Chapter 2

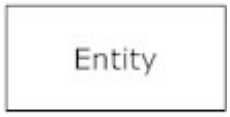
ER DIAGRAM AND RELATIONAL SCHEMA

ER DIAGRAM

An entity relationship diagram (ERD) shows the relationships of entity sets stored in a database. An entity in this context is a component of data. In other words, ER diagrams illustrate the logical structure of databases. At first glance an entity relationship diagram looks very much like a flowchart. It is the specialized symbols, and the meanings of those symbols, that make it unique.

There are five main components of an ERD:

- **Entities**, which are represented by rectangles. An entity is an object or concept about which you want to store information.



- **Actions**, which are represented by diamond shapes, show how two entities share information in the database.

- **Attributes**, which are represented by ovals. A key attribute is the unique, distinguishing characteristic of the entity.

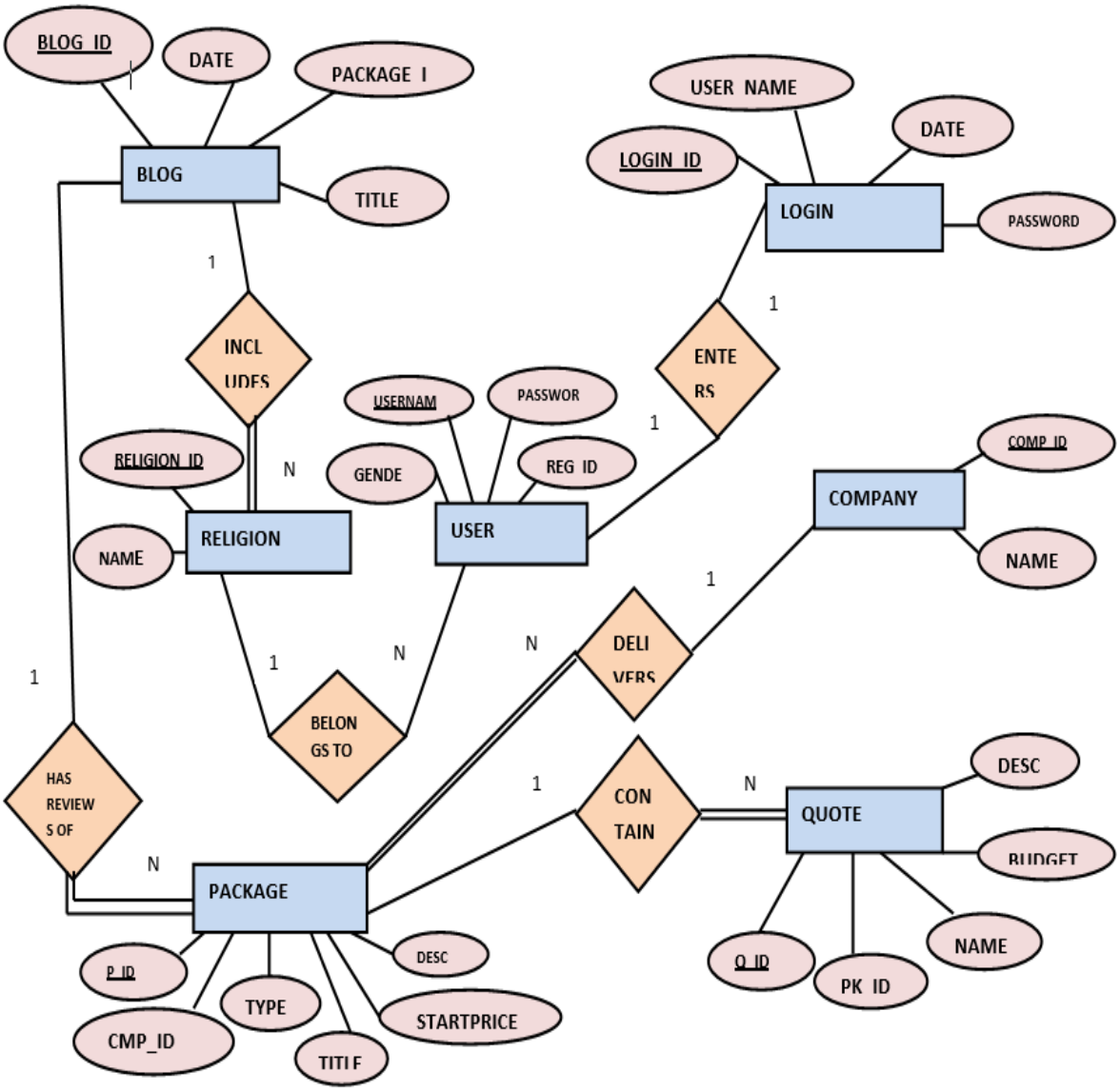


Figure 2.1 ER DIAGRAM

Relational Schema diagram

A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data.

