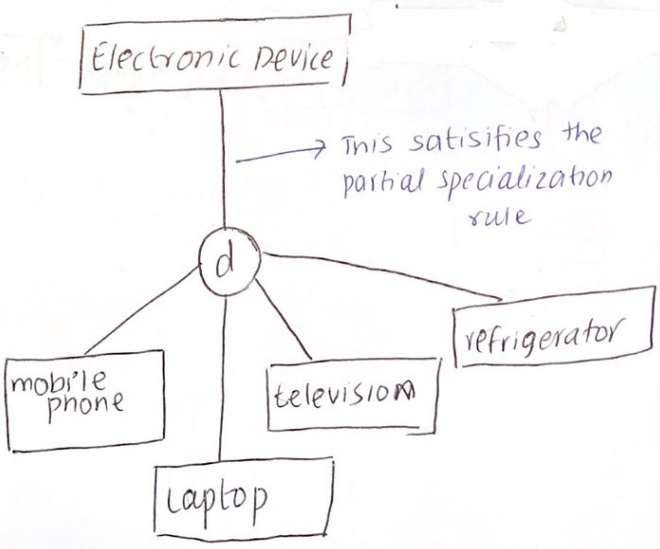
Q1:



assuming all the students participate

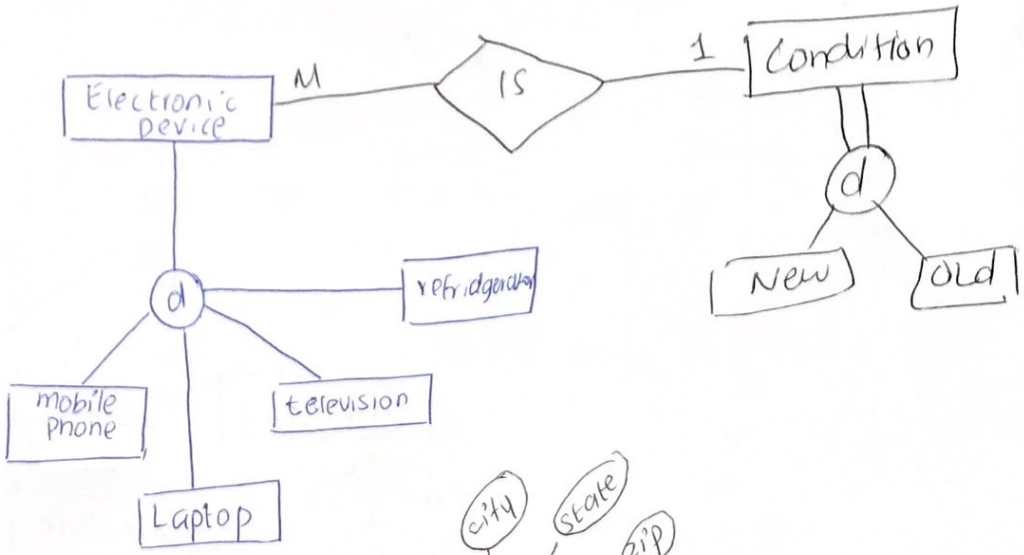
Q:2 a) Yes, it is possible because all these different electronic devices have common attributes which means these are sub classes and 'electronic device' is the super class

b)

