


Lec-5

* Steps to make ER diagram :-

- ① identify Entity sets.
- ② identify attributes & their types.
- ③ " Relⁿ & constraints
 - ↳ Mapping
 - ↳ Participation

* ER - Model of Banking System

- ① Banking system — Branches, (name)
- ② Bank \rightarrow Customers.
- ③ Customers — accounts, & take loan.
- ④ Customer associated with some banker.
- ⑤ Bank has employees.
- ⑥ Accounts $\begin{cases} \rightarrow \text{saving a/c} \\ \rightarrow \text{current a/c.} \end{cases}$
- ⑦ Loan originated by branch
 Loan ≥ 1 customers.
 \rightarrow 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, \downarrow Composite. \downarrow multivalued.
 \downarrow derived.

③ Employee →

<u>emp-id</u>	name	Contact no.	dependent name,
years of service		start-date	↓
↓ derived attr		↓ single valued	multivalued

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

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

⑦ loan \rightarrow loan-number, amount

⑧ Weak Entity Payment \rightarrow Payment no., date, amount.

③ relⁿ & constants

① customer borrow loans,
 $M \quad ! \quad N$

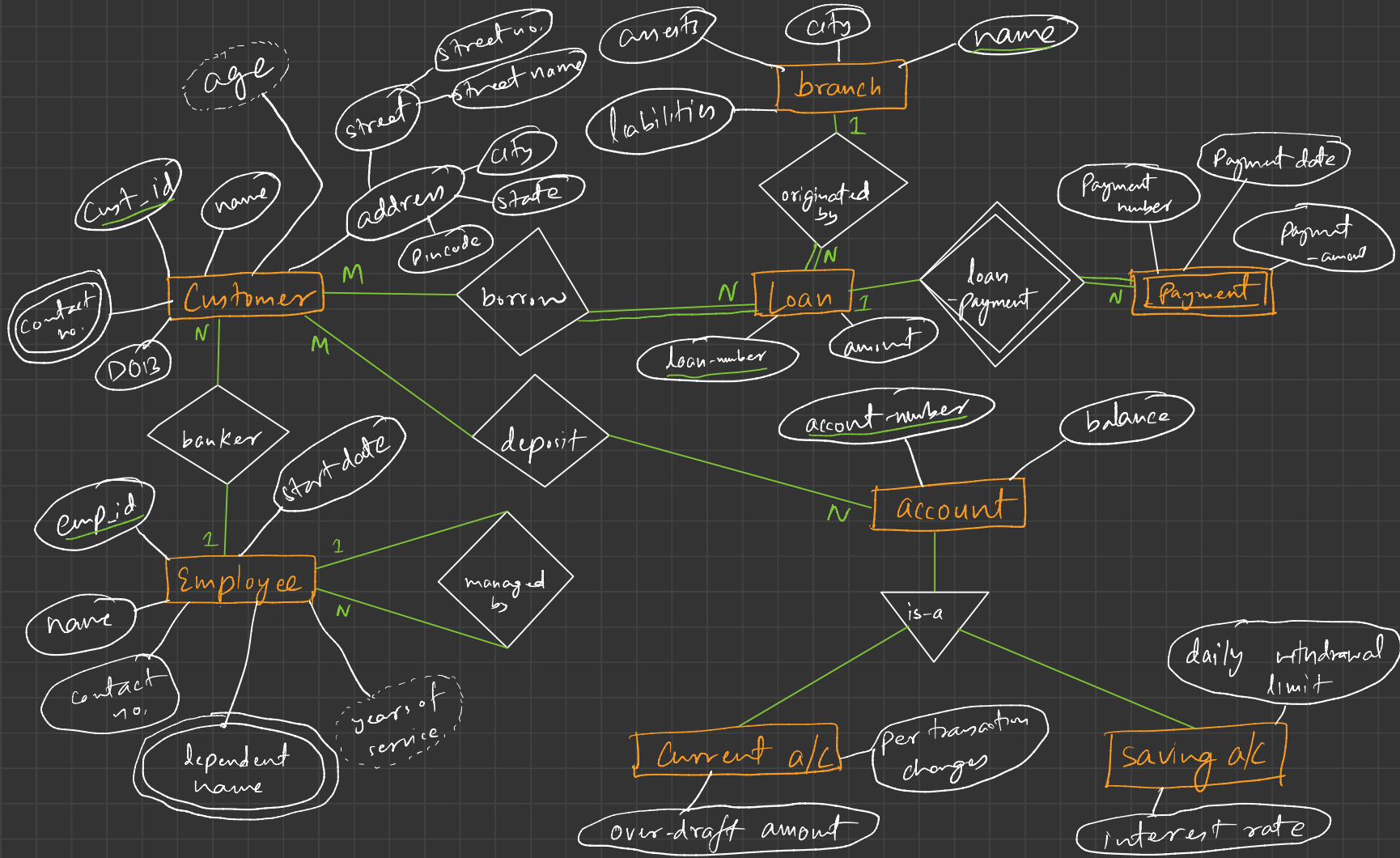
② Loan originated by branch.
 $N \quad \% \quad 1$

③ Loan loan-payment Payment.
 $1 \quad \% \quad N$

④ Customer deposit account
M 1 N

⑤ Customer banker Employee.
N 1 1

⑥ Employee manage by Employee,
N 1 1



h.w

- ① Online delivery system.
- ② University