CHAP-3 * Relational Model & Relational Algebra.

* Mapping ER or ERD diagram into relational model:

RULES:

1. Entity:
   1. Strong entity - create separate table
   2. Weak entity - create separate table, primary key = PK of strong + any attribute of (WE)

2. Attributes:
   1. Composite attribute - no ST (expand composite attribute in table)
   2. Multivalued Att - P(K) (MA)
      = PK (Entity to which it belongs) + MA(itself)
   3. Descriptive Att - S.T
      PK(DA) ⇒ PK(of both the tables) + DA itself

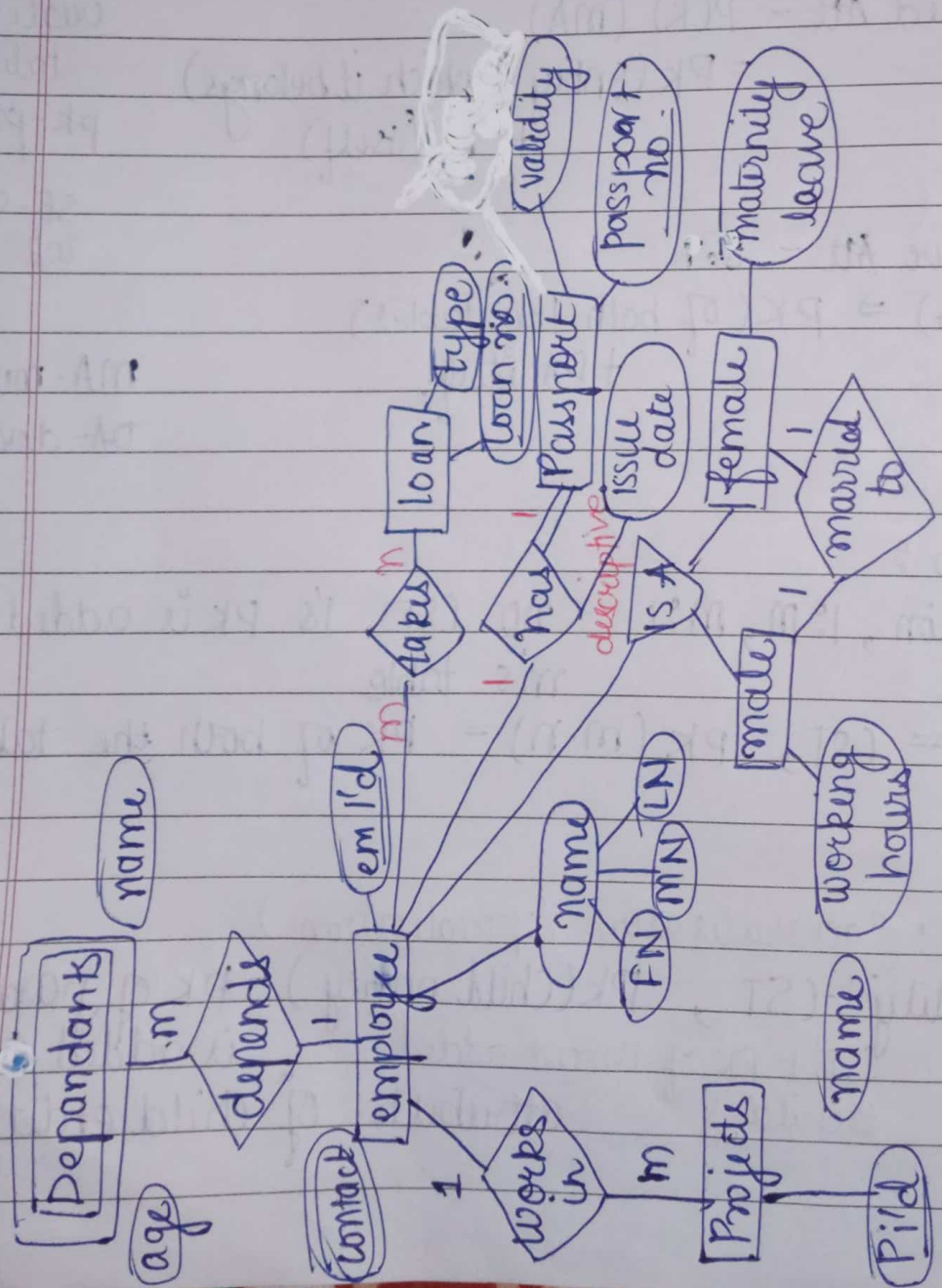
CST - create separate table
PK - primary key
SE - Strong
WE - weak
MA - multivalue
DA - descriptive

3. Relationship:
   1. 1:1 relation, 1:M, M:1 - no CST, 1's PK is added in m's table
   2. M:N = CST, PK(M.N) = PK of both the tables

4. Inheritance: (generalisation / specialisation)
   Child entity - (CST + PK of Parent added to child), PK(Child entity) = PK of parent entity is added to any attribute of child entity.

* NOTE:
If descriptive attribute is present in diagram separate table is always created irrespective of type of cardinality exist bet entities.

: Descriptive attribute:
The attribute which is associated with the relationship.



dependants (emp i'd , age , name)
employee (emp i'd , fname , lname , mname)
emp_contact no. (emp i'd , contact no.)
project (project i'd , name , emp i'd) — foreign key
loan (loan no. , type)
takes (emp i'd , loan no.)
male (emp i'd , working hours , maternity leave)
female (emp i'd , maternity leave)
passport (passport no. , validity)
pass. issue_date (emp i'd , passport no. , issue date)