

A  
Project Report  
on  
**Library Management System**  
Developed by  
**DINKY A. LAKHANI(IT-062) – Department of IT, DD University**  
**AASTHA N. MODI(IT-079) - Department of IT, DD University**  
**GURVINDER SINGH PADAM(IT-084) - Department of IT, DD University**

**Guided By:**

**Prof. Archana N. Vyas**  
**Prof. Fatema Vhora**

**Department of Information Technology**  
**Faculty of Technology**  
**DD University**



**Department of Information Technology**  
**Faculty of Technology, Dharmsinh Desai University**  
**College Road, Nadiad-387001**  
**October-2021**

**DHARMSINH DESAI UNIVERSITY**  
**NADIAD-387001, GUJARAT**



**CERTIFICATE**

This is to certify that the project entitled "**Library Management System**" is a bonafied report of the work carried out by

- 1) **Ms. DINKY A. LAKHANI**, Student ID No: **19ITUOS093**
- 2) **Ms. AASTHA N. MODI**, Student ID No: **19ITUBS045**
- 3) **Mr. GURVINDER SINGH PADAM**, Student ID No: **19ECUOG038**

of Department of Information Technology, semester V, under the guidance and supervision for the subject Database Management System. They were involved in Project training during academic year 2021-2022.

**Prof. Fatema Vhora**

(Project Guide)

Department of Information Technology,  
Faculty of Technology,  
Dharmsinh Desai University, Nadiad  
Date: 21-10-2021

**Prof. Vipul Dabhi**

Head, Department of Information Technology,  
Faculty of Technology,  
Dharmsinh Desai University, Nadiad  
Date: 21-10-2021

## ACKNOWLEDGEMENT

We would like to give our sincere acknowledgement and express our heartiest gratitude to everybody responsible for the successful completion of our project “OMNILIB”.

The success and final outcome of this project required a lot of guidance and assistance from many people and we are extremely privileged to have them all along the completion of this project.

We owe our gratitude to our project guide Prof. Fatema Vhora, who took keen interest on our project work and guided us all along till the completion of our project work by providing all the necessary help for developing a good Database System.

We would also like to thank Prof. Archana N. Vyas whose lectures and constant motivation led us to completion of this project.

Finally we convey our acknowledgement to all our faculties, friends and family members who are directly or indirectly associated with us in successful completion of this project.

We thank one and all.

## **TABLE OF CONTENTS**

➤ Certificate .....	2
➤ Acknowledgement .....	3
<b>1. SYSTEM OVERVIEW .....</b>	
1.1 Current system .....	6
1.2 Objectives of the Proposed System .....	7
1.3 Advantages of the Proposed system (over current) .....	8
<b>2. E-R DIAGRAM .....</b>	9
<b>3. DATA DICTIONARY .....</b>	11
<b>4. SCHEMA DIAGRAM .....</b>	19
<b>5. DATABASE IMPLEMENTATION.....</b>	
5.1 Queries for Table Creation.....	22
5.2 Insert Table Queries .....	34
5.3 Basic Queries .....	64
5.4 Joins and Sub Queries .....	71
5.5 PL/SQL .....	82
5.6 Functions .....	84
5.7 Triggers.....	86
5.8 Cursors .....	91
<b>6. FUTURE ENHANCEMENTS OF THE SYSTEM .....</b>	93
<b>7. BIBLIOGRAPHY.....</b>	95

# **1.SYSTEM OVERVIEW**

## 1.1 CURRENT SYSTEM

- OMNILIB is engineered to help people locate libraries or their favourite books in India. A person can get registered to the system via the Login portal and select the membership types offered to them and avail the benefits.
- OMNILIB has two types of users:
  - 1) Admins,
  - 2) Users.

An Admin can administer his books in his library and can keep a track of the return or issuing dates of the books. The Users can search the books they need and put hold on those books which they will issue physically at the libraries they attend to, Users are given merit points by the Admins based on their loyalty and User is also allowed to give feedback on or about the books and libraries.

## 1.2 OBJECTIVES OF THE PROPOSED SYSTEM

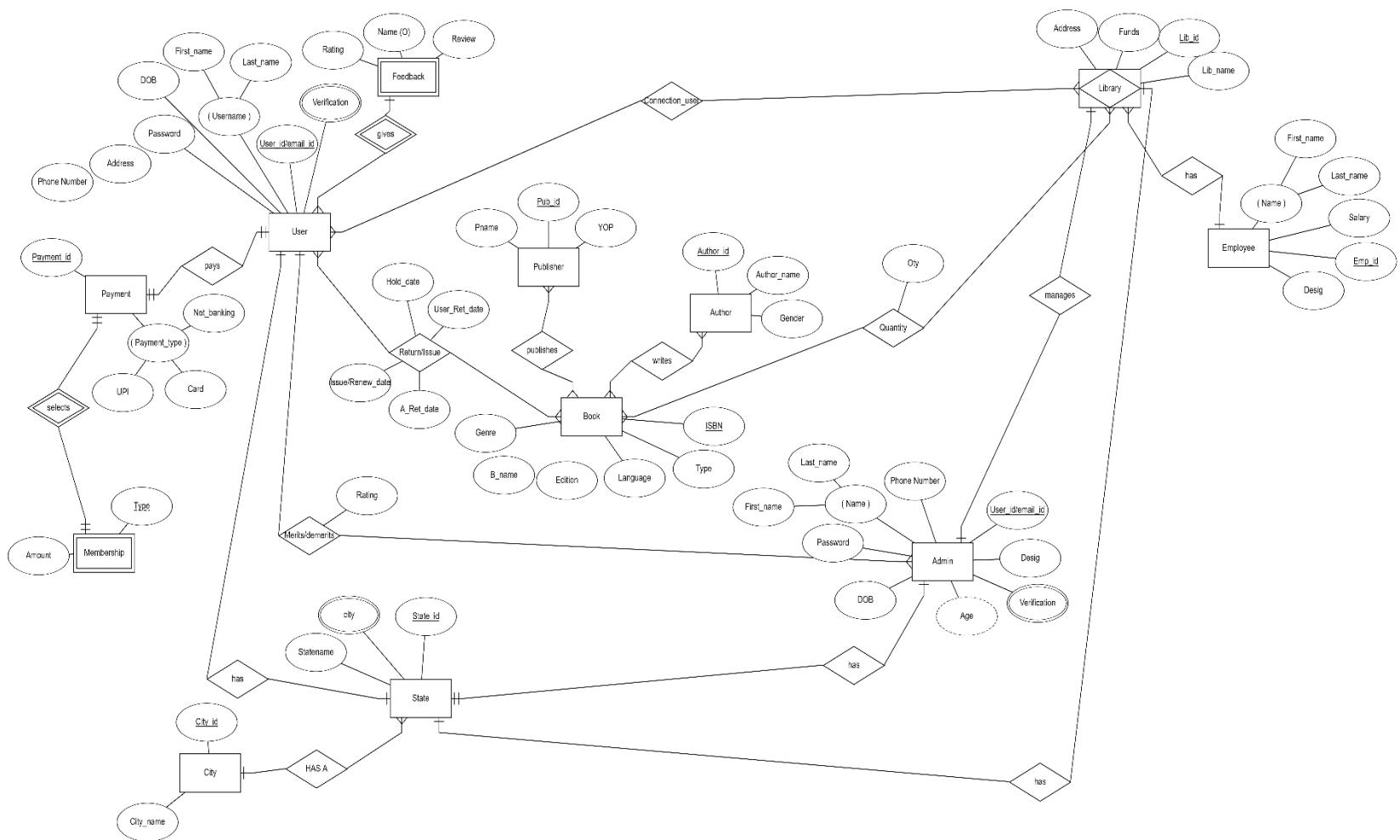
- Automate and facilitate process of searching books in one's locality.
- Unified system for Return/Issue or holding a particular book
- Ease of access for Users and Admins

### **1.3 ADVANTAGES OF THE PROPOSED SYSTEM**

Through this system we try to achieve the below objectives

- Reducing the managing/accessing time for the users and the admins
- Reduces time for the users looking for particular genres/authors. They can sift through the books easily.
- Helps reduce Library funds towards employment thus allowing minimal management
- Allows a user to extend his return date/ re-issuing of the book online.
- Admins can track users favourite genres and thus exercise their decisions for purchasing books and works that seem beneficial.

## 2.ER Diagram



## **3.Data Dictionary**

## Verification

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
verif_id	character varying ▾	50			
Aadhar Card	character varying ▾	20			
license	character varying ▾	50			

## User

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
first_name	character varying ▾	50			
last_name	character varying ▾	50			
phone_number	numeric ▾	10	0		
address	character varying ▾	200			
passwrd	character varying ▾	20			
dob	date ▾				
User_id/email_id	character varying ▾	50			
lib_id	character varying ▾	20			
verif_id	character varying ▾	50			
payment_id	character varying ▾	20			

**State**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
state_id	character varying	5			
statename	character varying	50			

**Return/Issue**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
hold_date	date				
user_ret_date	date				
Issue/Renew_date	date				
a_ret_date	date				
User_id/email_id	character varying	50			
isbn	numeric	13	0		

**Quantity**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
ISBN	numeric	13	0		
Lib_id	character varying	20			
Qty	numeric	20	0		

**Publisher**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
pname	character varying	50			
yop	date				
pub_id	character varying	20			
isbn	numeric	13	0		

**Payment**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
upi	character varying	20			
net_banking	character varying	20			
card	character varying	20			
payment_id	character varying	20			

**Merits/Demerits**

Columns						
	Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
	rating	numeric	2	1		
	Admin_User_id/email_id	character varying	50			
	User_id/email_id	character varying	50			

## Membership

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
<input type="button" value="edit"/> <input type="button" value="delete"/> amount	numeric ▾	4	0	<span>Yes</span>	<span>No</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> pay_type	character varying ▾	20		<span>Yes</span>	<span>Yes</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> payment_id	character varying ▾	20		<span>Yes</span>	<span>Yes</span>

## Library

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
<input type="button" value="edit"/> <input type="button" value="delete"/> address	character varying ▾	500		<span>Yes</span>	<span>No</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> funds	numeric ▾	8	2	<span>Yes</span>	<span>No</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> lib_name	character varying ▾	50		<span>Yes</span>	<span>No</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> lib_id	character varying ▾	20		<span>Yes</span>	<span>Yes</span>
<input type="button" value="edit"/> <input type="button" value="delete"/> city_id	character varying ▾	5		<span>Yes</span>	<span>No</span>

