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Roll No: 3 **Batch:** T1
Class: TY(CSE-AIML)

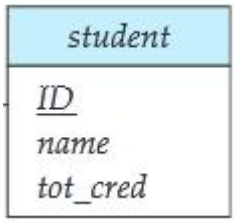
Experiment No: 2

Title: Conversion of ER Diagram to Table

Objective: To identify the entities & their relationship and then convert these into corresponding
records in the form of table.

Theory:

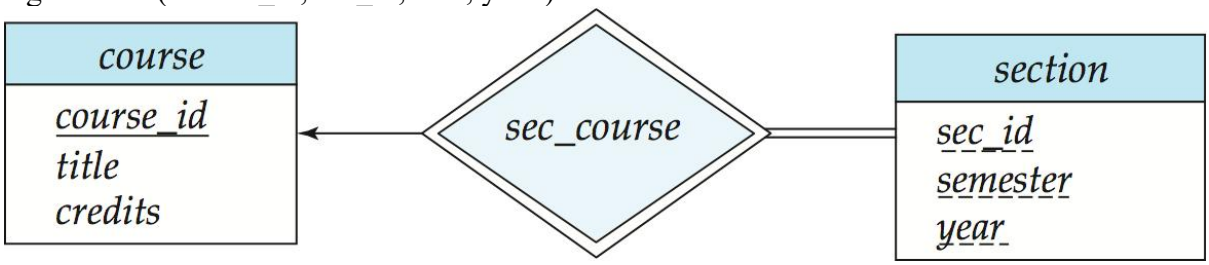
1. Tabular Representation of Strong Entity Sets
Let E be a strong entity set with descriptive attributes a1, a2, . . . , an. This entity set is represented by a table called E with n distinct columns, each of which corresponds to one of the
attributes of E. Each row in this table corresponds to one entity of the entity set E.
• A strong entity set reduces to a schema with the same attributes
e.g. student (ID, name, tot_cred)



2. Tabular Representation of Weak Entity Sets

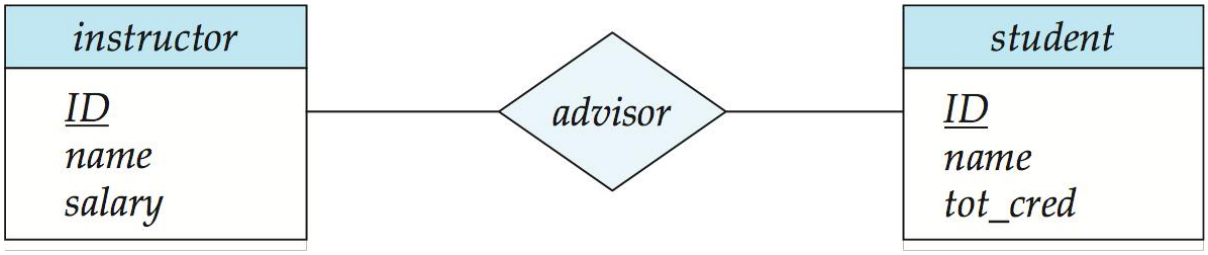
Let A be a weak entity set with attributes a1, a2, . . . , am. Let B be the strong entity set on which
A depends. Let the primary key of B consist of attributes b1, b2, . . . , bn. The entity set A is represented by a table called A with one column for each attribute of the set:
{a1, a2, . . . , am} ∪ {b1, b2, . . . , bn}

• A weak entity set becomes a table that includes a column for the primary key of the identifying strong entity set
e.g. section (course_id, sec_id, sem, year)