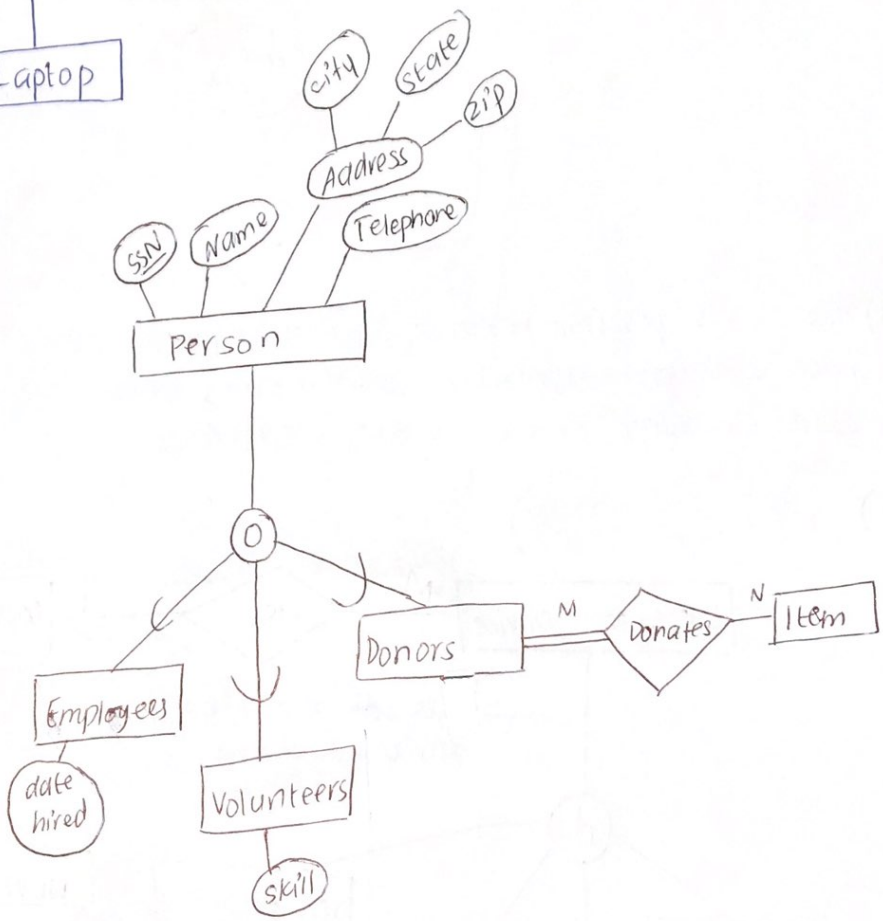


c) When all the possible electronic devices are mentioned in the hierarchy then it