**Admin**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
User_id/email_id	character varying ▾	50		<span>Yes</span>	<span>Yes</span>
lib_id	character varying ▾	20		<span>Yes</span>	<span>No</span>
verif_id	character varying ▾	50		<span>Yes</span>	<span>No</span>
first_name	character varying ▾	50		<span>Yes</span>	<span>No</span>
last_name	character varying ▾	50		<span>Yes</span>	<span>No</span>
Phone_Number	numeric ▾	10	0	<span>Yes</span>	<span>No</span>
passwd	character varying ▾	20		<span>Yes</span>	<span>No</span>
desig	character varying ▾	20		<span>Yes</span>	<span>No</span>
dob	date ▾			<span>Yes</span>	<span>No</span>

**Author**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
author_name	character varying ▾	50		<span>Yes</span>	<span>No</span>
gender	character varying ▾	6		<span>Yes</span>	<span>No</span>
author_id	character varying ▾	5		<span>Yes</span>	<span>Yes</span>
isbn	numeric ▾	13	0	<span>Yes</span>	<span>Yes</span>

**Book**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
b_name	character varying	800		Yes	No
genre	character varying	50		Yes	No
edition	integer			Yes	No
type	character varying	50		Yes	No
isbn	numeric	13	0	Yes	Yes
lib_id	character varying	20		Yes	No
ratings	numeric	2	1	Yes	No
language	character varying	100		No	No

**City**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
city_name	character varying	50		Yes	No
city_id	character varying	50		Yes	Yes
state_id	character varying	5		Yes	No

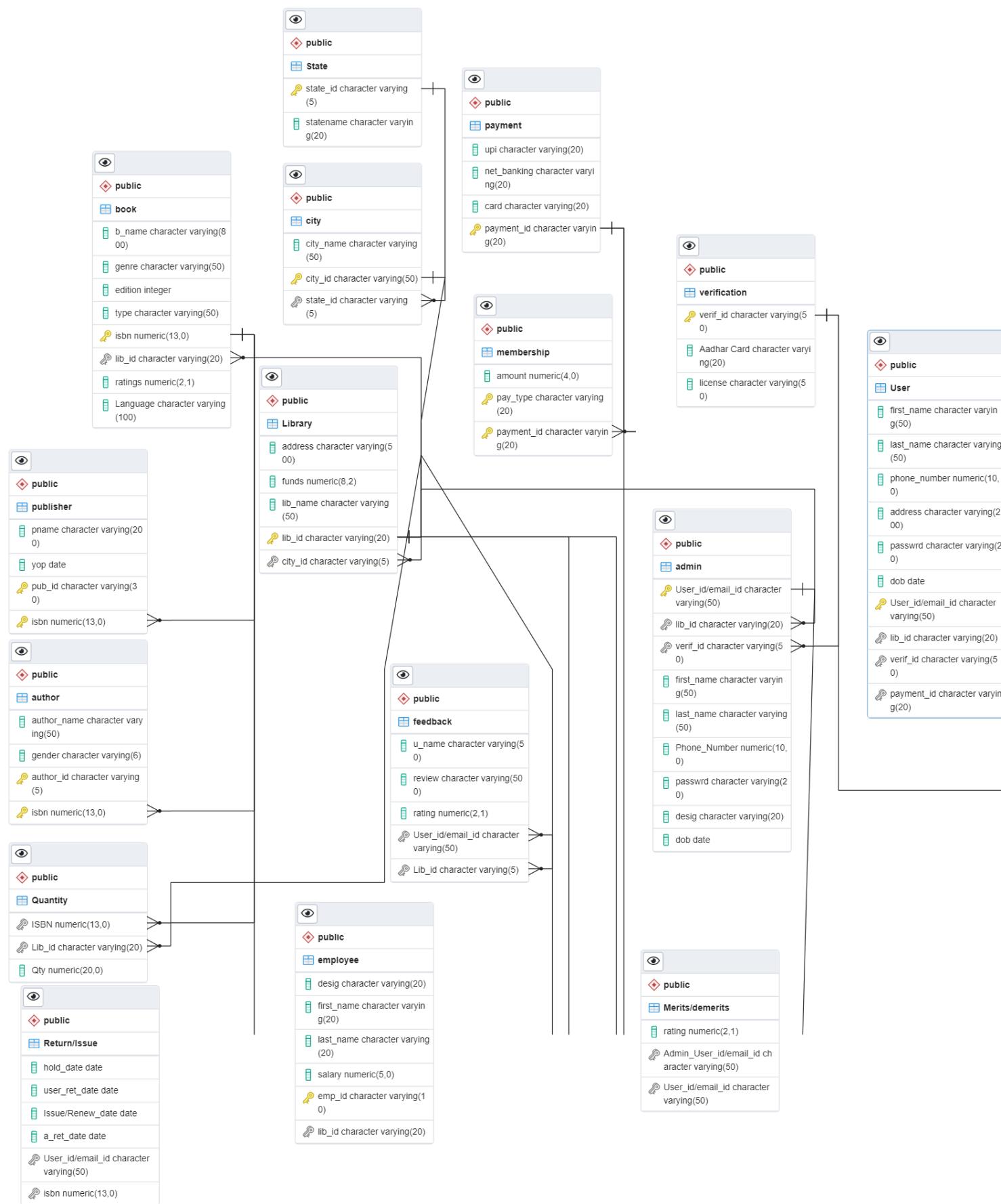
**Employee**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
desig	character varying ▾	20			
first_name	character varying ▾	20			
last_name	character varying ▾	20			
salary	numeric ▾	5	0		
emp_id	character varying ▾	10			
lib_id	character varying ▾	20			

**Feedback**

Name	Data type	Length/Precision	Scale	Not NULL?	Primary key?
u_name	character varying ▾	50			
review	character varying ▾	500			
rating	numeric ▾	2	1		
User_id/email_id	character varying ▾	50			
lib_id	character varying ▾	5			

## 4.Schema Diagram



## **5.Database Implementation**

## **5.1 Queries for Table Creation**

### **CREATE SCHEMA**

#### **1) Verification**

```
CREATE TABLE Verification  
(  
    Verif_id  varchar(50) NOT NULL,  
    "Aadhar Card" varchar(20) NULL,  
    License   varchar(50) NULL,  
    CONSTRAINT PK_215 PRIMARY KEY ( Verif_id )  
);
```

#### **2) State**

```
CREATE TABLE "State"  
(  
    State_id  varchar(5) NOT NULL,  
    Statename varchar(50) NOT NULL,  
    CONSTRAINT PK_159 PRIMARY KEY ( State_id ));
```

#### **3) City**

```
CREATE TABLE City  
(
```

```
City_name varchar(50) NOT NULL,  
City_id  varchar(50) NOT NULL,  
State_id varchar(5) NOT NULL,  
CONSTRAINT PK_163 PRIMARY KEY ( City_id ),  
CONSTRAINT FK_165 FOREIGN KEY ( State_id ) REFERENCES "State" ( State_id )  
);  
  
CREATE INDEX fkIdx_167 ON City  
(  
    State_id  
);
```

#### 4) Library

```
CREATE TABLE "Library"  
(  
    Address varchar(500) NOT NULL,  
    Funds  numeric(8,2) NOT NULL,  
    Lib_name varchar(50) NOT NULL,  
    Lib_id  varchar(20) NOT NULL,  
    City_id varchar(5) NOT NULL,  
    CONSTRAINT PK_52 PRIMARY KEY ( Lib_id ),  
    CONSTRAINT FK_181 FOREIGN KEY ( City_id ) REFERENCES "State" ( City_id )  
);
```

```
CREATE INDEX fkIdx_183 ON "Library"  
(  
    City_id  
);
```

## 5) Admin

```
CREATE TABLE Admin
(
    "User_id/email_id" varchar(50) NOT NULL,
    Lib_id      varchar(20) NOT NULL,
    Verif_id    varchar(50) NOT NULL,
    First_name   varchar(50) NOT NULL,
    Last_name    varchar(50) NOT NULL,
    "Phone_Number"  numeric(10,0) NOT NULL,
    Passwrд     varchar(20) NOT NULL,
    Desig       varchar(20) NOT NULL,
    DOB         date NOT NULL,
    CONSTRAINT PK_191 PRIMARY KEY ( "User_id/email_id"),
    CONSTRAINT FK_121 FOREIGN KEY ( Lib_id) REFERENCES "Library" ( Lib_id),
    CONSTRAINT FK_231 FOREIGN KEY ( Verif_id ) REFERENCES Verification ( Verif_id )
);
```

```
CREATE INDEX fkIdx_124 ON Admin
(
    Lib_id
);
```

```
CREATE INDEX fkIdx_233 ON Admin
(
    Verif_id
);
```

**6) Employee**

```
CREATE TABLE Employee
(
    Desig    varchar(20) NOT NULL,
    First_name varchar(20) NOT NULL,
    Last_name  varchar(20) NOT NULL,
    Salary    numeric(5,0) NOT NULL,
    Emp_id    varchar(10) NOT NULL,
    Lib_id    varchar(20) NOT NULL,
    CONSTRAINT PK_187 PRIMARY KEY ( Emp_id),
    CONSTRAINT FK_56 FOREIGN KEY ( Lib_id) REFERENCES "Library" ( Lib_id)
);
```

```
CREATE INDEX fkIdx_58 ON Employee
(
    Lib_id
);
```

**7) Book**

```
CREATE TABLE Book
(
    B_name   varchar(800) NOT NULL,
    Genre    varchar(50) NOT NULL,
    Edition   int NOT NULL,
    Type     varchar(50) NOT NULL,
    ISBN     decimal(13,0) NOT NULL,
```

```
    Lib_id  varchar(20) NOT NULL,  
    Ratings  numeric(2,1) NOT NULL,  
    Language varchar(100) NULL,  
    CONSTRAINT PK_185 PRIMARY KEY ( ISBN ),  
    CONSTRAINT FK_59 FOREIGN KEY ( Lib_id ) REFERENCES "Library" ( Lib_id )  
);
```

```
CREATE INDEX fkIdx_61 ON Book  
(  
    Lib_id  
);
```

## 8) Publisher

```
CREATE TABLE Publisher  
(  
    Pname  varchar(20) NOT NULL,  
    YOP    date NOT NULL,  
    Pub_id  varchar(20) NOT NULL,  
    ISBN   decimal(13,0) NOT NULL,  
    CONSTRAINT PK_193 PRIMARY KEY ( Pub_id,ISBN ),  
    CONSTRAINT FK_15 FOREIGN KEY ( ISBN ) REFERENCES Book ( ISBN )  
);
```

```
CREATE INDEX fkIdx_17 ON Publisher  
(  
    ISBN
```

```
);
```

