ENTITY RELATIONSHIP (or) E-R DESIGN ISSUES

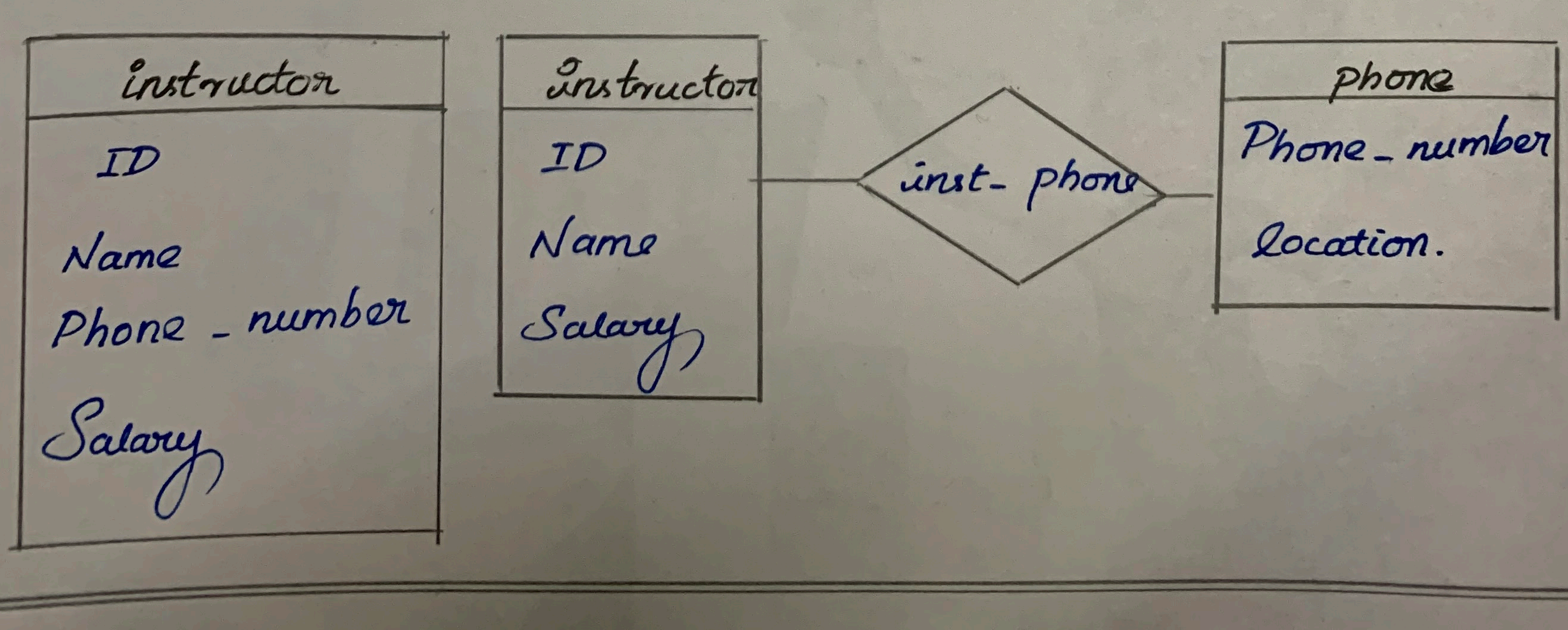
The relationship among various entities can be represented in many ways.

Basic issues and relative solutions concerning them are :

