TASK 1 - CONCEPTUAL DESIGN THROUGH FTR

Aim

To identify entities attributes and relationship from the usecase given and to draw the ERDiagram for the same.

Tasks and sample output

Using basic database design methodology and ER modeler, design Entity Relationship Diagram of library management system.

1. a. Identifying the entities.

1. b. Identifying the attributes.

Sample Output

- Publisher(PublisherId, Year of publication, name)
- Admin(LoginId, password, name, staff_id)
- Report(UserId, Reg_no, Book_no, Issue/Return date)
- Book(authno, isbn number, title, edition, category, PublisherID, price)
    - Name is composite attribute of firstname and lastname.
    - Phone no is multi valued attribute.
- Reader(UserId, Email, address, phone no, name)

2. Identification of relationships, cardinality and type of relationship.

Sample Output

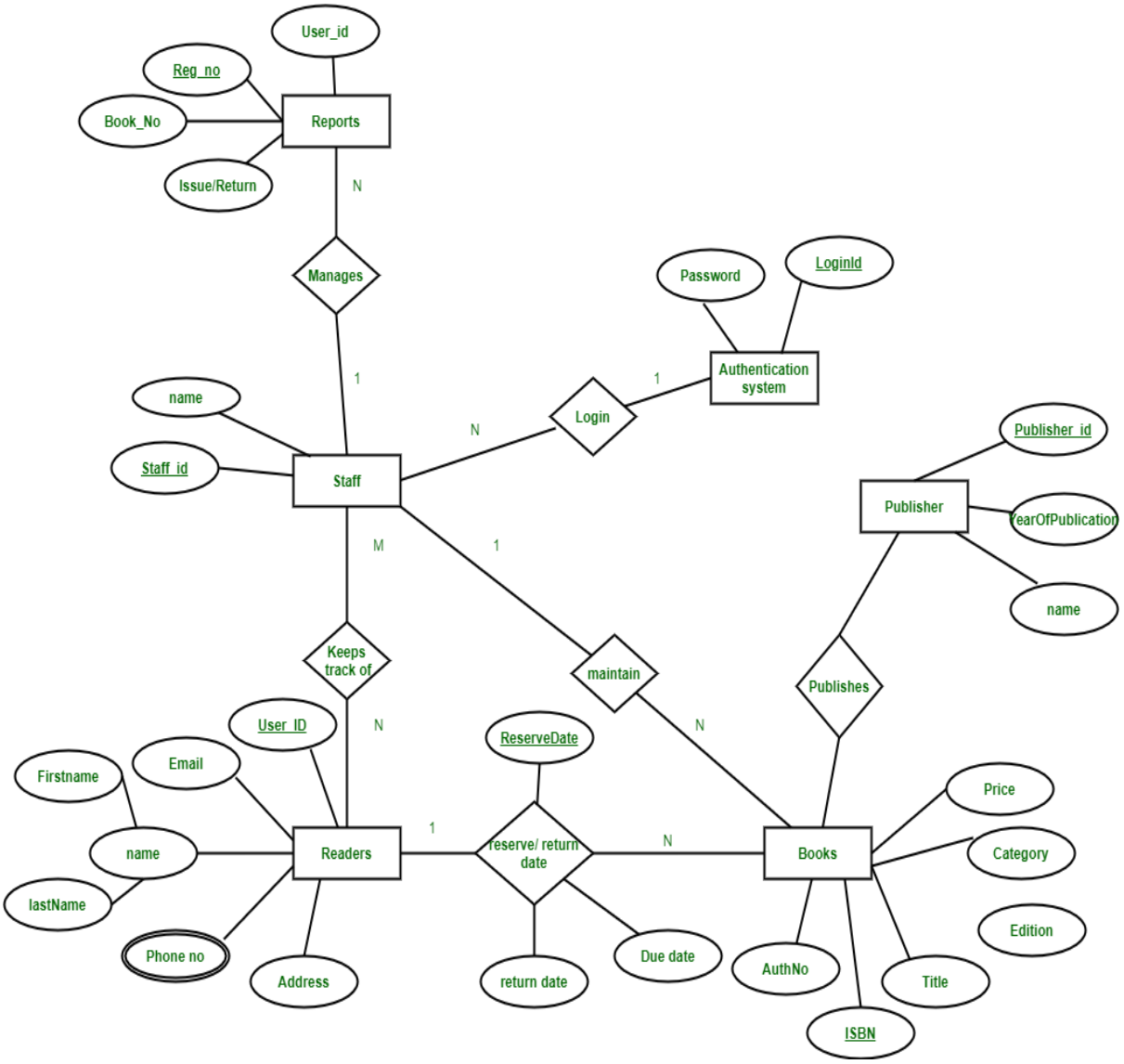
- A reader can reserve N books but one book can be reserved by only one reader. The relationship 1:N.
- A publisher can publish many books but a book is published by only one publisher. The relationship 1:N.
- Admin keeps track of readers. The relationship is M:N.
- Admin maintains multiple reports. The relationship 1:N.
- Admin maintains multiple Books. The relationship 1:N.
- Admin provides login to multiple staffs. The relation is 1:N.

3. Reframing the relations with keys and constraint.

Sample Output

- {isbn number} is the Primary Key for Book Entity.
- {authno, isbn number, title} – Super key of Book entity.
- {PublisherId} is the foreign key of Book entity.
- {authno,title} – Candidate key of Book entity.
- UserId is the Primary Key for Readers entity.
- PublisherID is the Primary Key for Publisher entity
- LoginID as Primary Key for Authentication system entity.
- Reg_no is the Primary Key of reports entity.

4. Using creately, develop ER diagram.



RESULT: The task to create an E-R diagram of library management system is executed successfully.