**Table Creation:**

**CREATE TABLE PUBLISHER(NAME VARCHAR(18) PRIMARY KEY, ADDRESS VARCHAR(10),PHONE VARCHAR(10));**

**CREATE TABLE BOOK(BOOK\_ID INTEGER PRIMARY KEY, TITLE VARCHAR(20),PUBLISHER\_NAME VARCHAR(20)REFERENCES PUBLISHER(NAME) ,PUB\_YEAR INT(4));**

**CREATE TABLE BOOK\_AUTHORS(BOOK\_ID INTEGER REFERENCES BOOK(BOOK\_ID),AUTHOR\_NAME VARCHAR(20),PRIMARY KEY(BOOK\_ID));**

**CREATE TABLE LIBRARY\_BRANCH( BRANCH\_ID INTEGER PRIMARY KEY, BRANCH\_NAME VARCHAR(18), ADDRESS VARCHAR(15));**

**CREATE TABLE BOOK\_COPIES(BOOK\_ID INTEGER REFERENCES BOOK(BOOK\_ID),BRANCH\_ID INTEGER REFERENCES LIBRARY\_BRANCH(BRANCH\_ID) , NO\_OF\_COPIES INTEGER,PRIMARY KEY(BOOK\_ID,BRANCH\_ID));**

**CREATE TABLE BOOK\_LENDING(BOOK\_ID INTEGER REFERENCES BOOK(BOOK\_ID) ,BRANCH\_ID INTEGER REFERENCES LIBRARY\_BRANCH(BRANCH\_ID) ,CARD\_NO INTEGER, DATE\_OUT DATE, DUE\_DATE DATE,PRIMARY KEY(BOOK\_ID,BRANCH\_ID,CARD\_NO));**

**Values for tables:**

**PUBLISHER**

**INSERT INTO PUBLISHER VALUES('PEARSON','BANGALORE','9875462530');**

**INSERT INTO PUBLISHER VALUES('MCGRAW','NEWDELHI','7845691234');**

**INSERT INTO PUBLISHER VALUES('SAPNA','BANGALORE','7845963210');**

**BOOK**

**INSERT INTO BOOK VALUES(1111,'SE','PEARSON',2005);**

**INSERT INTO BOOK VALUES(2222,'DBMS','MCGRAW',2004);**

**INSERT INTO BOOK VALUES(3333,'ANOTOMY','PEARSON',2010);**

**INSERT INTO BOOK VALUES(4444,'ENCYCLOPEDIA','SAPNA',2010);**

**BOOK\_AUTHORS**

**INSERT INTO BOOK\_AUTHORS VALUES(1111,'SOMMERVILLE');**

**INSERT INTO BOOK\_AUTHORS VALUES(2222,'NAVATHE');**

**INSERT INTO BOOK\_AUTHORS VALUES(3333,'HENRY GRAY');**

**INSERT INTO BOOK\_AUTHORS VALUES(4444,'THOMAS');**

**LIBRARY\_BRANCH**

**INSERT INTO LIBRARY\_BRANCH VALUES(11,'CENTRAL TECHNICAL','MG ROAD');**

**INSERT INTO LIBRARY\_BRANCH VALUES(22,'MEDICAL','BH ROAD');**

**INSERT INTO LIBRARY\_BRANCH VALUES(33,'CHILDREN','SS PURAM');**

**INSERT INTO LIBRARY\_BRANCH VALUES(44,'SECRETARIAT','SIRAGATE');**

**INSERT INTO LIBRARY\_BRANCH VALUES(55,'GENERAL','JAYANAGAR');**

**BOOK\_COPIES**

**INSERT INTO BOOK\_COPIES VALUES(1111,11,5);**

**INSERT INTO BOOK\_COPIES VALUES(3333,22,6);**

**INSERT INTO BOOK\_COPIES VALUES(4444,33,10);**

**INSERT INTO BOOK\_COPIES VALUES(2222,11,12);**

**INSERT INTO BOOK\_COPIES VALUES(4444,55,3);**

**BOOK\_LENDING**

**INSERT INTO BOOK\_LENDING VALUES(2222,11,1,'2017-01-10','2017-08-20');**

**INSERT INTO BOOK\_LENDING VALUES(3333,22,2,'2017-07-09','2017-08-12');**

**INSERT INTO BOOK\_LENDING VALUES(4444,55,1,'2017-04-11','2017-08-09');**

**INSERT INTO BOOK\_LENDING VALUES(2222,11,5,'2017-04-09','2017-08-19');**

**INSERT INTO BOOK\_LENDING VALUES(4444,33,1,'2017-06-10','2017-08-15');**

**INSERT INTO BOOK\_LENDING VALUES(1111,11,1,'2017-05-12','2017-06-10');**

**INSERT INTO BOOK\_LENDING VALUES(3333,22,1,'2017-07-10','2017-07-15');**

**Queries:**

**1)**

**SELECT LB.BRANCH\_NAME, B.BOOK\_ID,TITLE, PUBLISHER\_NAME,AUTHOR\_NAME, NO\_OF\_COPIES FROM BOOK B, BOOK\_AUTHORS BA, BOOK\_COPIES BC, LIBRARY\_BRANCH LB WHERE B.BOOK\_ID = BA.BOOK\_ID AND BA.BOOK\_ID = BC.BOOK\_ID AND BC.BRANCH\_ID = LB.BRANCH\_IDGROUP BY LB.BRANCH\_NAME, B.BOOK\_ID, TITLE, PUBLISHER\_NAME, AUTHOR\_NAME, NO\_OF\_COPIES;**

**2)**

**SELECT CARD\_NO FROM BOOK\_LENDING WHERE DATE\_OUT BETWEEN '2017-01-01' AND '2017-06-30'GROUP BY CARD\_NO HAVING COUNT(\*) > 3;**

**3)**

**DELETE FROM BOOK WHERE BOOK\_ID = '3333';**

**4)**

**SELECT BOOK\_ID, TITLE, PUBLISHER\_NAME, PUB\_YEAR FROM BOOK GROUP BY PUB\_YEAR, BOOK\_ID, TITLE, PUBLISHER\_NAME;**

**5)**

**CREATE VIEW BOOKS\_AVAILABLE AS SELECT B.BOOK\_ID, B.TITLE, C.NO\_OF\_COPIES FROM LIBRARY\_BRANCH L, BOOK B, BOOK\_COPIES C WHERE B.BOOK\_ID = C.BOOK\_ID AND L.BRANCH\_ID=C.BRANCH\_ID;**