Lec-5

* Steps to make ER diagram :-

1. identify Entity sets.
2. identify attributes & their types.
3. " Rel^n & constraints
   - Mapping
   - Participation

* ER - Model of Banking System

1. Banking system — Branches. (many)
2. Bank → Customers.
3. Customers — accounts, & take loan.
4. Customer associated with some banker.
5. Bank has employees.
6. Accounts — saving a/c
   current a/c.
7. Loan originated by branch
   Loan ≥ 1 customers.
   → payment schedules.

① Entity sets

① Branch ② Customer ③ Employee

④ Saving a/c ⑤ Current a/c

⑥ Loan ⑦ payment (Loan) (weak entity)

② Attributes :-

① branch → name, city, assets, liabilities

② Customer → cust-id, name, address, contact no.
DOB, age,
age → derived.
address → Composite.
contact no. → multivalued.

③ Employee → emp-id, name, contact no., dependent name,
years of service, start-date
↓ derived attribute ↓ single valued ↓ multivalued.

④ Saving account → ~~acc-number~~, ~~balance~~, interest-rate
, daily withdrawal limit.

⑤ Current a/c → ~~acc-number~~, ~~balance~~, per transaction charges,
overdraft-amount.

⑥ Generalized Entity "Account" → acc-no., balance

⑦ Loan → loan-number, amount

⑧ Weak Entity Payment → Payment no., date, amount.

③ Rel^n & constraints

① Customer borrow loan.

M : N

② Loan originated by branch.

N : 1

③ Loan loan-payment Payment.

1 : N

④ Customer deposit account

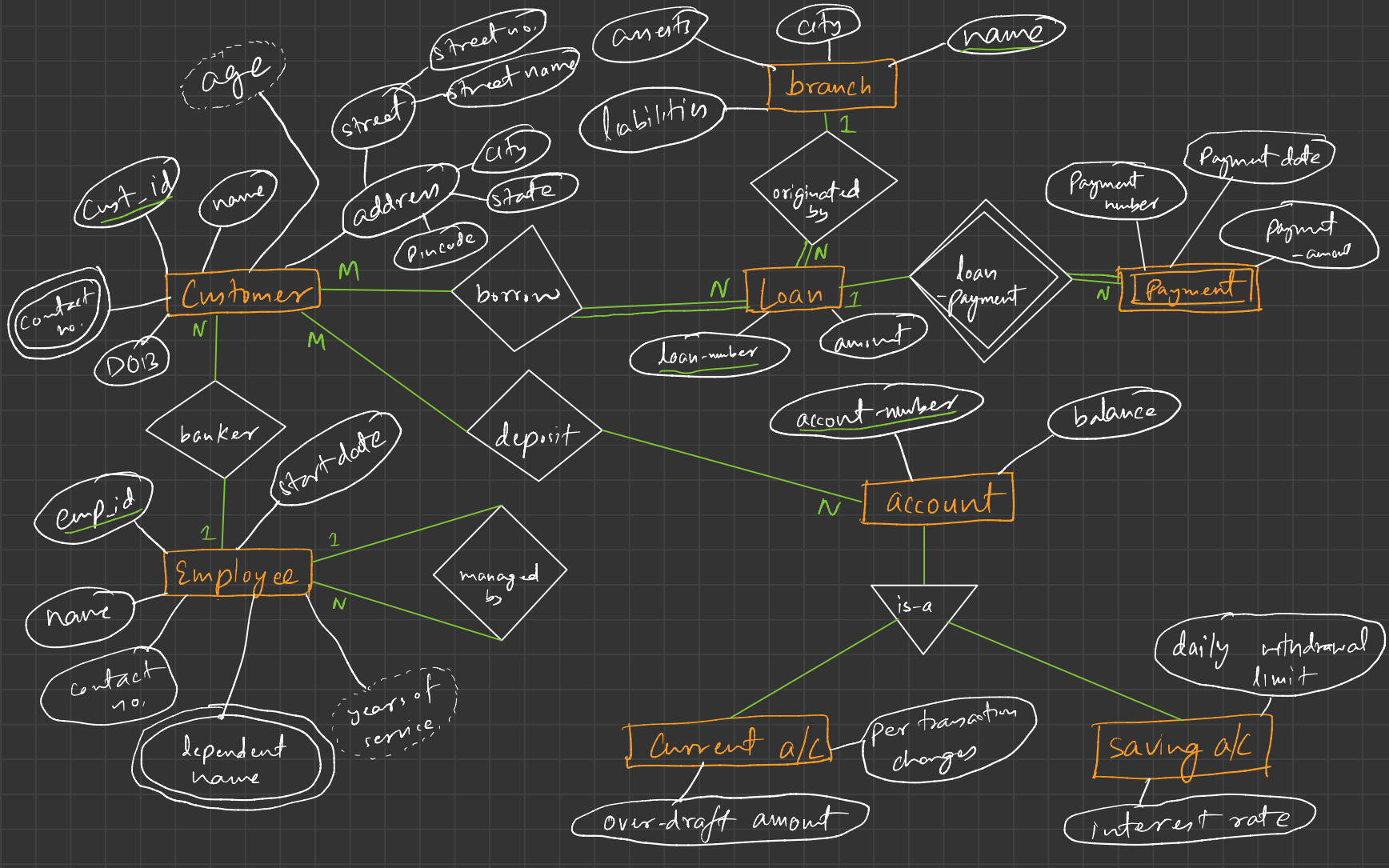
M : N

⑤ Customer banker Employee.

N : 1

⑥ Employee manage by Employee,

N : 1


age
street no.
street name
street
address
city
state
Pincode
Cust_id
name
Customer
contact no.
DOB
M
N
borrow
assets
city
name
branch
liabilities
1
originated by
N
Loan
N
1
Loan-number
amount
loan-payment
N
Payment
Payment number
Payment date
Payment amount
banker
start date
emp_id
1
Employee
1
N
managed by
name
contact no.
dependent name
years of service
deposit
N
account-number
balance
account
is-a
Current a/c
per transaction charges
over-draft amount
Saving a/c
daily withdrawal limit
interest rate

H.W

1. Online delivery system.
2. University