will satisfy the complete specialization rule. (All electronic devices imaginable)

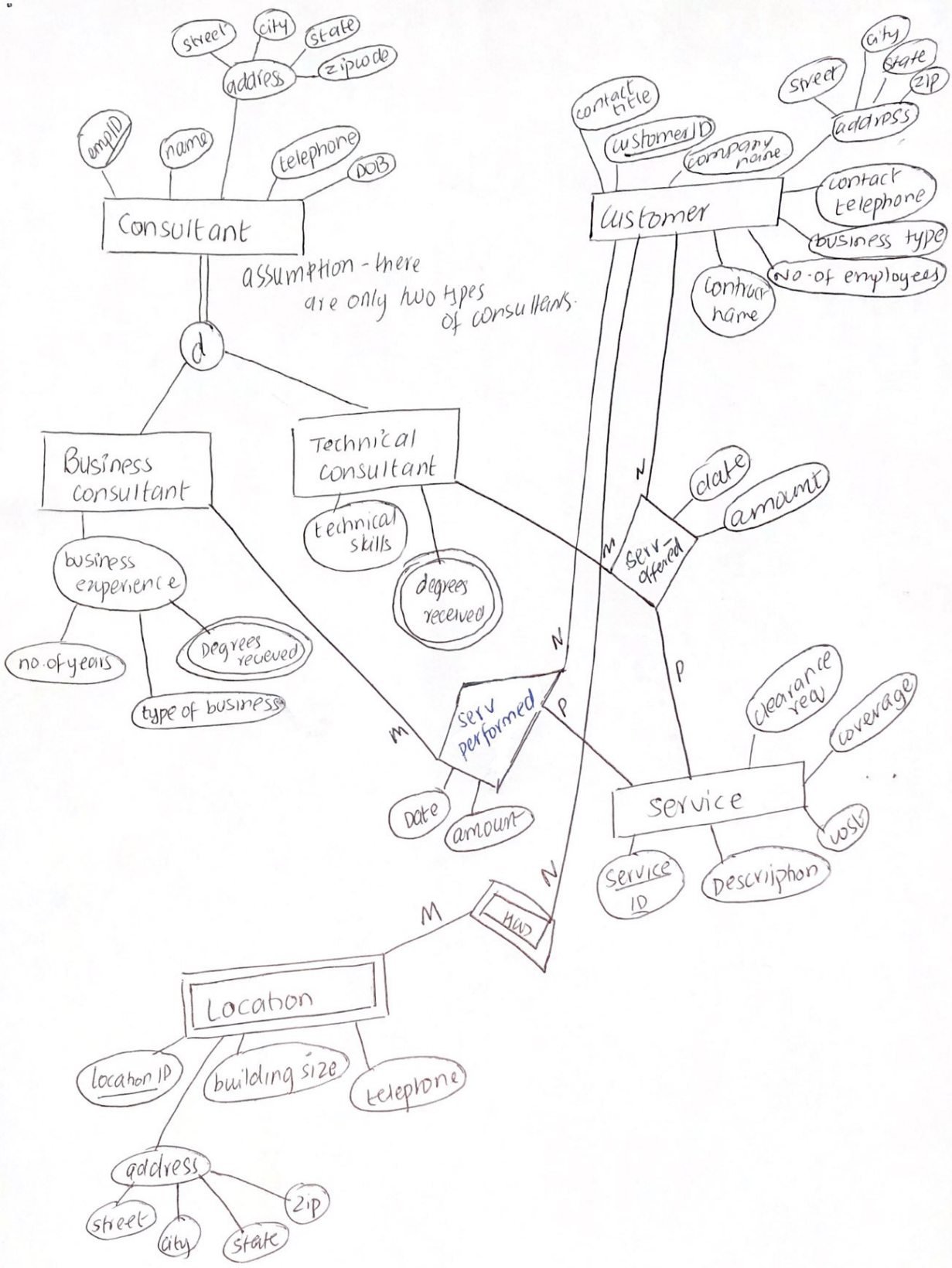
d)