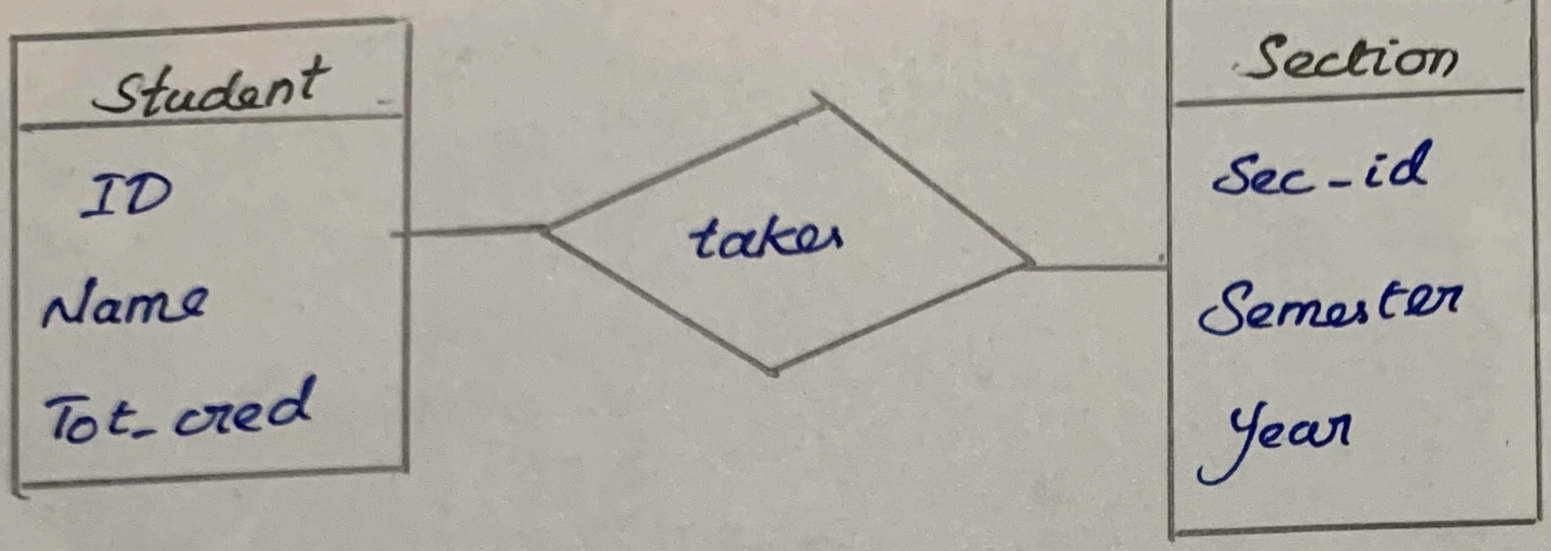
* Use of entity set vs attributes
* Use of entity Set vs Relationship Setv.
* Binary versus nary Relationship Sets.
* Placement of Relationship Attributes.