## 9) Author

```
CREATE TABLE Author
(
    Author_name varchar(50) NOT NULL,
    Gender     varchar(6) NOT NULL,
    Author_id  varchar(5) NOT NULL,
    ISBN       decimal(13,0) NOT NULL,
    CONSTRAINT PK_195 PRIMARY KEY ( Author_id,ISBN),
    CONSTRAINT FK_23 FOREIGN KEY ( ISBN) REFERENCES Book ( ISBN)
);
```

```
CREATE INDEX fkIdx_25 ON Author
```

```
(  
    ISBN  
);
```

## 10) Payment

```
CREATE TABLE Payment
(
    UPI      varchar(20) NULL,
    Net_Banking varchar(20) NULL,
    Card     varchar(20) NULL,
    Payment_id  varchar(20) NOT NULL,
    CONSTRAINT PK_230 PRIMARY KEY ( Payment_id )
);
```

## 11) Membership

```
CREATE TABLE Membership
(
    Amount    numeric(4,0) NOT NULL,
    Pay_Type  varchar(20) NOT NULL,
    Payment_id varchar(20) NOT NULL,
    CONSTRAINT PK_222 PRIMARY KEY ( Pay_Type, Payment_id ),
    CONSTRAINT FK_237 FOREIGN KEY ( Payment_id ) REFERENCES Payment ( Payment_id )
);
```

```
CREATE INDEX fkIdx_239 ON Membership
(
    Payment_id
);
```

## 12) User

```
CREATE TABLE "User"
(
    First_name    varchar(50) NOT NULL,
    Last_name     varchar(50) NOT NULL,
    Phone_Number  numeric(10,0) NOT NULL,
    Address       varchar(200) NOT NULL,
    Passwrd       varchar(20) NOT NULL,
    DOB           date NOT NULL,
```

```
"User_id/email_id" varchar(50) NOT NULL,  
Lib_id      varchar(20) NOT NULL,  
Verif_id    varchar(50) NOT NULL,  
Payment_id  varchar(20) NOT NULL,  
CONSTRAINT PK_189 PRIMARY KEY ( "User_id/email_id"),  
CONSTRAINT FK_131 FOREIGN KEY ( Lib_id) REFERENCES "Library" ( Lib_id),  
CONSTRAINT FK_218 FOREIGN KEY ( Verif_id ) REFERENCES Verification ( Verif_id ),  
CONSTRAINT FK_240 FOREIGN KEY ( Payment_id ) REFERENCES Payment ( Payment_id )  
);
```

```
CREATE INDEX fkIdx_133 ON "User"  
(  
Lib_id  
);
```

```
CREATE INDEX fkIdx_220 ON "User"  
(  
Verif_id  
);
```

```
CREATE INDEX fkIdx_242 ON "User"  
(  
Payment_id  
);
```

### 13) Return/Issue

```
CREATE TABLE "Return/Issue"
```

```
(  
    Hold_date      date NOT NULL,  
    User_Ret_date  date NOT NULL,  
    "Issue/Renew_date" date NOT NULL,  
    A_Ret_date     date NOT NULL,  
    "User_id/email_id" varchar(50) NOT NULL,  
    ISBN          decimal(13,0) NOT NULL,  
    CONSTRAINT FK_102 FOREIGN KEY ( "User_id/email_id") REFERENCES "User" (  
    "User_id/email_id"),  
    CONSTRAINT FK_106 FOREIGN KEY ( ISBN) REFERENCES Book ( ISBN)  
);
```

```
CREATE INDEX fkIdx_104 ON "Return/Issue"
```

```
(  
    "User_id/email_id"  
);
```

```
CREATE INDEX fkIdx_110 ON "Return/Issue"
```

```
(  
    ISBN  
);
```

## 14) Feedback

```
CREATE TABLE Feedback  
(
```

```
U_name      varchar(50) NULL,  
Review      varchar(500) NOT NULL,  
Rating      numeric(2,1) NOT NULL,  
"User_id/email_id" varchar(50) NOT NULL,  
Lib_id      varchar(5) NULL,  
CONSTRAINT FK_75 FOREIGN KEY ( "User_id/email_id") REFERENCES "User" (   
"User_id/email_id")  
CONSTRAINT FK_111 FOREIGN KEY ( "Lib_id") REFERENCES "Library" ( "Lib_id ")  
);
```

```
CREATE INDEX fkIdx_77 ON Feedback
```

```
(  
"User_id/email_id"  
);
```

```
CREATE INDEX fkIdx_113 ON Feedback
```

```
(  
"Lib_id"  
);
```

## 15) Merits/Demerits

```
CREATE TABLE "Merits/demerits"  
(
```

```
Rating          numeric(2,1) NOT NULL,  
"Admin_User_id/email_id" varchar(50) NOT NULL,  
"User_id/email_id"      varchar(50) NOT NULL,  
  
CONSTRAINT FK_144 FOREIGN KEY ( "Admin_User_id/email_id") REFERENCES Admin (  
"User_id/email_id"),  
CONSTRAINT FK_153 FOREIGN KEY ( "User_id/email_id") REFERENCES "User" (  
"User_id/email_id")  
);  
  
CREATE INDEX fkIdx_147 ON "Merits/demerits"  
(  
"Admin_User_id/email_id"  
);  
  
CREATE INDEX fkIdx_156 ON "Merits/demerits"  
(  
"User_id/email_id"  
);
```

## 16) Quantity

```
CREATE TABLE public."Quantity"  
(
```

```
"ISBN" numeric(13, 0) NOT NULL,  
"Lib_id" character varying(20) NOT NULL,  
"Qty" numeric(20, 0) NOT NULL  
);
```

```
ALTER TABLE Quantity"  
ADD FOREIGN KEY ("ISBN")  
REFERENCES book (isbn);
```

```
ALTER TABLE "Quantity"  
ADD FOREIGN KEY ("Lib_id")  
REFERENCES Library" (lib_id);
```

## **5.2 Insert Table Queries**

### **1) State Table**

```
Insert into "State" values('S2','Arunachal Pradesh');
Insert into "State" values('S3','Assam');
Insert into "State" values('S4','Bihar');
Insert into "State" values('S5','Chhattisgarh');
Insert into "State" values('S6','Goa');
Insert into "State" values('S7','Gujarat');
Insert into "State" values('S8','Haryana');
Insert into "State" values('S9','Himachal Pradesh');
Insert into "State" values('S10','Jharkhand');
Insert into "State" values('S11','Karnataka');
Insert into "State" values('S12','Kerala');
Insert into "State" values('S13','Madhya Pradesh');
Insert into "State" values('S14','Maharashtra');
Insert into "State" values('S15','Manipur');
Insert into "State" values('S16','Meghalaya');
Insert into "State" values('S17','Mizoram');
Insert into "State" values('S18','Nagaland');
Insert into "State" values('S19','Odisha');
Insert into "State" values('S20','Punjab');
Insert into "State" values('S21','Rajasthan');
Insert into "State" values('S22','Sikkim');
Insert into "State" values('S23','Tamil Nadu');
```

---

```

Insert into "State" values('S24','Telangana');

Insert into "State" values('S25','Tripura');

Insert into "State" values('S26','Uttar Pradesh');

Insert into "State" values('S27','Uttarakhand');

Insert into "State" values('S28','West Bengal');

Insert into "State" values('U1','Andaman & Nicobar');

Insert into "State" values('U2','Chandigarh');

Insert into "State" values('U3','Dadra & Nagar Haveli');

Insert into "State" values('U4','Daman & Diu');

Insert into "State" values('U5','Delhi');

Insert into "State" values('U6','Jammu and Kashmir');

Insert into "State" values('U7','Lakshadweep');

Insert into "State" values('U8','Ladakh');

Insert into "State" values('U9','Puducherry');

```

	state_id [PK] character varying (5)	statename character varying (50)
1	S2	Arunachal Pradesh
2	S3	Assam
3	S4	Bihar
4	S5	Chhattisgarh
5	S6	Goa
6	S7	Gujarat
7	S8	Haryana
8	S9	Himachal Pradesh
9	S10	Jharkhand
10	S11	Karnataka
11	S12	Kerala
12	S13	Madhya Pradesh
13	S14	Maharashtra
14	S15	Manipur
15	S16	Meghalaya
16	S17	Mizoram
17	S18	Nagaland
18	S19	Odisha
19	S20	Punjab
20	S21	Rajasthan

	state_id [PK] character varying (5)	statename character varying (50)
20	S21	Rajasthan
21	S22	Sikkim
22	S23	Tamil Nadu
23	S24	Telangana
24	S25	Tripura
25	S26	Uttar Pradesh
26	S27	Uttarakhand
27	S28	West Bengal
28	U1	Andaman & Nicobar
29	U2	Chandigarh
30	U3	Dadra & Nagar Haveli
31	U4	Daman & Diu
32	U5	Delhi
33	U6	Jammu and Kashmir
34	U7	Lakshadweep
35	U8	Ladakh
36	U9	Puducherry
37	S	Andhra Pradesh
38	S1	Andhra Pradesh

