

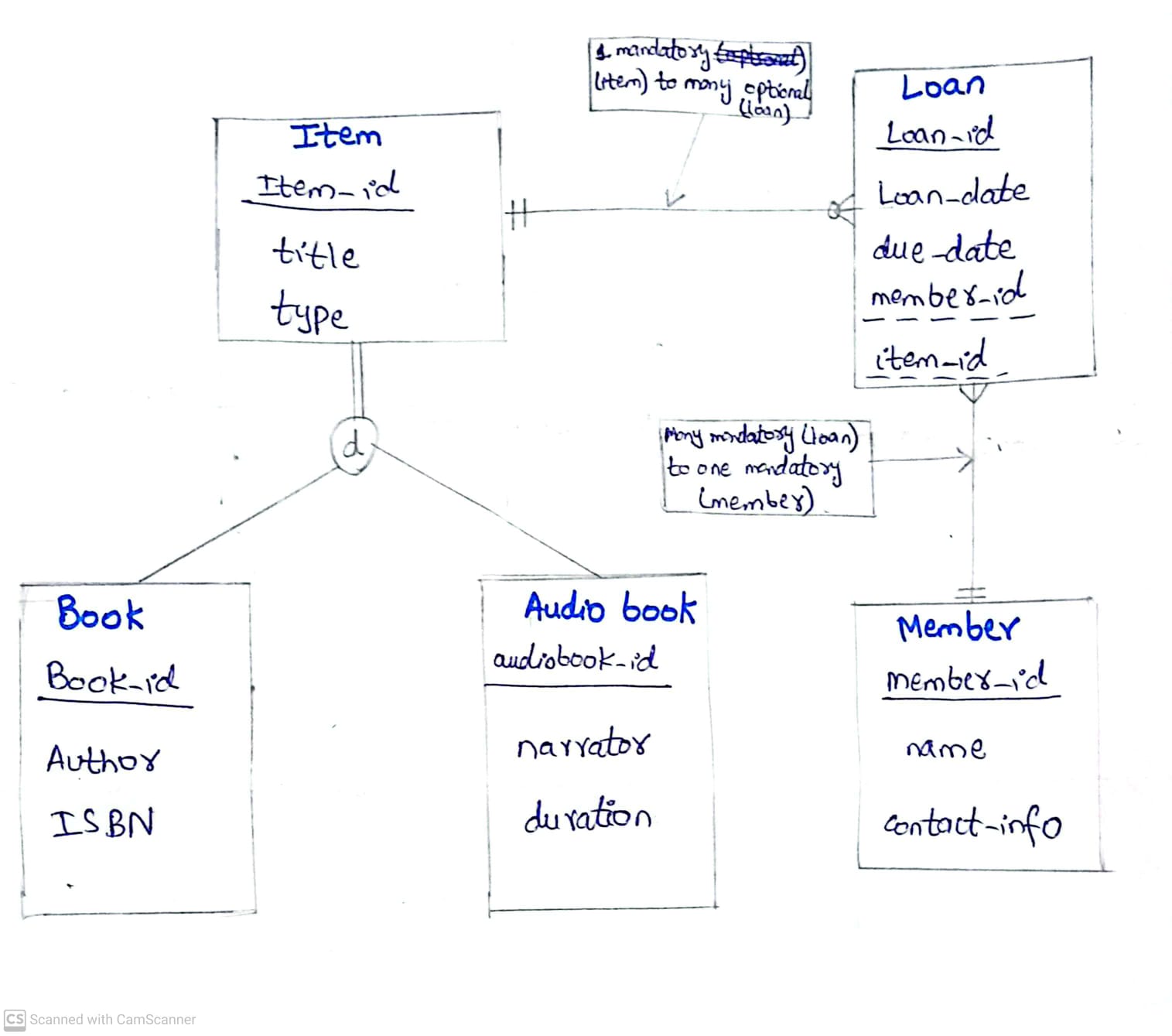
**TAYYABA REHMAN**

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**LAB 8**

**LAB TASK 1:**

**ERD:**

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**LAB TASK 2:**

**CODE:**

CREATE database LAB8;

USE LAB8;

CREATE TABLE Item (

item\_id INT

PRIMARY KEY,

title VARCHAR(255) NOT NULL,

type VARCHAR(50) NOT NULL CHECK (type IN ('Book', 'Audiobook'))

);

CREATE TABLE Book (

book\_id INT PRIMARY KEY,

author VARCHAR(255) NOT NULL,

ISBN VARCHAR(20),

item\_id INT,

FOREIGN KEY (item\_id) REFERENCES Item(item\_id),

CONSTRAINT chk\_book\_type CHECK (item\_id IN (SELECT item\_id FROM Item WHERE type = 'Book'))

);

CREATE TABLE Audiobook (

audiobook\_id INT PRIMARY KEY,

narrator VARCHAR(255) NOT NULL,

duration INT NOT NULL, -- Duration in minutes

item\_id INT,

FOREIGN KEY (item\_id) REFERENCES Item(item\_id),

CONSTRAINT chk\_audiobook\_type CHECK (item\_id IN (SELECT item\_id FROM Item WHERE type = 'Audiobook')) -- Disjoint constraint

);

CREATE TABLE Member (

member\_id INT PRIMARY KEY,

name VARCHAR(255) NOT NULL,

contact\_info VARCHAR(255)

);

CREATE TABLE Loan (

loan\_id INT PRIMARY KEY,

loan\_date DATE NOT NULL,

due\_date DATE NOT NULL,

member\_id INT,

item\_id INT,

FOREIGN KEY (member\_id) REFERENCES Member(member\_id),

FOREIGN KEY (item\_id) REFERENCES Item(item\_id)

);