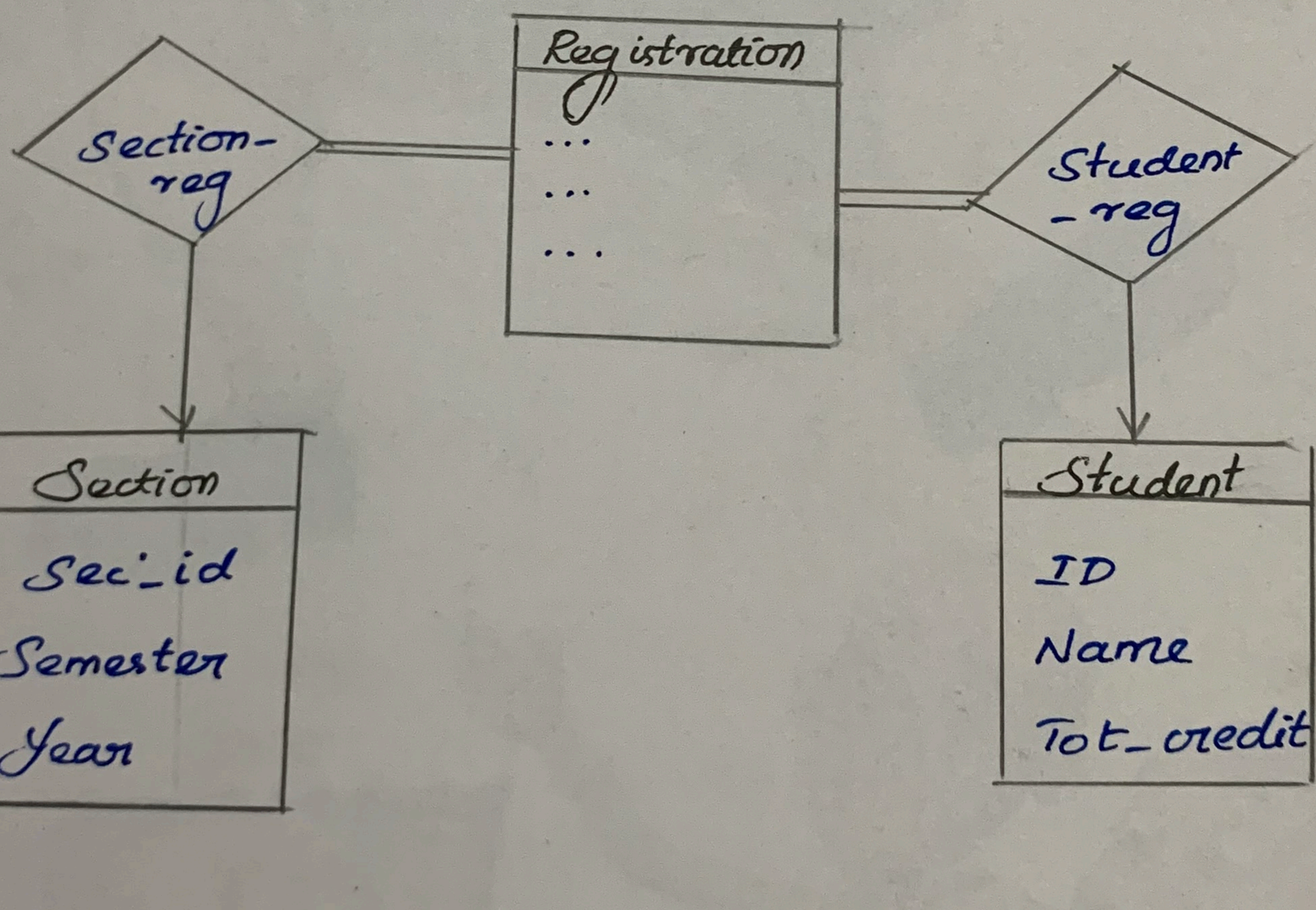
Entity Set Vs Attributes

Choice mainly depends on the structure of the enterprise being modeled, and on the semantics associated with the attribute in question.



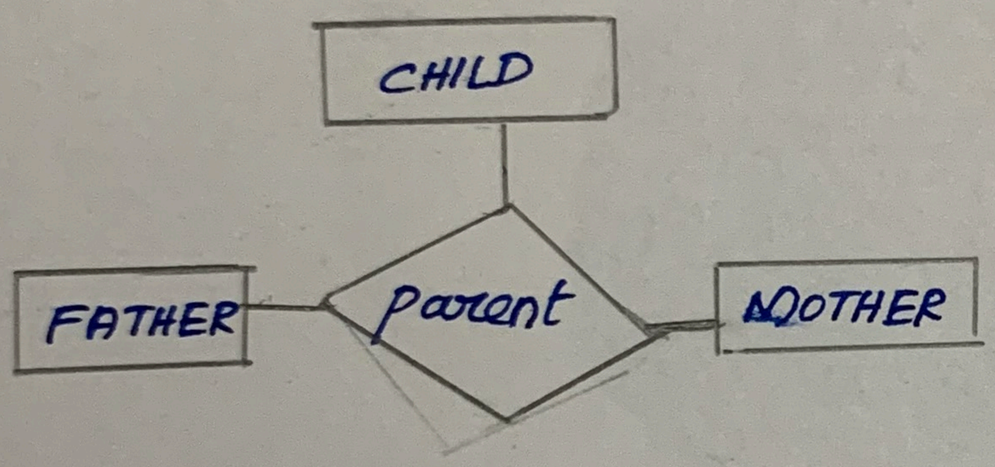
Entity Sets Vs Relationship Sets.

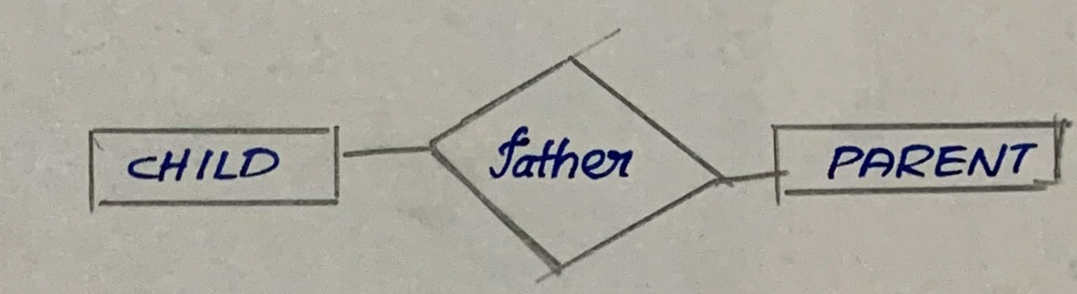


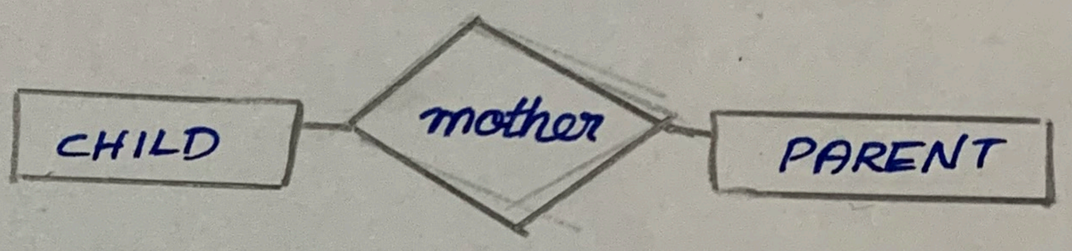


Binary Vs n-array Relationship Sets.

