**AUTHOR: RISHI KUMAR SONI**

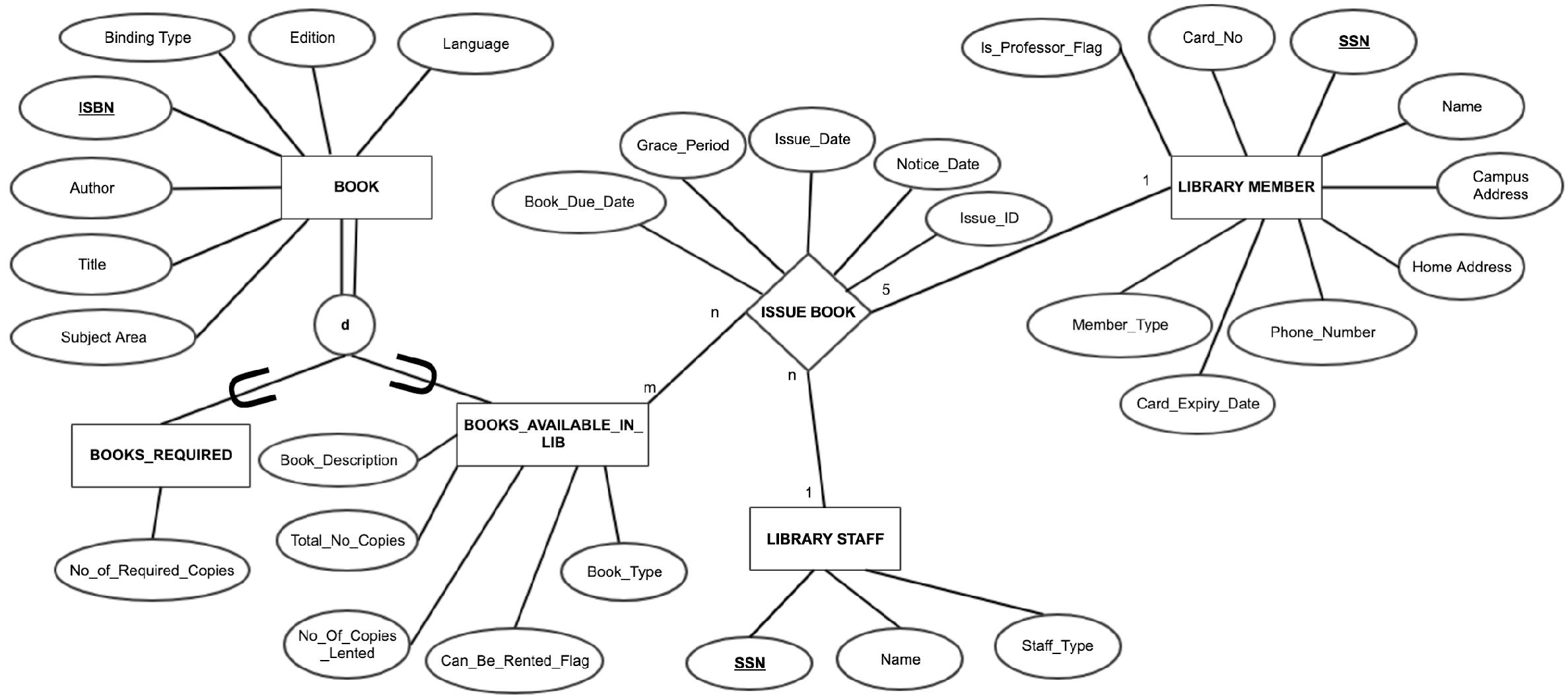
**UTA ID: 1001774020**

**Net Id: rxs4020**

**PART 3**

**EXTENDED ENTITY RELATIONSHIP DIAGRAM:**

**PART1**



**NOTE: Please Zoom the Diagram , if Diagram is not visible.**

There are 6 **entities** that are being used in the EER Diagram.

