1. **Create Database**

create database LMS\_Stm;

1. **USE DATABASE**

USE LMS\_Stm;

1. **Create Tables**

CREATE TABLE STUDENTS (

stud\_ID INT NOT NULL,

first\_name VARCHAR(255),

last\_name VARCHAR(255),

gender CHAR(1),

age INT,

contact\_add VARCHAR(255),

stud\_email VARCHAR(255),

PRIMARY KEY (stud\_ID)

);

CREATE TABLE BOOK (

book\_ID INT NOT NULL,

bk\_title VARCHAR(255),

author VARCHAR(255),

bk\_num INT,

pub\_date DATE NOT NULL,

PRIMARY KEY (book\_ID)

);

CREATE TABLE USERS (

user\_ID INT NOT NULL,

first\_name VARCHAR(255),

last\_name VARCHAR(255),

gender CHAR(2),

age INT,

contact\_add VARCHAR(255),

user\_email VARCHAR(255),

PRIMARY KEY (user\_ID)

);

CREATE TABLE BORROWING (

borrowing\_ID INT NOT NULL AUTO\_INCREMENT,

book\_ID INT,

stud\_ID INT,

data\_borrowed DATE NOT NULL,

data\_return DATE NOT NULL,

PRIMARY KEY (borrowing\_ID),

FOREIGN KEY (book\_ID)

REFERENCES BOOK (book\_ID)

ON DELETE CASCADE,

FOREIGN KEY (stud\_ID)

REFERENCES STUDENTS (stud\_ID)

ON DELETE CASCADE

);

CREATE TABLE TRANSACTIONS (

trans\_ID INT NOT NULL,

trans\_name VARCHAR(255),

borrowing\_ID INT,

stud\_ID INT,

trans\_date DATE NOT NULL,

PRIMARY KEY (trans\_ID),

FOREIGN KEY (borrowing\_ID)

REFERENCES BORROWING (borrowing\_ID)

ON DELETE CASCADE,

FOREIGN KEY (stud\_ID)

REFERENCES STUDENTS (stud\_ID)

ON DELETE CASCADE

);

1. **Insert Values in Table:**

INSERT INTO book (book\_ID,bk\_title,author,bk\_num ,pub\_date )

VALUES(1010,'Pather Panchali ','Bibhutibhushan Bandyopadhyay',5052,'1929-06-17'),

(1011,'Devdas ','Sarat Chandra Chatterjee',5258,'1917-06-30'),

(1012,'Aranyak ','Bibhutibhushan Bandopadhyay',58792,'1976-05-01'),

(1013,'CShesher Kabita ',' Rabindranath Tagore',57582,'1929-03-18'),

(1014,'Chander Pahar ','Bibhutibhushan Bandyopadhyay',52759,'2002-07-01');

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

insert into USERS (user\_ID,first\_name,last\_name,gender,age,contact\_add,user\_email)

value (985, 'Dipa', 'Rani', 'F', 25, '01305395', 'diparani0320@gmail.com'),

(888,'Afia','Emu','F',19,'01456','emu@g.com'),

(999,'Afran','Eou','F',21,'01454566','amu@g.com'),

(777,'Afia','ni','M',23,'0148576','emi@g.com'),

(444,'Plabok','man','M',20,'015456','eiiu@g.com'),

(758,'Anny','Roy','F',22,'0114456','emkku@g.com');

insert into USERS (user\_ID,first\_name,last\_name,gender,age,contact\_add,user\_email)

value (985, 'Dipa', 'Rani', 'F', 25, '01305395', 'diparani0320@gmail.com');

insert into STUDENTS (stud\_ID,first\_name,last\_name,gender,age,contact\_add,stud\_email)

value (109,'Dipa','Rani','F',25,'01365','diparani0320@gmail.com'),

(101,'Afia','Emu','F',19,'01456','emu@g.com'),

(102,'Afran','Eou','F',21,'01454566','amu@g.com'),

(103,'Afia','ni','M',23,'0148576','emi@g.com'),

(104,'Plabok','man','M',20,'015456','eiiu@g.com'),

(105,'Anny','Roy','F',22,'0114456','emkku@g.com');

insert into BORROWING (borrowing\_ID,book\_ID,stud\_ID,data\_borrowed,data\_return)

value (78978,1010,102,'2000-11-12','2000-11-15'),

(78979,1011,103,'2001-10-12','2001-10-15');

insert into TRANSACTIONS (trans\_ID ,trans\_name,borrowing\_ID,stud\_ID,trans\_date)

value (01,'Book',78978,102,'2000-11-12'),

(02,'Book',78979,103,'2001-10-12');

1. **Query Runs**

/\*\*\*\*\*\*\* which table has what \*\*\*\*\*\*\*\*\*/

SELECT \* FROM STUDENTS;

SELECT \* FROM BOOK;

SELECT \* FROM USERS;

SELECT \* FROM BORROWING;

SELECT \* FROM TRANSACTIONS;

/\*\*\*\*\*\*\*\* find someting using where in a tables \*\*\*\*\*\*\*\*/

SELECT \* FROM STUDENTS WHERE stud\_email = 'diparani0320@gmail.com';

SELECT \* FROM TRANSACTIONS WHERE trans\_date = '2001-10-12';

SELECT \* FROM BORROWING WHERE book\_ID = '1011';

SELECT \* FROM USERS WHERE user\_ID = '985';

SELECT \* FROM book WHERE author = 'Bibhutibhushan Bandyopadhyay';

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Update using \*\*\*\*\*\*\*\*/

UPDATE USERS SET first\_name = 'Faminul Aman', user\_email= 'faman@gmail.com'

WHERE user\_ID = 444;

UPDATE STUDENTS SET first\_name = 'Dipa', last\_name = 'Rani'

WHERE stud\_ID = 102;

/\*\*\*\*\*\*\*\*\*\*\* UNION, GROUP BY Using \*\*\*\*\*\*\*\*/

SELECT stud\_ID FROM STUDENTS

UNION

SELECT stud\_ID FROM BORROWING

ORDER BY stud\_ID;

SELECT stud\_ID, age

FROM STUDENTS

GROUP BY age;

/\*\*\*\*\*\* ORDER BY USING Ascending / descending\*\*\*\*\*\*/

SELECT book\_ID, author, bk\_num

FROM book

ORDER BY book\_ID, bk\_num DESC;

/\*\*\*\*\* Delete using\*\*\*\*/

DELETE FROM STUDENTS WHERE stud\_ID=105;