It is always possible to replace a non-binary relationship set by a number of distinct binary relationship set.







Binary Vs n-array Relationship Sets

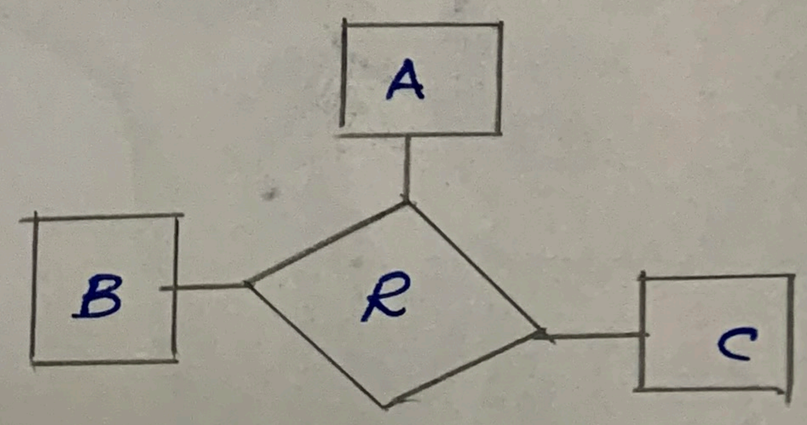
Ternary ($n = 3$) relationship set R, relating entity sets A, B and C.

We replace the relationship set R by an entity set E, and create three relationship sets.