1. **BOOK:**

**Attributes: ISBN,** Author, Title, Subject Area, Binding Type, Edition, Language

1. **LIBRARY MEMBER:**

**Attributes: SSN ,** Name, Campus Address, Home Address, Phone\_Number, Member\_Type, Card\_No, Card\_Expiry\_Date, Is\_Professor\_Flag

1. **LIBRARY STAFF:**

**Attributes: SSN,** Name, Staff\_Type.

1. **ISSUE BOOK:**

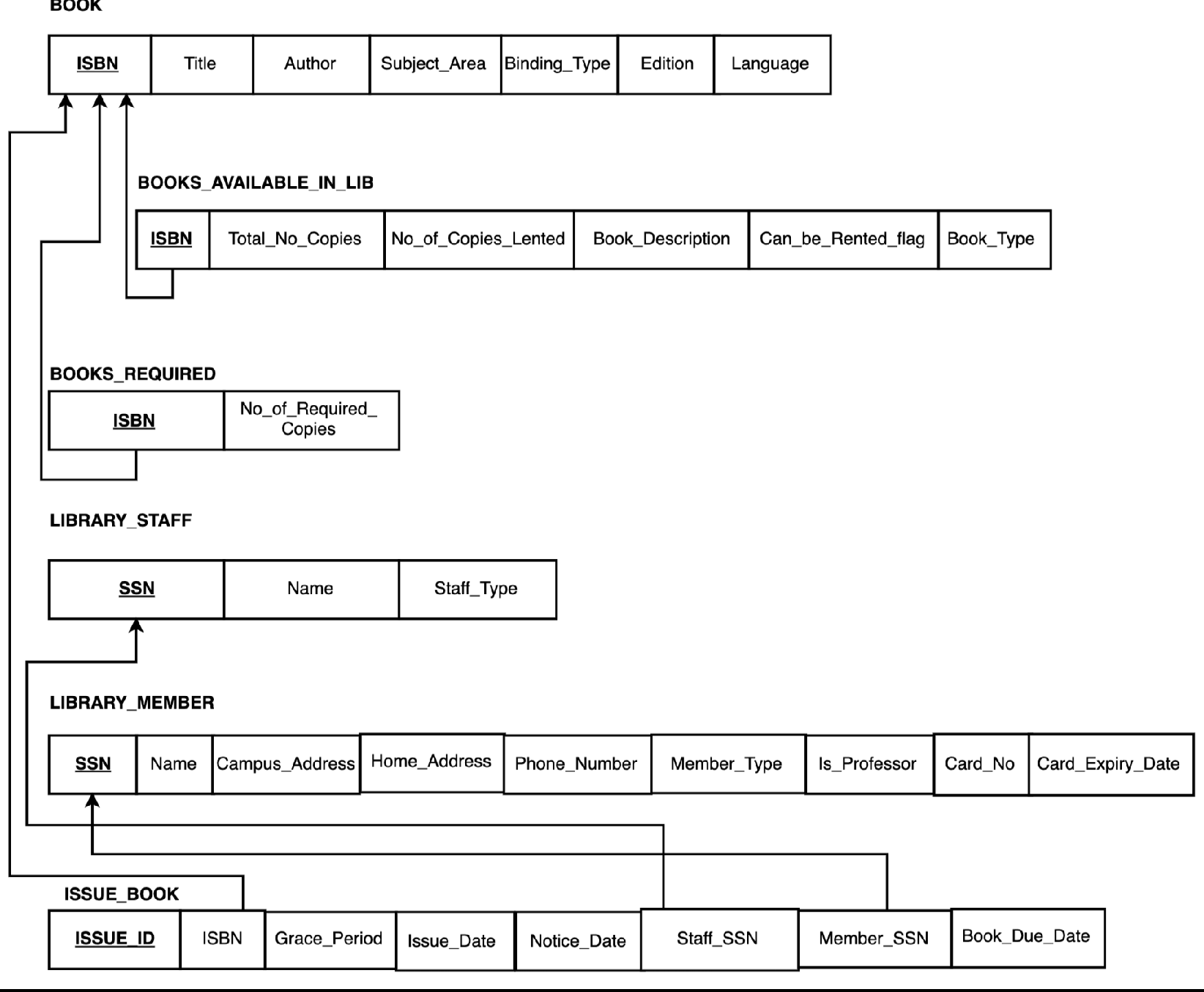
**Attributes:** Issue\_Date, Notice\_Date, Book\_Due\_Date, Grace\_Period, **Issue\_Id**