## 2) City Table

```
INSERT INTO city(city_id,city_name,state_id)
VALUES('C101','Amaravati','S1'),('C102','Vishakhapatnam','S1'),('C103','Guntur','S1'),
('C201','Itanagar','S2'),
('C301','Dispur','S3'),
('C401','Patna','S4'),
('C501','Raipur','S5'),
('C601','Panaji','S6'),
('C701','Gandhinagar','S7'),
('C702','Ahmedabad','S7'),
('C703','Surat','S7'),
('C704','Rajkot','S7'),
('C705','Nadiad','S7'),
('C706','Ankleshwar','S7'),
('C707','Vadodara','S7'),
('C801','Chandigarh','S8'),
('C901','Shimla','S9'),
('C1001','Ranchi','S10'),
('C1101','Bengaluru','S11'),
('C1201','Thiruvananthapuram','S12'),
('C1301','Bhopal','S13'),
('C1401','Mumbai','S14'),
('C1501','Imphal','S15'),
('C1601','Shilong','S16'),
```

```
('C1701','Aizawl','S17'),  
('C1801','Kohima','S18'),  
('C1901','Bhubaneshwar','S19'),  
('C2001','Chandigarh','S20'),  
('C2101','Jaipur','S21'),  
('C2201','Gangtok','S22'),  
('C2301','Chennai','S23'),  
('C2401','Hyderabad','S24'),  
('C2501','Agartala','S25'),  
('C2601','Lucknow','S26'),  
('C2701','Dehradun','S27'),  
('C2801','Kolkata','S28'),  
('U101','Port Blair','U1'),  
('U201','Chandigarh','U2'),  
('U301','D&N Haveli','U3'),  
('U401','Daman','U4'),  
('U501','New Delhi','U5'),  
('U601','Srinagar','U6'),  
('U701','Kavaratti','U7'),  
('U801','Leh','U8'),  
('U901','Pondicherry','U9');
```

	city_name character varying (50)	city_id [PK] character varying (50)	state_id character varying (5)
1	Amaravati	C101	S1
2	Vishakhapatnam	C102	S1
3	Guntur	C103	S1
4	Itanagar	C201	S2
5	Dispur	C301	S3
6	Patna	C401	S4
7	Rajpur	C501	S5
8	Panaji	C601	S6
9	Gandhinagar	C701	S7
10	Ahmedabad	C702	S7
11	Surat	C703	S7
12	Rajkot	C704	S7
13	Nadiad	C705	S7
14	Ankleshwar	C706	S7
15	Vadodara	C707	S7
16	Chandigarh	C801	S8
17	Shimla	C901	S9
18	Ranchi	C1001	S10
19	Bengaluru	C1101	S11
20	Thiruvananthapuram	C1201	S12

	city_name character varying (50)	city_id [PK] character varying (50)	state_id character varying (5)
21	Bhopal	C1301	S13
22	Mumbai	C1401	S14
23	Imphal	C1501	S15
24	Shilong	C1601	S16
25	Aizawl	C1701	S17
26	Kohima	C1801	S18
27	Bhubaneshwar	C1901	S19
28	Chandigarh	C2001	S20
29	Jaipur	C2101	S21
30	Gangtok	C2201	S22
31	Chennai	C2301	S23
32	Hyderabad	C2401	S24
33	Agartala	C2501	S25
34	Lucknow	C2601	S26
35	Dehradun	C2701	S27
36	Kolkata	C2801	S28
37	Port Blair	U101	U1
38	Chandigarh	U201	U2
39	D&N Haveli	U301	U3
40	Daman	U401	U4

36	Chandigarh	U201	U2
39	D&N Haveli	U301	U3
40	Daman	U401	U4
41	New Delhi	U501	U5
42	Srinagar	U601	U6
43	Kavaratti	U701	U7
44	Leh	U801	U8
45	Pondicherry	U901	U9

### 3) Verification Table

```

INSERT INTO verification(verif_id,"Aadhar Card",license)
VALUES('V1','1234123412341200','AP0120201234567'),
      ('V2','1234123412341201','GJ0120191234567'),
      ('V3','1234123412341202','MH0120181234567'),
      ('V4','1234123412341203','PN0120171234567'),
      ('V5','1234123412341204','UP0120201234567'),
      ('V6','1234123412341205','TN0120211234567'),
      ('V7','1234123412341206','KN0120161234567'),
      ('V8','1234123412341207','MP0120001234567'),
      ('V9','1234123412341208','RJ0120191234567'),
      INSERT INTO verification VALUES('V11','1234123412341210','GJ0120191234576');
  
```

```
INSERT INTO verification VALUES('V12','1234123412341211',' GJ0120191233456');  
INSERT INTO verification VALUES('V13','1234123412341212',' GJ0120211234123');  
INSERT INTO verification VALUES('V14','1234123412341213',' GJ0120171237340');  
INSERT INTO verification VALUES('V15','1234123412341214',' MH0120211234867');  
INSERT INTO "verification" values('V16','1234123412341288','AP0120201234568');  
INSERT INTO "verification" values('V17','1234123412341204','GJ0120191234561');  
INSERT INTO "verification" values('V18','1234123412341205','MH0120181234565');  
INSERT INTO "verification" values('V19','1234123412341207','PN0120171234564');  
INSERT INTO "verification" values('V20','1234123412341208','UP0120201234568');  
INSERT INTO "verification" values('V21','1234123412341209','TN0120211234561');  
INSERT INTO "verification" values('V22','1234123412341202','KN0120161234534');  
INSERT INTO "verification" values('V23','1234123412341203','MP0120001234556');  
INSERT INTO "verification" values('V24','1234123412341204','RJ0120191234598');  
INSERT INTO "verification" values('V25','1234123412341205','OR0120141234521');  
INSERT INTO "verification" values('V26','1234123412341216',' GJ0120191264579');  
INSERT INTO "verification" values('V27','1234123412341217',' GJ0120191293498');  
INSERT INTO "verification" values('V28','1234123412341218',' GJ0120211214127');  
INSERT INTO "verification" values('V29','1234123412341214',' GJ0120171247342');  
INSERT INTO "verification" values('V30','1234123412341211',' MH0120211234861');  
INSERT INTO "verification" values('V31','1234123672341288','AP0120261234568');  
INSERT INTO "verification" values('V32','1234123892341204','GJ0120181234561');  
INSERT INTO "verification" values('V33','1234123232341205','MH0120191234565');  
INSERT INTO "verification" values('V34','1234123982341207','PN0120181234564');  
INSERT INTO "verification" values('V35','1234123562341208','UP0120211234568');  
INSERT INTO "verification" values('V36','1234123122341209','TN0120211234561');
```

	verif_id [PK] character varying (50)	Aadhar Card character varying (20)	license character varying (50)
1	V1	1234123412341200	AP0120201234567
2	V2	1234123412341201	GJ0120191234567
3	V3	1234123412341202	MH0120181234567
4	V4	1234123412341203	PN0120171234567
5	V5	1234123412341204	UP0120201234567
6	V6	1234123412341205	TN0120211234567
7	V7	1234123412341206	KN0120161234567
8	V8	1234123412341207	MP0120001234567
9	V9	1234123412341208	RJ0120191234567
10	V11	1234123412341210	GJ0120191234576
11	V12	1234123412341211	GJ0120191233456
12	V13	1234123412341212	GJ0120211234123
13	V14	1234123412341213	GJ0120171237340
14	V15	1234123412341214	MH0120211234867
15	V16	1234123412341288	AP0120201234568
16	V17	1234123412341204	GJ0120191234561
17	V18	1234123412341205	MH0120181234565
18	V19	1234123412341207	PN0120171234564
19	V20	1234123412341208	UP0120201234568
20	V21	1234123412341209	TN0120211234561

	verif_id [PK] character varying (50)	Aadhar Card character varying (20)	license character varying (50)
18	V19	1234123412341207	PN0120171234564
19	V20	1234123412341208	UP0120201234568
20	V21	1234123412341209	TN0120211234561
21	V22	1234123412341202	KN0120161234534
22	V23	1234123412341203	MP0120001234556
23	V24	1234123412341204	RJ0120191234598
24	V25	1234123412341205	OR0120141234521
25	V26	1234123412341216	GJ0120191264579
26	V27	1234123412341217	GJ0120191293498
27	V28	1234123412341218	GJ0120211214127
28	V29	1234123412341214	GJ0120171247342
29	V30	1234123412341211	MH0120211234861
30	V31	1234123672341288	AP0120261234568
31	V32	1234123892341204	GJ0120181234561
32	V33	1234123232341205	MH0120191234565
33	V34	1234123982341207	PN0120181234564
34	V35	1234123562341208	UP0120211234568
35	V36	1234123122341209	TN0120211234561
36	V10	12341234123413100	GJ0130201234567

#### 4) Library Table

Insert INTO "Library" VALUES('Bank Rd, Beside Bank of, Bajwada, Mandvi, Vadodara', 5000, 'Central Library Mandvi Baroda', 'L101','C707'),

('Station Rd, M.S.U. Compound, M.S.U. University, Maharaja Sayajirao University, Sayajiganj, Vadodara', 17000,'Sir Sayajirao Memorial Trust Library', 'L102','C707'),

('SMES, Gujarat Vidyapith Rd, Sattar Taluka Society, Usmanpura, Ahmedabad', 5500,'Gujarat Vidyapith Library','L103','C702'),

('3046, Gandhi Rd, Old City, Dhalgarwad, Khadia, Ahmedabad',16900,'Dadabhai Navroji Library','L104','C702'),

('SVNIT Surat, Keval Chowk, Surat',20000,'New Central Library SVNIT','L105','C703'),

('6V27+H3X, Near Archana School, Ranujadham Society, Varachha, Surat',2500,'Jhaverchandmeghani Library','L106','C703'),

('7QX6+GXX, Indian Park, Rajkot',4000,'Rajkot Municipal Corporation Library','L107','C704'),

('9, University Road, Jala Ram Nagar, Rajkot',8900,'Shri Ram Reading Room','L108','C704'),

- ('312, Dr Dadabhai Naoroji Rd, Azad Maidan, Fort, Mumbai, Maharashtra',7000,'J. N. Petit Library','L109','C1401'),
- ('near Bandra Gymkhana, Mumbai, Maharashtra',11000,'Maharashtra Mitra Mandal Library','L110','C1401'),
- ('Sai Nagri Society, Shop No A2, Near Nagarwala School, Kalyani Nagar, Bhopal, Ma',16700,'Bookaholic Library','L111','C1301'),
- ('Kumthekar Road, Sadashiv Peth, near Chitrashala Chowk, Bhopal, Madhya Pradesh',15400,'The Phoenix Library','L112','C1301'),
- ('Ramakrishna Math Marg, Domalguda, Himayatnagar, Hyderabad, Telangana',13000,'Vivekanand Institute & Library','L113','C2401'),
- ('8GW9+49R, Sai Ram Nagar, Champapet, Telangana',12300,'City Central Library','L114','C2401'),
- ('G-9, Blue Cross Chambers, Behind-Safina Plaza, Infantry Rd, Bengaluru, Karnataka',12200,'Eloor Lending Libraries','L115','C1101'),
- ('IISc Campus, Gulmohar Marg, Devasandra Layout, Bengaluru, Karnataka',12000,'JRD Tata Memorial Library','L116','C1101'),
- ('Shiv Market, Bhooton Wali Gali, near RWA, Ashok Mohalla, Nangloi Jat, Nangloi, Delhi',11000,'VPS Educational Library','L117','U501'),
- ('Shiv Market, Bhooton Wali Gali, near RWA, Ashok Mohalla, Nangloi Jat, Nangloi, Delhi',12500,'VPS Educational Library','L118','U501'),
- ('1/26, 1st Circular St, Jawahar Nagar, Perambur, Chennai, Tamil Nadu',16700,'Branch Library','L119','C2301'),
- ('54 C, 3rd Street, River View Colony, Block AG, Opp. K3 Police Station, Anna Nagar, Chennai, Tamil Nadu',1800,'Little Love Library','L120','C2301');