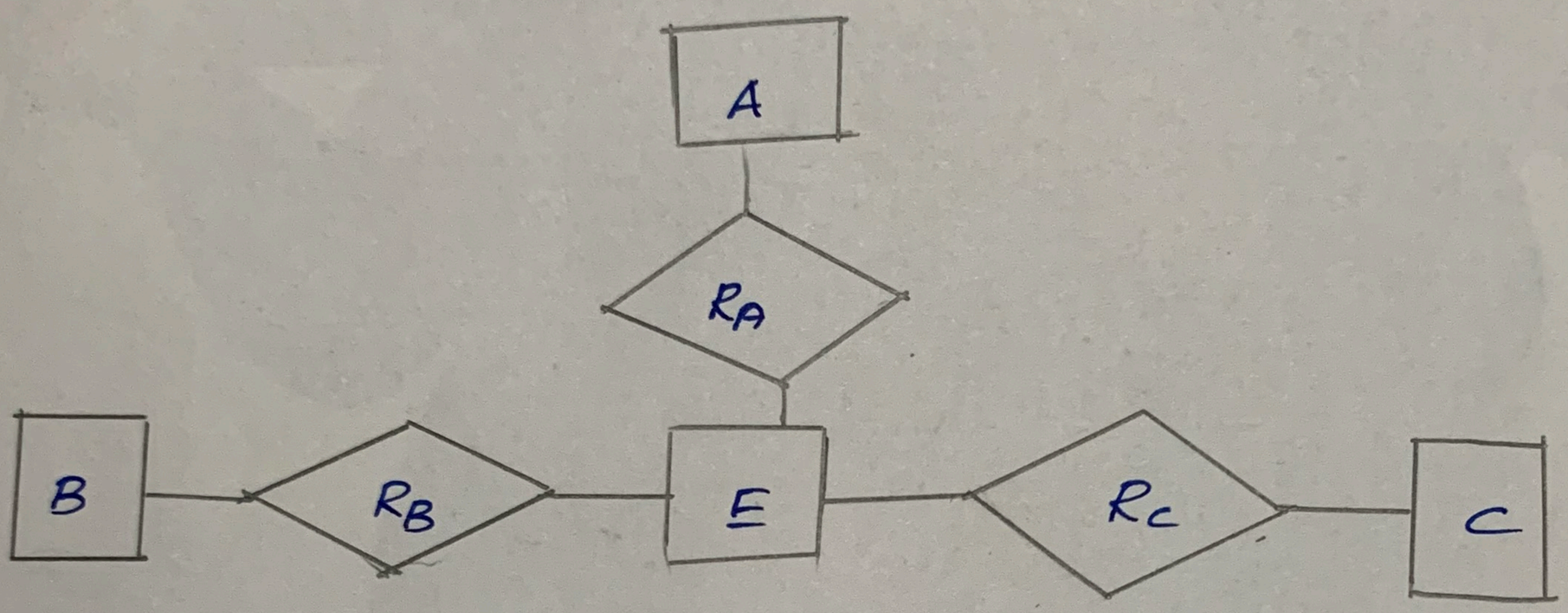
R_A, relating E and A

R_B, relating E and B

R_C, relating E and C



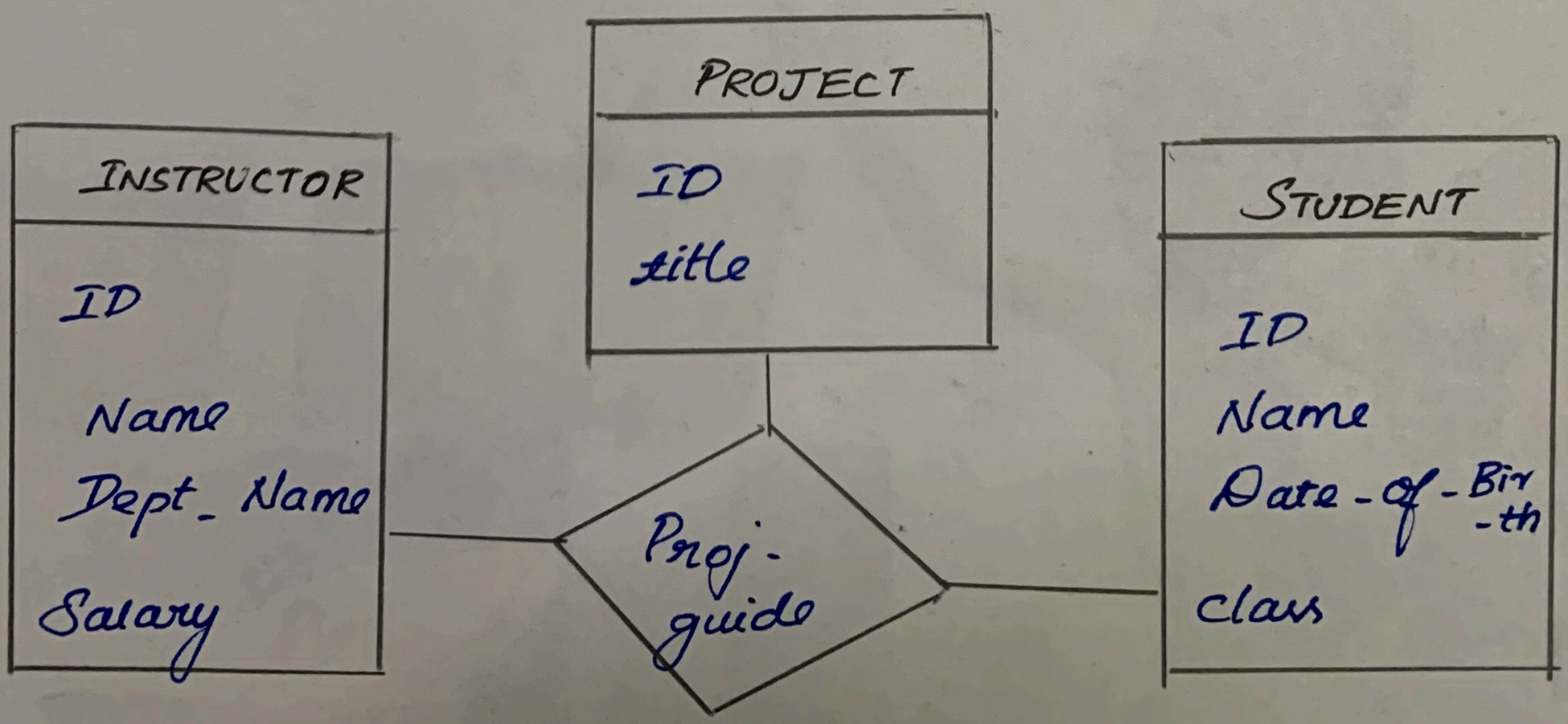
If the relationship set R had any attributes, these are assigned to entity set E.



Binary Vs n-array relationship Sets.

There are some relationship that are naturally non-binary.

Eg: proj-guide.



Placement of Relationship Attributes

Attributes of one-to-many or many-to-one relationship sets can be repositioned to only the entity set on the many side of the relationship.