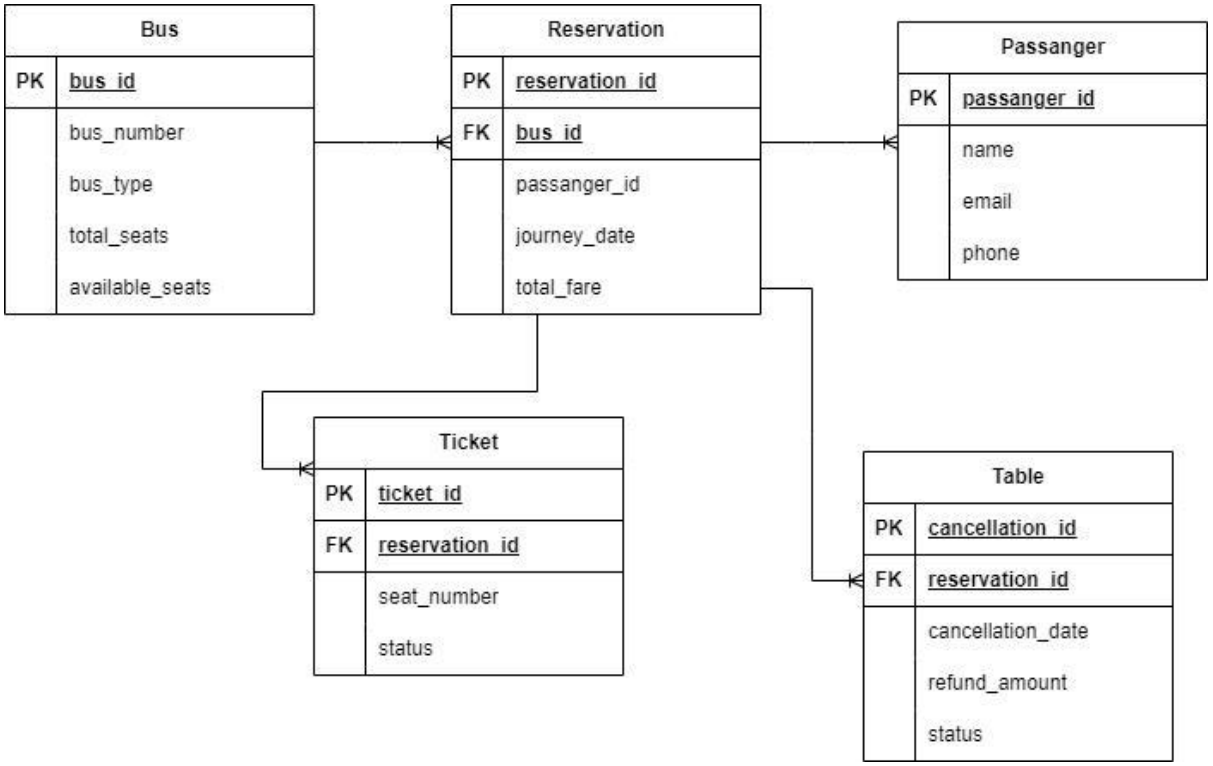


3. Tabular Representation of Relationship Sets

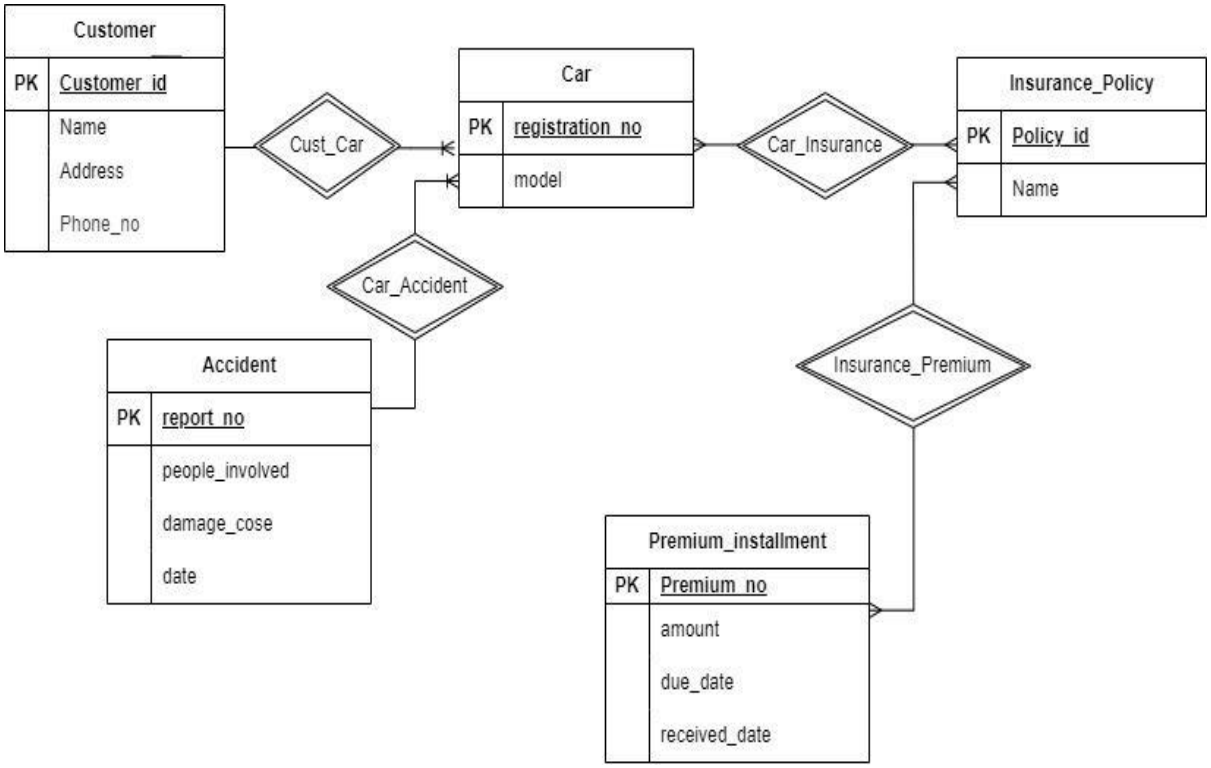
Let *R* be a relationship set, let *a*1, *a*2, . . . , *am* be the set of attributes formed by the union of the
primary keys of each of the entity sets participating in *R*, and let the descriptive attributes (if any)
of *R* be *b*1, *b*2, . . . , *bn*. This relationship set is represented by a table called *R* with one column
for each attribute of the set:
*{a*1, *a*2, . . . , *am} ∪ {b*1, *b*2, . . . , *bn}*
• **Example**: schema for relationship set *advisor*
e.g. *advisor* = (*s_id, i_id*)



1.Tabular representation of an ER diagram for Online Bus ticket reservation.



2. Tabular representation an E-R diagram for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents.



3. Tabular Representation of an E-R diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.