	address character varying (500)	funds numeric (8,2)	lib_name character varying (50)	lib_id [PK] character varying (20)	city_id character varying (5)
1	Bank Rd, Beside Bank of, Bajw...	5000.00	Central Library Mandvi Baroda	L101	C707
2	Station Rd, M.S.U. Compound,...	17000.00	Sir Sayajirao Memorial Trust ...	L102	C707
3	SMES, Gujarat Vidyapith Rd, S...	5500.00	Gujarat Vidyapith Library	L103	C702
4	3046, Gandhi Rd, Old City, Dha...	16900.00	Dadabhai Navroji Library	L104	C702
5	SVNIT Surat, Keval Chowk, Sur...	20000.00	New Central Library SVNIT	L105	C703
6	6V27+H3X, Near Archana Sch...	2500.00	Jhaverchandmeghani Library	L106	C703
7	7QX6+GXX, Indian Park, Rajkot	4000.00	Rajkot Municipal Corporatio...	L107	C704
8	9, University Road, Jala Ram ...	8900.00	Shri Ram Reading Room	L108	C704
9	312, Dr Dadabhai Naoroji Rd, ...	7000.00	J. N. Petit Library	L109	C1401
10	near Bandra Gymkhana, Mum...	11000.00	Maharashtra Mitra Mandal L...	L110	C1401
11	Sai Nagri Society, Shop No A2,...	16700.00	Bookaholic Library	L111	C1301
12	Kumthekar Road, Sadashiv Pe...	15400.00	The Phoenix Library	L112	C1301
13	Ramakrishna Math Marg, Do...	13000.00	Vivekanand Institute & Library	L113	C2401
14	8GW9+49R, Sai Ram Nagar, C...	12300.00	City Central Library	L114	C2401
15	G-9, Blue Cross Chambers, Be...	12200.00	Eloor Lending Libraries	L115	C1101
16	IISc Campus, Gulmohar Marg, ...	12000.00	JRD Tata Memorial Library	L116	C1101
17	Shiv Market, Bhooton Wali Gal...	11000.00	VPS Educational Library	L117	U501
18	Shiv Market, Bhooton Wali Gal...	12500.00	VPS Educational Library	L118	U501
19	1/26, 1st Circular St, Jawahar ...	16700.00	Branch Library	L119	C2301
20	54 C, 3rd Street, River View Co...	1800.00	Little Love Library	L120	C2301

## 5) Payment Table

```

Insert into Payment values('9392348212@sbi','-' , '1234 5678 9543 5435' , 'PM00101');

Insert into Payment values('8392348212@icici','-' , '1234 5678 5623 5435' , 'PM00102');

Insert into Payment values('9392348212@yes','-' , '4531 5678 9543 5435' , 'PM00103');

Insert into Payment values('-' , '-' , '1234 5034 5932 5435' , 'PM00104');

Insert into Payment values('-' , '-' , '7565 5678 9543 8664' , 'PM00105');

Insert into Payment values('9912372729@icici','-' , '1234 5678 9543 8064' , 'PM00106');

Insert into Payment values('9912345678@hdfc','-' , '6355 5678 9543 5435' , 'PM00107');

Insert into Payment values('9392348212@kotak','-' , '8644 5678 9543 5435' , 'PM00108');

Insert into Payment values('9392897045@sbi','-' , '3453 5678 9543 5435' , 'PM00109');

Insert into Payment values('9456734523@bob','-' , '1753 5678 9543 5435' , 'PM00110');

Insert into Payment values('8877663456@bob','-' , '1234 5678 9543 5435' , 'PM00111');

Insert into Payment values('9999996660@sbi','-' , '5333 5678 3242 5435' , 'PM00112');

Insert into Payment values('9397689050@icici','-' , '9021 4534 6435 2231' , 'PM00113');

Insert into Payment values('9399877896@sbi','-' , '9021 4534 6435 3742' , 'PM00114');

Insert into Payment values('4323424216@hdfc','-' , '9021 6435 2231 3424' , 'PM00115');

```

	upi character varying (20)	net_banking character varying (20)	card character varying (20)	payment_Id [PK] character varying (20)
1	9392348212@sbi	-	1234 5678 9543 5435	PM00101
2	8392348212@icici	-	1234 5678 5623 5435	PM00102
3	9392348212@yes	-	4531 5678 9543 5435	PM00103
4	-	-	1234 5034 5932 5435	PM00104
5	-	-	7565 5678 9543 8664	PM00105
6	9912372729@icici	-	1234 5678 9543 8064	PM00106
7	9912345678@hdfc	-	6355 5678 9543 5435	PM00107
8	9392348212@kotak	-	8644 5678 9543 5435	PM00108
9	9392897045@sbi	-	3453 5678 9543 5435	PM00109
10	9456734523@bob	-	1753 5678 9543 5435	PM00110
11	8877663456@bob	-	1234 5678 9543 5435	PM00111
12	9999996660@sbi	-	5333 5678 3242 5435	PM00112
13	9397689050@icici	-	9021 4534 6435 2231	PM00113
14	9399877896@sbi	-	9021 4534 6435 3742	PM00114
15	4323424216@hdfc	-	9021 6435 2231 3424	PM00115

## 6)User Table

Insert into "User" values('Dinky','Lakhani',9392348212,'A101 ,Platinum Towers , University Road , Rajkot - 360001','fjjdsnkd','24-06-2001','gyeoroo24@gmail.com','L107','V2','PM101');

Insert into "User" values('Sharvari','Gadkari',8392348212,'"Heaven" ,Nityaprabha Street ,Delhi','kdflgmdfk','14-02-2001','sharvarigad14@gmail.com','L117','V1','PM00102');

Insert into "User" values('Nirupama','Das',9392348212,'"Paradise Villa" , Block D ,Dr. Chopra Road,New Delhi','kgmfgkwq','04-07-2000','nirupamadas123@gmail.com','L118','V3','PM00103');

Insert into "User" values('Suresh','Agarwal',9392322222,'Sai Nagri Society, Shop No A2, Near Nagarwala School, Kalyani Nagar , Bhopal','ghkkfskfd','24-12-1999','sureshagarwal54@yahoo.com','L111','V5','PM00104');

Insert into "User" values('Nitya','Chaudhary',9392313121,'Kumthekar Road, Sadashiv Peth, near Chitrashala Chowk, Bhopal , M.P.','2392&203kfsk','02-01-1993','nityachaudhary65@gmail.com','L112','V4','PM00105');

Insert into "User" values('Aastha','Modi',9912372729,'701,Shanti Heights,Opposite SNK School, , University Road , Rajkot','4349jfjf\*jfs','02-02-2001','aasthamodi02@gmail.com','L107','V7','PM00106');

Insert into "User" values('Yami','Gautam',9912345678,'A101 , Jalaram Tower ,Navrangpura Main Road , Ahmedabad','fkfkqlq139da','14-03-2010','yamigautam1410@hotmail.com','L104','V6','PM00107');

Insert into "User" values('Varshita','Goti',9392897045,'C301 ,Varday Residency,L.P. Savani Road, Surat','hllte032mf','15-09-2000','varshi15@gmail.com','L105','V8','PM00108');

Insert into "User" values('Gurvinder','Singh',9456734523,'S123 ,Silver Plaaza,Gotri Road, Vadodara','fknkf0023d','10-06-2001','gurvinders1221@gmail.com','L101','V9','PM00109');

Insert into "User" values('Yasin','Sheikh',8877663456,"Shanti Niketan",M.S University Road,Saiyajignaj, Vadodara','rktek3995','13-04-1996','yasinsheikh786@gmail.com','L102','V10','PM00110');

Insert into "User" values('Isha','Keshariya',9999996660,'IISc Campus, Gulmohar Marg, Devasandra Layout, Bengaluru, Karnataka 560012','749fjdfnq&^&9','04-01-2001','ishakeshariya0401@gmail.com','L116','V12','PM00111');

Insert into "User" values('Shobita','Dhar',9397689050,'"501 Veena Apartments"Jayanagar 3rd Block, South End Circle, Opposite Vivek Showroom, Bengaluru, Karnataka 560011','rwkre^&T\*3','12-12-1997','shobitadhar@yahoo.com','L115','V11','PM00112');

Insert into "User" values('Ranveer','Khurrana',9399877896,' "Aiyappa" ,Beside Goverment Maternity Hospital , Pantheon Road , Chennai','Lkgdg^%\$^dsdf','18-02-1998','ranveekhana1802@gmail.com','L119','V13','PM00113');

Insert into "User" values('Udayveer','Jaisingh',4323424216,'Sukh Sadan, Laxman Nagar, Champapet, Telangana','oqwoeqa&^^','03-05-1987','udaybhan0305@gmail.com','L114','V15','PM00114');

Insert into "User" values('Siya','Rathod',9392344455,'C504 , 13th Street, River View Colony, Block AG, Opp. K3 Police Station, Anna Nagar , Chennai , Tamil Nadu','SDAKkds\*\*&12','02-04-1992','siyarathod0204@gmail.com','L119','V14','PM00115');