1. **BOOKS\_AVAILABLE\_IN\_LIBRARY:**

**Attributes:** Book\_Description, Book\_Type , Total\_No\_Copies, No\_Of\_Copies\_lented, Can\_Be\_Rented\_Flag

1. **BOOKS\_REQUIRED:**

**SCHEMA DIAGRAM: EER DIAGRAM TO RELATIONAL MAPPING**



**TABLES CREATED:**

1. **BOOK**
2. **LIBRARY\_MEMBER**
3. **LIBRARY\_STAFF**
4. **ISSUE\_BOOK**
5. **BOOKS\_AVAILABLE\_IN\_LIB**
6. **BOOKS\_REQUIRED**

**Mapping of Subclasses and Super Classes-**

**CREATE TABLES QUERIES**

**BOOK:**

CREATE TABLE BOOK (

ISBN VARCHAR (10) NOT NULL,

Title VARCHAR (25) NOT NULL,

AUTHOR VARCHAR (25) NOT NULL,

SUBJECT\_AREA VARCHAR (25) NOT NULL,

LANGUAGE VARCHAR (15) NOT NULL,

BINDING\_TYPE VARCHAR (10) NOT NULL,

EDITION VARCHAR (10) NOT NULL,

**Primary key (ISBN)**);

**BOOKS\_AVAILABLE\_IN\_LIB:**

CREATE TABLE BOOKS\_AVAILABLE\_IN\_LIB(

ISBN VARCHAR (10) NOT NULL,

**CAN\_BE\_RENTED\_FLAG NUMBER (1,0) NOT NULL**,

TOTAL\_NO\_COPIES INT NOT NULL,

NO\_OF\_COPIES\_LENTED INT NOT NULL,

BOOK\_DESCRIPTION VARCHAR (40),

BOOK\_TYPE VARCHAR (40),

**Primary key (ISBN),**

**FOREIGN KEY (ISBN) REFERENCES BOOK(ISBN)**);

**BOOKS\_REQUIRED:**

CREATE TABLE BOOKS\_REQUIRED (ISBN VARCHAR (10) NOT NULL,

NO\_OF\_REQUIRED\_COPIES INT NOT NULL,

**Primary key (ISBN)**,

**FOREIGN KEY (ISBN) REFERENCES BOOK(ISBN)**);

**LIBRARY\_STAFF:**

CREATE TABLE LIBRARY\_STAFF (

SSN VARCHAR (10) NOT NULL,

Name VARCHAR (40) NOT NULL,

Staff Type VARCHAR (20) NOT NULL,

**Primary Key (SSN)**);

**LIBRARY\_MEMBER:**

CREATE TABLE LIBRARY\_MEMBER (

SSN VARCHAR (10) NOT NULL,

NAME VARCHAR (30) NOT NULL,

CAMPUS\_ADDRESS VARCHAR (40) NOT NULL,

HOME\_ADDRESS VARCHAR (40) NOT NULL,

PHONE\_NUMBER NUMBER (10) NOT NULL,

CARD\_NUMBER VARCHAR (10) NOT NULL,

CARD\_EXPIRY\_DATE DATE NOT NULL,

**IS\_PROFESSOR\_FLAG CHAR (5) CHECK (IS\_PROFESSOR\_FLAG IN('TRUE','FALSE'))**,

Member Type VARCHAR (30),

**primary key (SSN)**);

**ISSUE\_BOOK:**

CREATE TABLE ISSUE\_BOOK (

ISSUE\_ID INT NOT NULL,

MEMBER\_SSN VARCHAR (10) NOT NULL,

STAFF\_SSN VARCHAR (10) NOT NULL,

ISBN VARCHAR (10) NOT NULL,

ISSUE\_DATE DATE NOT NULL,

NOTICE\_DATE DATE NOT NULL,

GRACE\_PERIOD INT NOT NULL,

BOOK\_DUE\_DATE DATE,

**Primary key (ISSUE\_ID),**

**FOREIGN KEY (MEMBER\_SSN) REFERENCES LIBRARY\_MEMBER(SSN) ,**

**FOREIGN KEY (STAFF\_SSN) REFERENCES LIBRARY\_STAFF(SSN),**

**FOREIGN KEY (ISBN) REFERENCES BOOK(ISBN)**);

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