BASICS OF DATABASES

ASSIGNMENT

VRIDHI WADHAWAN 18021021354

THE ENTITY RELATIONSHIP MODEL

At a basic level, databases store information about distinct objects, or entities, and the associations, or relationships, between these entities. A popular approach to conceptual design uses the Entity Relationship (ER) model, which helps transform the requirements into a formal description of the entities and relationships that appear in the database.

THE LIBRARY SYSTEM

This Entity Relationship (ER) Diagram represents the model of Library Management System Entity. The entity relationship diagram of Library Management System shows all the visual instrument of database tables and the relations between Books, Librarian, Student and Issue. It used structure data and to define the relationships between structured data groups of Library Management System functionalities.

THE MAIN ENTITIES OF THE LIBRARY MANAGEMENT SYSTEM ARE:

- Student
- Books
- Issues
- Librarian

LIBRARY MANAGEMENT SYSTEM ENTITIES AND THEIR ATTRIBUTES:

- Attributes of Student Entity are:
  - std_id
  - std_date_of_birth
  - std _mobile
  - std _name
  - std _email
  - std _age
- Attributes of Books Entity are:
  - bk_id
  - bk_author
  - bk_description
  - bk_name
  - bk_price
  - bk_avaibility

- Attributes of Issues Entity are:
  - issue_id
  - issue_date
  - issue_renewl
  - issue_expiry
- Attributes of Librarian Entity are:
  - lib_id
  - lib_name
  - lib_mobile
  - lib_email
  - lib_date_of_birth
  - lib _age

LIST OUT ALL THE BINARY RELATIONSHIP BETWEEN VARIOUS ENTITIES

- The binary relationship between “n” number of student who can issue only “1”book at the time of issue. Thus there is a many-is-to-one relationship.

- The binary relationship between “n” number of student and “1”librarian is that the “1“ librarian is responsible to manage “n” number of students. . Thus there is a many-is-to-one relationship.

- The binary relationship between “n” number of books and “1”librarian is that the “1“ librarian is responsible for “n” number of books. . Thus there is a many-is-to-one relationship.

- The binary relationship between “n” number of issues of books and “1”librarian is that the “1“ librarian is responsible for “n” number of issues of books. Thus there is a many-is-to-one relationship.

- There is a tertiary relationship between books students and librarian, is that the “1“ librarian is responsible to issue “1” book to “n” number of students

E-R DIAGRAM FOR LIBRARY MANAGEMENT SYSTEM