	first_name character varying (50)	last_name character varying (50)	phone_number numeric (10)	address character varying (200)	passwd character varying (20)	dob date	User_id/email_id [PK] character varying (50)	lib_id charact	verif_id character	payment_id character varying (20)
1	Dinky	Lakhani	9392348212	A101 ,Platinum Towers , Univ...	fjidsnk	2001-06...	gyeoro24@gmail.com	L107	V2	PM00101
2	Sharvari	Gadkari	8392348212	"Heaven" ,Nityaprabraha Street...	kdfgmdfk	2001-02...	sharvarigad14@gmail.com	L117	V1	PM00102
3	Nirupama	Das	9392348212	"Paradise Villa" , Block D ,Dr. C...	kgmfgkwq	2000-07...	nirupamadas123@gmail.com	L118	V3	PM00103
4	Suresh	Agarwal	9392322222	Sai Nagri Society, Shop No A2...	ghkkfskfd	1999-12...	sureshagarwal54@yahoo.com	L111	V5	PM00104
5	Nitya	Chaudhary	9392313121	Kumthekar Road, Sadashiv Pe...	2392&203kfsk	1993-01...	nityachaudhary65@gmail.com	L112	V4	PM00105
6	Aastha	Modi	9912372729	701,Shanti Heights,Opposite S...	4349jfjf*jfs	2001-02...	aasthamodi02@gmail.com	L107	V7	PM00106
7	Yami	Gautam	9912345678	A101 , Jalaram Tower ,Navran...	fkflqlq139da	2010-03...	yamigautam1410@hotmail.c...	L104	V6	PM00107
8	Varshita	Goti	9392897045	C301 ,Varday Residency,L.P. S...	hllte032mf	2000-09...	varshi15@gmail.com	L105	V8	PM00108
9	Gurvinder	Singh	9456734523	S123 ,Silver Plaaza,Gotri Road...	fknkf0023d	2001-06...	gurvinders1221@gmail.com	L101	V9	PM00109
10	Yasin	Sheikh	8877663456	"Shanti Niketan",M.S Universit...	rktek3995	1996-04...	yasinsheikh786@gmail.com	L102	V10	PM00110
11	Isha	Keshariya	9999996660	IISc Campus, Gulmohar Marg, ...	749fjdfnq&^&9	2001-01...	ishakeshariya0401@gmail.c...	L116	V12	PM00111
12	Shobita	Dhar	9397689050	"501 Veena Apartments"Jaya...	rwkre^&T*3	1997-12...	shobitadhar@yahoo.com	L115	V11	PM00112
13	Ranveer	Khurrana	9399877896	"Aiyappa" ,Beside Goverment ...	Lkgdg^%\$^dsdf	1998-02...	ranveekhana1802@gmail.com	L119	V13	PM00113
14	Udayveer	Jaisingh	4323424216	Sukh Sadan, Laxman Nagar, C...	oqwoeqa&^^	1987-05...	udaybhan0305@gmail.com	L114	V15	PM00114
15	Siya	Rathod	9392344455	C504 , 13th Street, River View ...	SDAKkds**&12	1992-04...	siyarathod0204@gmail.com	L119	V14	PM00115

## 7)Membership Table

```

Insert into membership values(1000,'UPI','PM00101');

Insert into membership values(1000,'UPI','PM00102');

Insert into membership values(750,'UPI','PM00103');

Insert into membership values(3000,'Debit Card','PM00104');

Insert into membership values(1000,'Rupay Card','PM00105');

Insert into membership values(1000,'UPI','PM00106');

Insert into membership values(400,'UPI','PM00107');

Insert into membership values(1000,'UPI','PM00108');

Insert into membership values(750,'Debit Card','PM00109');

Insert into membership values(1000,'UPI','PM00110');

Insert into membership values(400,'Rupay Card','PM00111');

Insert into membership values(750,'UPI','PM00112');

Insert into membership values(1000,'UPI','PM00113');

Insert into membership values(1000,'Debit Card','PM00114');

Insert into membership values(3000,'Debit Card','PM00115');

```

	amount numeric (4)	pay_type [PK] character varying (20)	payment_id [PK] character varying (20)
1	1000	UPI	PM00101
2	1000	UPI	PM00102
3	750	UPI	PM00103
4	3000	Debit Card	PM00104
5	1000	Rupay Card	PM00105
6	1000	UPI	PM00106
7	400	UPI	PM00107
8	1000	UPI	PM00108
9	750	Debit Card	PM00109
10	1000	UPI	PM00110
11	400	Rupay Card	PM00111
12	750	UPI	PM00112
13	1000	UPI	PM00113
14	1000	Debit Card	PM00114
15	3000	Debit Card	PM00115

## 8)Feedback Table

Insert into feedback values('Dinky','Amazing collection of books !!! The library gives a proper study vibe. The staff is very cooperative',4.0,'gyeoroo24@gmail.com');

Insert into feedback(review,rating,"User\_id/email\_id","Lib\_id") values('Can Improve their taste in Book Collection.Many of the popular books and best-sellers are not even displayed or mentioned for e.g. Sudha Murty',2.5,'ranveekhana1802@gmail.com','L101');

Insert into feedback values('Random Chikibum','Good Infrastructure of the Library',4.0,'siyarathod0204@gmail.com','L102');

Insert into feedback(review,rating,"User\_id/email\_id","Lib\_id") values('Can Increase the Scriptures and Historical/Religious Books for the Elderly',3.0,'sureshagarwal54@yahoo.com','L101');

Insert into feedback values('Yami','This Library is a bit Suffocating. Can improve the infrasturcture and greenary around',1.5,'yamigautam1410@hotmail.com','L111');

Insert into feedback(review,rating,"User\_id/email\_id","Lib\_id") values('Has Kickass Books and magazines. Must Visist !!!',5.0,'yasinsheikh786@gmail.com','L112');

	u_name character varying (50)	review character varying (500)	rating numeric (2,1)	User_id/email_id character varying (50)	lib_id character varying (5)
1	Dinky	Amazing collection of books !!! The library gives a proper study vibe. The staff is very cooperative	4.0	gyeoroo24@gmail.com	[null]
2	[null]	Can Improve their taste in Book Collection.Many of the popular books and best-sellers are not even displayed or mentioned for e.g. Sudha Murty	2.5	ranveekhana1802@gmail.com	L101
3	Random Chikibum	Good Infrastructure of the Library	4.0	siyarathod0204@gmail.com	L102
4	[null]	Can Increase the Scriptures and Historical/Religious Books for the Elderly	3.0	sureshagarwal54@yahoo.com	L101
5	Yami	This Library is a bit Suffocating. Can improve the infrasturcture and greenary around	1.5	yamigautam1410@hotmail.com	L111
6	[null]	Has Kickass Books and magazines. Must Visist !!!	5.0	yasinsheikh786@gmail.com	L112

## 9) Book Table

```
INSERT INTO book(isbn,b_name,genre,edition,type,lib_id,ratings,"Language")
VALUES(9788129104595,'Five Point Someone','Fiction',1,'Paperback','L101',3.4,'English'),
(9780143103295,'Mahashweta','Fiction',1,'Paperback','L101',4.1,'English'),
(9788186172810,'Dollar Bahu','Domestic Fiction',1,'Paperback','L102',3.7,'English'),
(9780143422259,'The Mother I Never Knew','Fiction',1,'Paperback','L102',3.7,'English'),
```

- (9780143444343,'Here , There And Everywhere','Autobiography',1,'Paperback','L103',4.3,'English'),  
(9788184004328,'Ex','Fiction',1,'Paperback','L103',3.9,'English'),  
(9783785756003,'Origins','Mystery thriller Fiction',1,'Paperback','L104',4.2,'English'),  
(9780142414934,'Paper Towns','Fiction',1,'Paperback','L104',4.0,'English'),  
(9780747507420,'Word Power Made Easy','Self-Help',1,'Hardcover','L105',4.4,'English'),  
(9789381841181,'Till the Last Breath','Romantic Fantasy',1,'Hardcover','L106',4.0,'English'),  
(9781565115187,'The Story of my Experiments with Truth','Autobiography',1,'Paperback','L106',4.1,'English'),  
(9780141345659,'The Fault in Our Stars','Young Adult Fiction',1,'Paperback','L105',4.2,'English'),  
(9783954713851,'Predictably Irrational','Non-fiction',1,'Paperback','L107',4.1,'English'),  
(9783442315536,'12 Rules for Life','Self-Help',1,'Hardcover','L107',3.9,'English'),  
(9783863524586,'Moby Dick','Adventure Fiction',1,'Hardcover','L108',3.5,'English'),  
(9788809810570,'Little Women','Children Literature',1,'Hardcover','L108',4.1,'English'),  
(9781101524275,'Drive: The Surprising Truth About What Motivates Us','Self-Help',1,'Hardcover','L109',3.9,'English'),  
(9780716726180,'The Social Animal','Non-Fiction',12,'Paperback','L109',3.9,'English'),  
(9780141182704,'Animal Farm','Political Satire',1,'Paperback','L110',4.0,'English'),  
(9780143130727,'Ikigai','Self-Help',1,'Paperback','L110',3.7,'English'),  
(9780007617012,'The God of Small Things','Psychological Fiction',1,'Paperback','L111',3.9,'English'),  
(9780143441984,'The Best Couple Ever ','Fiction',1,'Paperback','L111',4.5,'English'),  
(9780143442691,'Half Torn Hearts','Fiction',1,'Paperback','L112',4.5,'English'),  
(9788184007906,'Black Suits You','Fiction',1,'Paperback','L113',4.4,'English'),  
(9780143427490,'Forever is a Lie','Fiction',1,'Hardcover','L113',4.5,'English'),  
(9780143427506,'Forever is True','Fiction',2,'Hardcover','L114',4.4,'English'),  
(9781612680194,'Rich Dad Poor Dad','Finance',1,'Hardcover','L114',4.6,'English'),

- (9789387944893,'The 5 AM Club','Non-Fiction',1,'Hardcover','L115',4.5,'English'),  
(9780091929114,'The 4-Hour Work Week','Reference',1,'Hardcover','L115',4.4,'English'),  
(9780753555194,'Zero to One','Economics',1,'Hardcover','L116',4.2,'English'),  
(9780143109099,'Your One Word','Self-Help',1,'Hardcover','L116',4.8,'English'),  
(9789353336899,'How to Become Rich','Personal Transformation',1,'Paperback','L117',4.3,'English'),  
(9788129137708,'My Gita','Historical Fiction',1,'Hardcover','L117',4.4,'English'),  
(9789385152146,'Ram - Scion of Ikshvaku','Historical Fiction',1,'Paperback','L118',4.4,'English'),  
(9780143449522,'Whisper to Me Your Lies ','Fiction',1,'Hardcover','L119',4.1,'English'),  
(9781637455081,'Wandering Wheels','Travel Writing',1,'Hardcover','L118',4.9,'English'),  
(9789380741116,'The Treasured Thief: A Graphic Novel','Comics',1,'Paperback','L119',4.0,'English'),  
(9781449474195,'Adulthood Is a Myth','Humour',1,'Comics','L120',4.7,'English'),  
(9781408855652,'Harry Potter and the Philosophers Stone','Contemporary Fiction',2011,'Paperback','L120',4.7,'English'),  
(9788129144973,'The Perfect Murder','Crime Fiction',1,'Paperback','L101',3.9,'English'),  
(9788129135094,'A Fistful of Earth and Other Stories','Short stories',1,'Paperback','L102',4.4,'English'),  
(9780241370148,'This is Marketing','Creativity',1,'Paperback','L103',4.5,'English'),  
(9781861976109,'The 22 Immutable Laws Of Marketing','Analysis & Strategy',1,'Paperback','L110',4.6,'English'),  
(9789390166268,'The Psychology of Money','Analysis & Strategy',1,'Paperback','L117',4.2,'English');