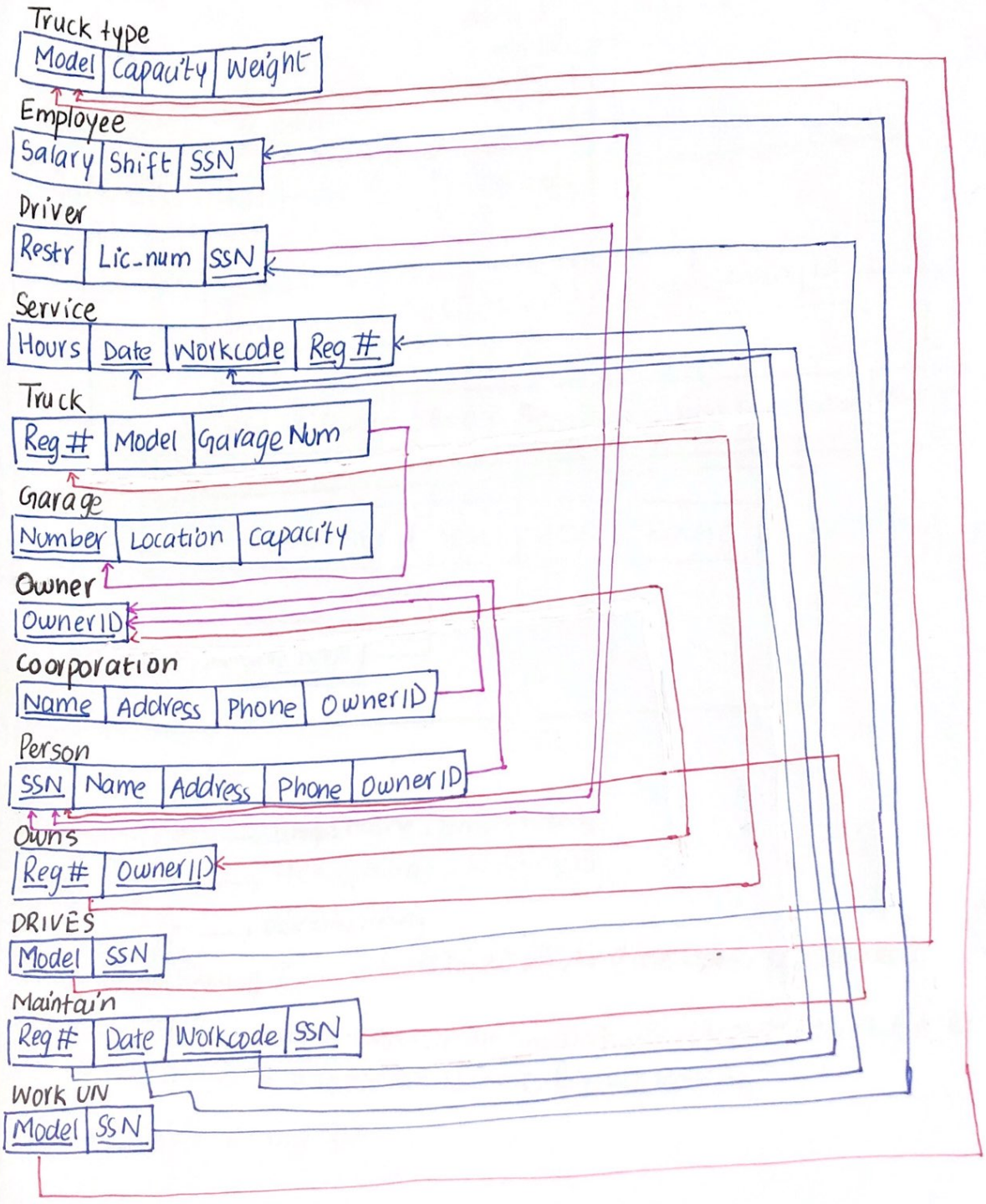
Q3:



Q4:

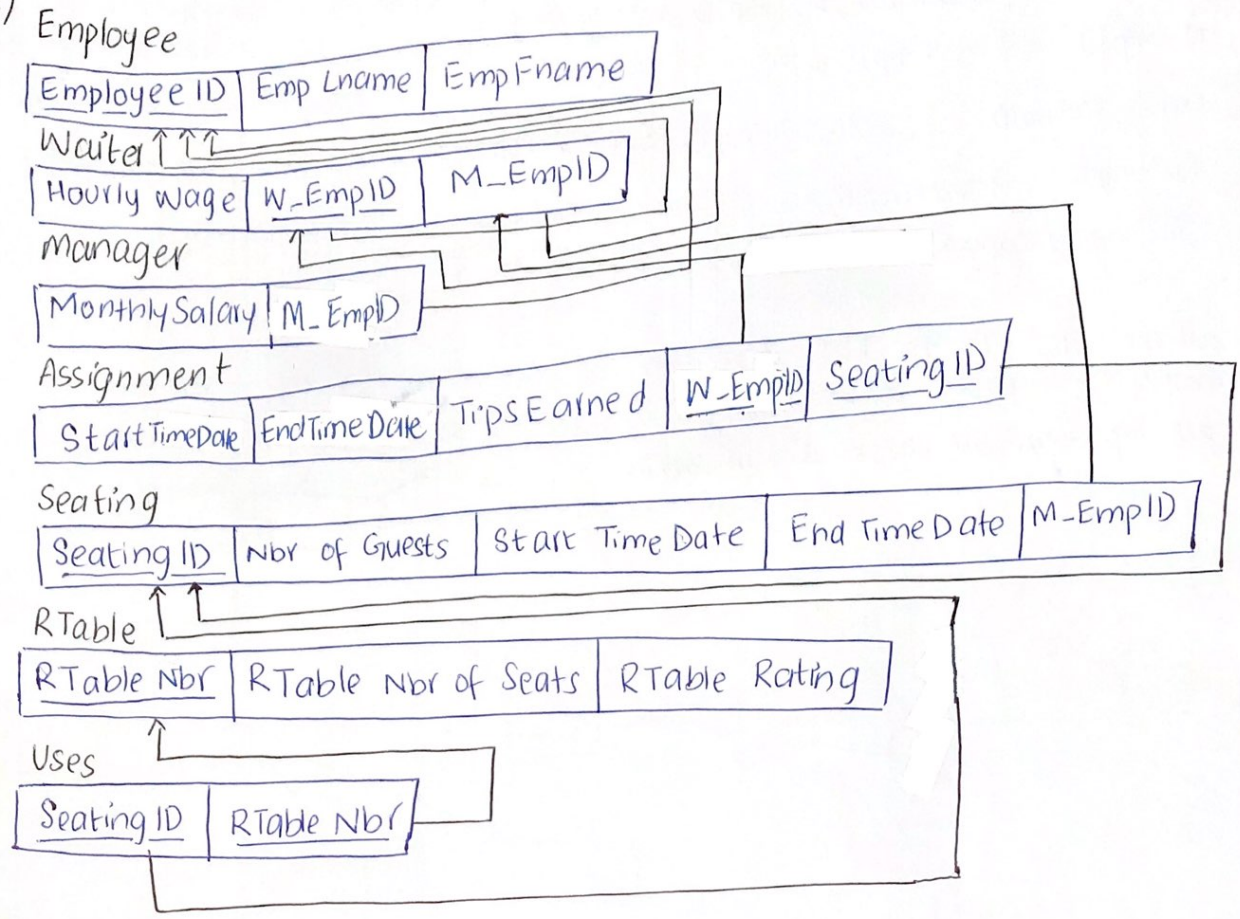

street
city
state
zipcode
address
empID
name
telephone
DOB
Consultant
assumption - there are only two types of consultants.
d
Business consultant
Technical consultant
business experience
no. of years
Degrees received
type of business
technical skills
degrees received
contact title
customerID
company name
street
city
state
zip
address
Customer
contact telephone
business type
No. of employees
contact name
N
M
serv offered
date
amount
P
N
M
serv performed
P
Date
amount
Service
clearance req
coverage
cost
Service ID
Description
N
M
HAS
Location
location ID
building size
telephone
address
street
city
state
zip

Assignment 8
Q:1



Q2 :

a)



b)

Employee
Employee ID ⟶ Emp Lname, Emp Fname

Waiter
W_Emp ID ⟶ Hourly Wage, M_Emp ID

Manager
M_Emp ID ⟶ Monthly Salary

Assignment
W_Emp ID, Seating ID ⟶ Start Time Date, End Time Date, Tips Earned

Seating
Seating ID ⟶ Nbr of Guests, Start Time Date, End Time Date, M_Emp ID

RTable
RTable Nbr ⟶ RTable Nbr of Seats, RTable Rating

Uses
Seating ID, RTable Nbr

c) $EmployeeID^+ = \{EmployeeID, EmpLname, EmpFname\}$

$W\text{-}EmpID^+ = \{W\text{-}EmpID, M\text{-}EmpID, hourly\ wage\}$

$M\text{-}EmpID^+ = \{M\text{-}EmpID, monthly\ salary\}$

$EmpID, SeatingID^+ = \{EmpID, SeatingID, StartTimeDate, EndTimeDate, Tips\ Earned\}$

$SeatingID^+ = \{SeatingID, Nbr\ of\ Guests, Nbr\ of\ seats, RTableRating\}$

$SeatingID, RTableNbr^+ = \{SeatingID, RTableNbr\}$

all the LHSs of the FDS determine all the attributes of their respective tables as mentioned in part (b) so since the LHSs are all super keys all these are in 3NF.

Q3:

a) Videos and Subscribers. 4 subclasses of videos i.e movies, documentaries, dramas and cartoons.

b) Two relationships between Videos and Subscribers -
one is videos watched by subscribers & the other one is videos the subscribers desire to watch

c) Videos (<u>VideoID</u>, Title, Description, UploadDate, Creator, duration, genre)
Subscribers (SubID, name, age, phone, email, password, country)