A database schema defines its entities and the relationship among them. It contains a descriptive detail of the database, which can be depicted by means of schema diagrams. It's the database designers who design the schema to help programmers understand the database and make it useful.

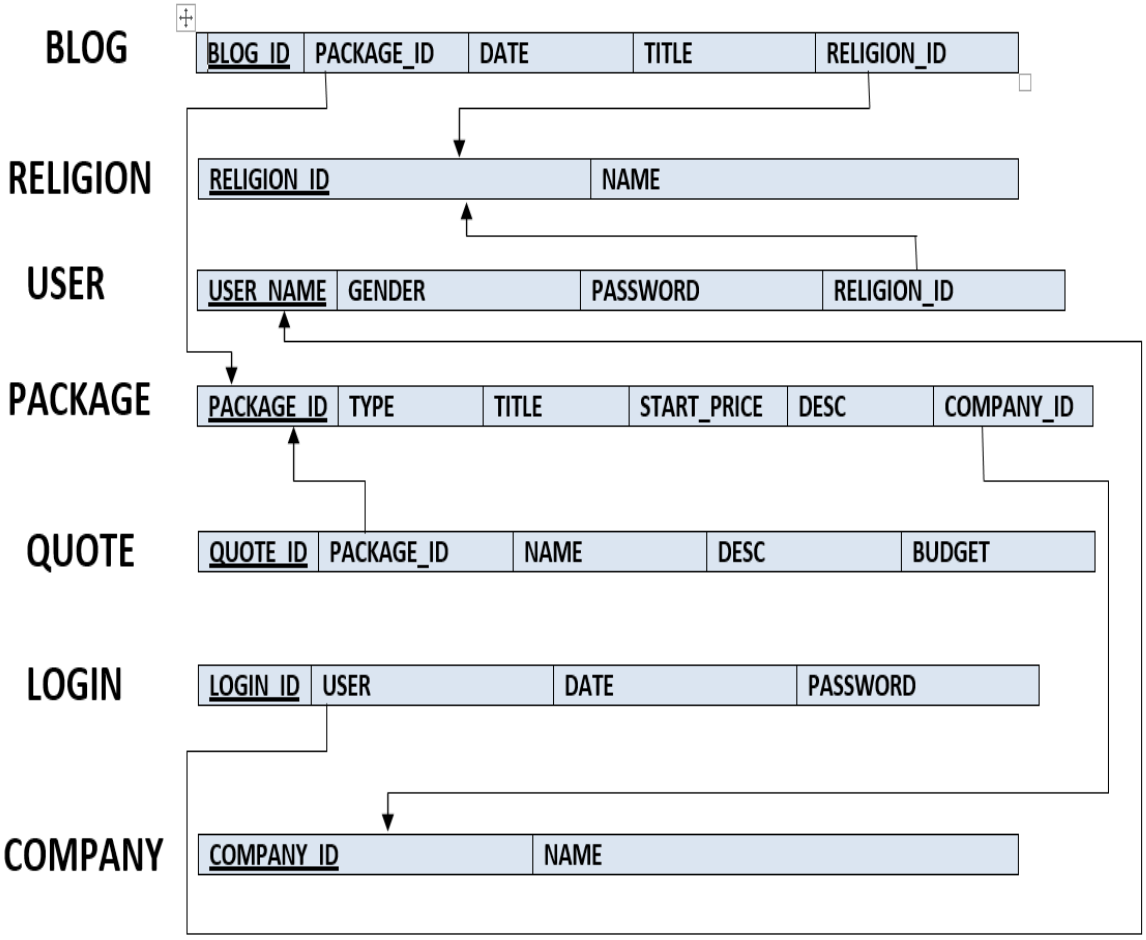


Figure 2.2 Schema Diagram