6. Reduction of Generalization

In generalizations, higher level entity sets and lower level entity sets are considered. Make a table for higher level entity set with all its attributes. For lower level entity set, make a table with all its attributes with primary key attributes of its higher level entity set. Consider E-R diagram shown in Figure 2.20, in which Employee is high level entity set and Full Time Employee and Part Time Employee are two lower level entity sets. So, make three tables as given below:

- Employee [Emp-ID, Dept-ID, First-Name, Middle-Name, Last-Name, Salary]
- Full Time Employee [Emp-ID, Qualification]
- Part Time Employee [Emp-ID, Hours-Worked]

7. Reduction of Aggregation

Reduction of aggregation into tables is simple. Consider the E-R diagram shown in Figure 2.19. For all entity sets, make tables as discussed earlier. For making tables for relationship sets, consider the same approach as discussed earlier. Take an example of relationship set Manages. Make a table manages with all descriptive attributes, primary key of entity set Manager and the relationship set works-on.

SOLVED PROBLEMS

Problem 1. Construct 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 various tests and examinations conducted. Construct the appropriate tables for this E-R diagram and list the tables with their attributes, primary key and foreign keys.

Solution. The E-R diagram is shown in Figure 2.28.

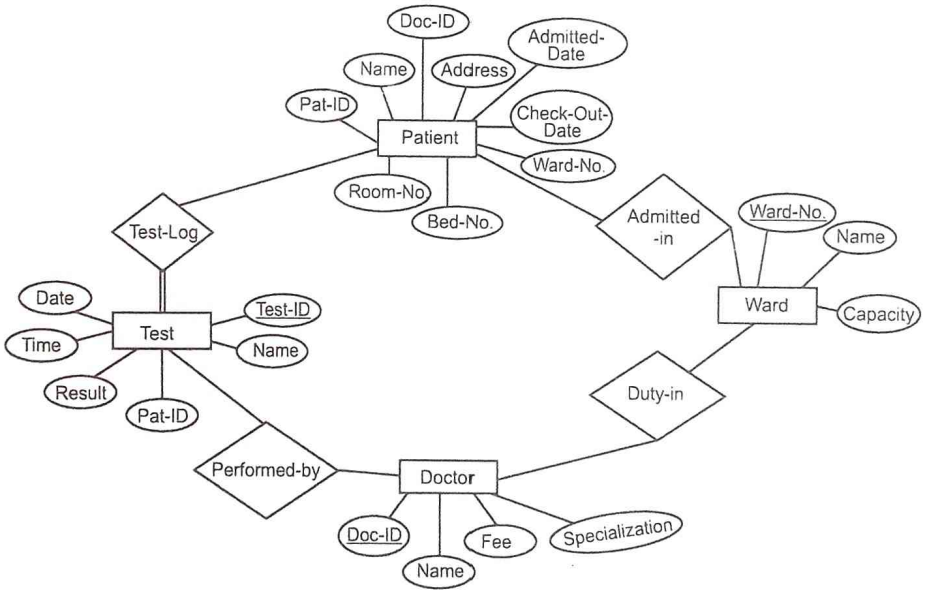

FIGURE 2.28. E-R diagram of hospital.