	b_name character varying (800)	genre character varying (50)	edition integer	type character varying (50)	isbn [PK] numeric (13)	lib_id character v	ratings numeric (2)	language character varying (100)
1	Five Point Someone	Fiction	1	Paperback	9788129104595	L101	3.4	English
2	Mahashweta	Fiction	1	Paperback	9780143103295	L101	4.1	English
3	Dollar Bahu	Domestic Fiction	1	Paperback	9788186172810	L102	3.7	English
4	The Mother I Never Knew	Fiction	1	Paperback	9780143422259	L102	3.7	English
5	Here, There And Everywhere	Autobiography	1	Paperback	9780143444343	L103	4.3	English
6	Ex	Fiction	1	Paperback	9788184004328	L103	3.9	English
7	Origins	Mystery thriller Fiction	1	Paperback	9783785756003	L104	4.2	English
8	Paper Towns	Fiction	1	Paperback	9780142414934	L104	4.0	English
9	Word Power Made Easy	Self-Help	1	Hardcover	9780747507420	L105	4.4	English
10	Till the Last Breath	Romantic Fantasy	1	Hardcover	9789381841181	L106	4.0	English
11	The Story of my Experiments ...	Autobiography	1	Paperback	9781565115187	L106	4.1	English
12	The Fault in Our Stars	Young Adult Fiction	1	Paperback	9780141345659	L105	4.2	English
13	Predictably Irrational	Non-fiction	1	Paperback	9783954713851	L107	4.1	English
14	12 Rules for Life	Self-Help	1	Hardcover	9783442315536	L107	3.9	English
15	Moby Dick	Adventure Fiction	1	Hardcover	9783863524586	L108	3.5	English
16	Little Women	Children Literature	1	Hardcover	9788809810570	L108	4.1	English
17	Drive: The Surprising Truth Ab...	Self-Help	1	Hardcover	9781101524275	L109	3.9	English
18	The Social Animal	Non-Fiction	12	Paperback	9780716726180	L109	3.9	English
19	Animal Farm	Political Satire	1	Paperback	9780141182704	L110	4.0	English
20	Ikigai	Self-Help	1	Paperback	9780143130727	L110	3.7	English
	b_name character varying (800)	genre character varying (50)	edition integer	type character varying (50)	isbn [PK] numeric (13)	lib_id character v	ratings numeric (2)	language character varying (100)
21	The God of Small Things	Psychological Fiction	1	Paperback	9780007617012	L111	3.9	English
22	The Best Couple Ever	Fiction	1	Paperback	9780143441984	L111	4.5	English
23	Half Torn Hearts	Fiction	1	Paperback	9780143442691	L112	4.5	English
24	Black Suits You	Fiction	1	Paperback	9788184007906	L113	4.4	English
25	Forever is a Lie	Fiction	1	Hardcover	9780143427490	L113	4.5	English
26	Forever is True	Fiction	2	Hardcover	9780143427506	L114	4.4	English
27	Rich Dad Poor Dad	Finance	1	Hardcover	9781612680194	L114	4.6	English
28	The 5 AM Club	Non-Fiction	1	Hardcover	9789387944893	L115	4.5	English
29	The 4-Hour Work Week	Reference	1	Hardcover	9780091929114	L115	4.4	English
30	Zero to One	Economics	1	Hardcover	9780753555194	L116	4.2	English
31	Your One Word	Self-Help	1	Hardcover	9780143109099	L116	4.8	English
32	How to Become Rich	Personal Transformat...	1	Paperback	9789353336899	L117	4.3	English
33	My Gita	Historical Fiction	1	Hardcover	9788129137708	L117	4.4	English
34	Ram - Scion of Ikshvaku	Historical Fiction	1	Paperback	9789385152146	L118	4.4	English
35	Whisper to Me Your Lies	Fiction	1	Hardcover	9780143449522	L119	4.1	English
36	Wandering Wheels	Travel Writing	1	Hardcover	9781637455081	L118	4.9	English
37	The Treasured Thief: A Graphi...	Comics	1	Paperback	9789380741116	L119	4.0	English
38	Adulthood Is a Myth	Humour	1	Comics	9781449474195	L120	4.7	English
39	Harry Potter and the Philosop...	Contemporary Fiction	2011	Paperback	9781408855652	L120	4.7	English
40	The Perfect Murder	Crime Fiction	1	Paperback	9788129144973	L101	3.9	English
41	A Fistful of Earth and Other St...	Short stories	1	Paperback	9788129135094	L102	4.4	English
42	This is Marketing	Creativity	1	Paperback	9780241370148	L103	4.5	English
43	The 22 Immutable Laws Of M...	Analysis & Strategy	1	Paperback	9781861976109	L110	4.6	English
44	The Psychology of Money	Analysis & Strategy	1	Paperback	9789390166268	L117	4.2	English

**10)Author Table**

```
INSERT INTO author(author_id,author_name,gender,isbn) VALUES('A1','Chetan  
Bhagat','M',9788129104595),  
('A2','Sudha Murty','F',9780143103295),  
('A3','Dan Brown','M',9783785756003),  
('A4','Sudha Murty','F',9788186172810),  
('A5','Sudha Murty','F',9780143422259),  
('A6','Sudha Murty','F',9780143444343),  
('A7','Novoneel Chakraborty','M',9788184004328),  
('A8','John Green','M',9780142414934),  
('A9','Norman Lewis','M',9780747507420),  
('A10','Durjoy Dutta','M',9789381841181),  
('A11','Mahatma Gandhi','M',9781565115187),  
('A12','John Green','M',9780141345659),  
('A13','Dan Areily','M',9783954713851),  
('A14','Jordan Peterson','M',9783442315536),  
('A15','Herman Melville','M',9783863524586),  
('A16','Louisa May Alcott','F',9788809810570),  
('A17','Daneil H. Pink','M',9781101524275),  
('A18','Elliot Aronson','M',9780716726180),  
('A19','George Orwell','M',9780141182704),  
('A20','Hector Garcia','M',9780143130727),  
('A21','Francesc Miralles','M',9780143130727),  
('A22','Novoneel Chakraborty','M',9780143441984),
```

('A23','Novoneel Chakraborty','M',9780143442691),  
('A24','Novoneel Chakraborty','M',9788184007906),  
('A25','Novoneel Chakraborty','M',9780143427490),  
('A26','Novoneel Chakraborty','M',9780143427506),  
('A27','Robert T. Kiyosaki','M',9781612680194),  
('A28','Robin Sharma','M',9789387944893),  
('A29','Timothy Ferriss','M',9780091929114),  
('A30','Blake Masters','M',9780753555194),  
('A31','Peter Thiel','M',9780753555194),  
('A32','Evan Carmichael','M',9780143109099),  
('A33','Devdutt Pattnaik','M',9789353336899),  
('A34','Devdutt Pattnaik','M',9788129137708),  
('A35','Amish Tripathi','M',9789385152146),  
('A36','Novoneel Chakraborty','M',9780143449522),  
('A37','Sushant Kaushik','M',9781637455081),  
('A38','Ryan Foley','M',9789380741116),  
('A39','Sarah Anderson','F',9781449474195),  
('A40','J.K. Rowling','F',9781408855652),  
('A41','Ruskin Bond','M',9788129144973),  
('A42','Siddhartha Gigoo','M',9788129135094),  
('A43','Seth Godin','M',9780241370148),  
('A44','Joao Bosco Medeires','M',9780241370148),  
('A45','Al Ries','M',9781861976109),  
('A46','Morgan Housel','M',9789390166268);

	author_name character varying (50)	gender character varying (6)	author_id [PK] character varying (5)	isbn [PK] numeric (13)
1	Chetan Bhagat	M	A1	9788129104595
2	Sudha Murty	F	A2	9780143103295
3	Dan Brown	M	A3	9783785756003
4	Sudha Murty	F	A4	9788186172810
5	Sudha Murty	F	A5	9780143422259
6	Sudha Murty	F	A6	9780143444343
7	Novoneel Chakraborty	M	A7	9788184004328
8	John Green	M	A8	9780142414934
9	Norman Lewis	M	A9	9780747507420
10	Durjoy Dutta	M	A10	9789381841181
11	Mahatma Gandhi	M	A11	9781565115187
12	John Green	M	A12	9780141345659
13	Dan Areily	M	A13	9783954713851
14	Jordan Peterson	M	A14	9783442315536
15	Herman Melville	M	A15	9783863524586
16	Louisa May Alcott	F	A16	9788809810570
17	Daneil H. Pink	M	A17	9781101524275
18	Elliot Aronson	M	A18	9780716726180
19	George Orwell	M	A19	9780141182704
20	Hector Garcia	M	A20	9780143130727

	author_name character varying (50)	gender character varying (6)	author_id [PK] character varying (5)	isbn [PK] numeric (13)
21	Francesc Miralles	M	A21	9780143130727
22	Novoneel Chakraborty	M	A22	9780143441984
23	Novoneel Chakraborty	M	A23	9780143442691
24	Novoneel Chakraborty	M	A24	9788184007906
25	Novoneel Chakraborty	M	A25	9780143427490
26	Novoneel Chakraborty	M	A26	9780143427506
27	Robert T. Kiyosaki	M	A27	9781612680194
28	Robin Sharma	M	A28	9789387944893
29	Timothy Ferriss	M	A29	9780091929114
30	Blake Masters	M	A30	9780753555194
31	Peter Thiel	M	A31	9780753555194
32	Evan Carmichael	M	A32	9780143109099
33	Devdutt Pattanaik	M	A33	9789353336899
34	Devdutt Pattanaik	M	A34	9788129137708
35	Amish Tripathi	M	A35	9789385152146
36	Novoneel Chakraborty	M	A36	9780143449522
37	Sushant Kaushik	M	A37	9781637455081
38	Ryan Foley	M	A38	9789380741116
39	Sarah Anderson	F	A39	9781449474195
40	J.K. Rowling	F	A40	9781408855652

**11) Publisher table**

```
INSERT into publisher(pub_id,pname,yop,isbn) VALUES('P1','Rupa Publications','2004-10-13',9788129104595),  
('P2','Penguin Random House','2000-09-12',9780143103295),  
('P3','Penguin Random House','2003-08-11',9788186172810),  
('P4','Penguin Random House','2014-07-10',9780143422259),  
('P5','Penguin Random House','2018-06-09',9780143444343),  
('P6','Penguin Random House','2016-05-08',9788184004328),  
('P7','Double Day','2017-04-07',9783785756003),  
('P8','Dutton Books','2008-03-06',9780142414934),  
('P9','Penguin Books','1949-02-05',9780747507420),  
('P10','Penguin Random House','2012-01-04',9789381841181),  
('P11','Jaico Publishing House','2019-02-03',9781565115187),  
('P12','Dutton Books','2012-03-02',9780141345659),  
('P13','Halper Collins','2008-04-01',9783954713851),  
('P14','Random House Canada Penguin Allen Lane','2018-05-30',9783442315536),  
('P15','Richard Bentley (England) Harper & Brothers (US)','1851-06-29',9783863524586),  
('P16','Robert Brothers','1868-07-28',9788809810570),  
('P17','RiverHead Books','2009-08-27',9781101524275),  
('P18','Random House','1972-09-26',9780716726180),  
('P19','Simon & Schuster','1945-10-25',9780141182704),  
('P20','penguin random house','2016-11-24',9780143130727),  
('P21','Penguin Metro Reads','2018-12-23',9780143441984),  
('P22','Penguin','2019-11-22',9780143442691),  
('P23','penguin random house','2016-10-21',9788184007906),  
('P24','penguin random house','2017-09-20',9780143427490),
```

('P26','penguin random house','2017-08-19',9780143427506),  
('P27','Plata Publishing','2017-07-18',9781612680194),  
('P28','Jaico Publishing House','2018-06-17',9789387944893),  
('P29','RHUK','2011-05-16',9780091929114),  
('P30','Random House','2014-04-15',9780753555194),  
('P31','Penguin','2017-03-14',9780143109099),  
('P32','Rupa Publications','2019-02-13',9789353336899),  
('P33','Rupa Publications','2015-01-12',9788129137708),  
('P34','Westland Limited','2015-02-11',9789385152146),  
('P35','Penguin Metro Reads','2021-03-10',9780143449522),  
('P36','Notion Press','2021-04-09',9781637455081),  
('P37','Campfire','2012-05-08',9789380741116),  
('P38','Andrews McMeel Publishing','2016-06-07',9781449474195),  
('P39','Bloomsbury Childrens Books','2014-07-06',9781408855652),  
('P40','Rupa Publications India','2016-08-05',9788129144973),  
('P41','Rupa Publications India','2015-09-04',9788129135094),  
('P42','Portfolio Penguin','2018-10-03',9780241370148),  
('P43','Profile Books Ltd','1994-11-02',9781861976109),  
('P44','Jaico Publishing House','2020-12-01',9789390166268);

	pname character varying (50)	yop date	pub_id [PK] character varying (20)	isbn [PK] numeric (13)			pname character varying (50)	yop date	pub_id [PK] character varying (20)	isbn [PK] numeric (13)		
1	Rupa Publications	2004-10-01	P1	9788129104595			21	Penguin Metro Reads	2018-12-01	P21	9780143441984	
2	Penguin Random House	2000-09-01	P2	9780143103295			22	Penguin	2019-11-01	P22	9780143442691	
3	Penguin Random House	2003-08-01	P3	9788186172810			23	penguin random house	2016-10-01	P23	9788184007906	
4	Penguin Random House	2014-07-01	P4	9780143422259			24	penguin random house	2017-09-01	P24	9780143427490	
5	Penguin Random House	2018-06-01	P5	9780143444343			25	penguin random house	2017-08-01	P26	9780143427506	
6	Penguin Random House	2016-05-01	P6	9788184004328			26	Plata Publishing	2017-07-01	P27	9781612680194	
7	Double Day	2017-04-01	P7	9783785756003			27	Jaico Publishing House	2018-06-01	P28	9789387944893	
8	Dutton Books	2008-03-01	P8	9780142414934			28	RHUK	2011-05-01	P29	9780091929114	
9	Penguin Books	1949-02-01	P9	9780747507420			29	Random House	2014-04-01	P30	9780753555194	
10	Penguin Random House	2012-01-01	P10	9789381841181			30	Penguin	2017-03-01	P31	9780143109099	
11	Jaico Publishing House	2019-02-01	P11	9781565115187			31	Rupa Publications	2019-02-01	P32	9789353336899	
12	Dutton Books	2012-03-01	P12	9780141345659			32	Rupa Publications	2015-01-01	P33	9788129137708	
13	Halper Collins	2008-04-01	P13	9783954713851			33	Westland Limited	2015-02-01	P34	9789385152146	
14	Random House Canada Pen...	2018-05-01	P14	9783442315536			34	Penguin Metro Reads	2021-03-01	P35	9780143449522	
15	Richard Bentley (England) H...	1851-06-01	P15	9783863524586			35	Notion Press	2021-04-01	P36	9781637455081	
16	Robert Brothers	1868-07-01	P16	9788809810570			36	Campfire	2012-05-01	P37	9789380741116	
17	RiverHead Books	2009-08-01	P17	9781101524275			37	Andrews McMeel Publishing	2016-06-01	P38	9781449474195	
18	Random House	1972-09-01	P18	9780716726180			38	Bloomsbury Childrens Books	2014-07-01	P39	9781408855652	
19	Simon & Schuster	1945-10-01	P19	97801411182704			39	Rupa Publications India	2016-08-01	P40	9788129144973	
20	penguin random house	2016-11-01	P20	9780143130727			40	Rupa Publications India	2015-09-01	P41	9788129135094	
40	Rupa Publications India	2015-09-01	P41	9788129135094								
41	Portfolio Penguin	2018-10-01	P42	9780241370148								
42	Profile Books Ltd	1994-11-01	P43	9781861976109								
43	Jaico Publishing House	2020-12-01	P44	9789390166268								

## 12)Return/Issue Table

```
Insert into "Return/Issue"("Issue/Renew_date",a_ret_date,"User_id/email_id",isbn)
values('17-09-2021','01-10-2021','gyeoroo24@gmail.com',9783954713851);
```

```
Insert into "Return/Issue"(hold_date,"User_id/email_id",isbn) values('18-09-
2021','gyeoroo24@gmail.com',9783442315536);
```

```
Insert into "Return/Issue"("Issue/Renew_date",a_ret_date,"User_id/email_id",isbn)
values('14-09-2021','28-09-2021','sharvarigad14@gmail.com',9788129137708);
```

```
Insert into "Return/Issue"("Issue/Renew_date",a_ret_date,"User_id/email_id",isbn)
values('10-09-2021','24-09-2021','yasinsheikh786@gmail.com',9780143422259);
```

```
Insert into "Return/Issue"(hold_date,"User_id/email_id",isbn) values('10-09-
2021','yasinsheikh786@gmail.com',9788186172810);
```

Insert into

```
"Return/Issue"("Issue/Renew_date",user_ret_date,a_ret_date,"User_id/email_id",isbn)
values('10-09-2019','24-09-2021','26-09-
2021','udaybhan0305@gmail.com',9780143427506);
```

```
Insert into "Return/Issue"(hold_date,"User_id/email_id",isbn) values('26-09-
2019','udaybhan0305@gmail.com',9781612680194);
```

	hold_date date	user_ret_date date	Issue/Renew_date date	a_ret_date date	User_id/email_id character varying (50)	isbn numeric (13)
1	[null]	[null]	2021-09-17	2021-10-01	gyeoroo24@gmail.com	9783954713851
2	2021-09-18	[null]	[null]	[null]	gyeoroo24@gmail.com	9783442315536
3	[null]	[null]	2021-09-14	2021-09-28	sharvarigad14@gmail.com	9788129137708
4	[null]	[null]	2021-09-10	2021-09-24	yasinsheikh786@gmail.com	9780143422259
5	2021-09-10	[null]	[null]	[null]	yasinsheikh786@gmail.com	9788186172810
6	[null]	2021-09-24	2019-09-10	2021-09-26	udaybhan0305@gmail.com	9780143427506
7	2019-09-26	[null]	[null]	[null]	udaybhan0305@gmail.com	9781612680194

**13)Employee Table**

```

Insert INTO Employee values('librarian','Yash','Parmar',25000,'E101','L101');

Insert INTO Employee values('staff','Binal','Modi',30000,'E102','L102');

Insert INTO Employee values('watchman','Ketan','Khare',21000,'E103','L110');

Insert INTO Employee values('librarian','Kamlesh','Mehta',23000,'E104','L111');

Insert INTO Employee values('librarian','Darshan','Mali',26000,'E105','L112');

Insert INTO Employee values('watchman','Darsh','Patel',26000,'E106','L113');

Insert INTO Employee values('staff','Margi','Chaudhry',26000,'E107','L114');

Insert INTO Employee values('watchman','Kashish','Panvala',26000,'E108','L115');

Insert INTO Employee values('librarian','Hiya','Bidivala',26000,'E109','L116');

Insert INTO Employee values('librarian','Priyanshi','Sarvan',26000,'E110','L117');

```

	desig character varying (20)	first_name character varying (20)	last_name character varying (20)	salary numeric (5)	emp_id [PK] character varying (10)	lib_id character varying (20)
1	librarian	Yash	Parmar	25000	E101	L101
2	staff	Binal	Modi	30000	E102	L102
3	watchman	Ketan	Khare	21000	E103	L110
4	librarian	Kamlesh	Mehta	23000	E104	L111
5	librarian	Darshan	Mali	26000	E105	L112
6	watchman	Darsh	Patel	26000	E106	L113
7	staff	Margi	Chaudhry	26000	E107	L114
8	watchman	Kashish	Panvala	26000	E108	L115
9	librarian	Hiya	Bidivala	26000	E109	L116
10	librarian	Priyanshi	Sarvan	26000	E110	L117

**14)Admin Table**

```

Insert INTO admin
values('kenilmodi10@gmail.com','L101','V16','Kenil','Modi',1234567892,'kenil@123','country Admin', '10/01/1998');

```

```

Insert INTO admin
values('vrajmodi11@gmail.com','L101','V17','Vraj','Modi',3425678297,'vraj@123','city Admin', '11/03/1998');

```

```

Insert INTO admin
values('aasthamodi22@gmail.com','L102','V18','Aastha','Modi',8903420091,'aastha@123','state Admin','02/02/1996');

```

Insert INTO admin

```
values('ketulmodi7977@gmail.com','L103','V19','Ketul','Modi',9034330056,'ketul@123','city Admin','07/09/1987');
```

Insert INTO admin

```
values('chelsipatel22@gmail.com','L104','V20','Chelsi','Patel',6782380167,'chelsi@123','city Admin','24/06/1988');
```

Insert INTO admin

```
values('gurvisingh45@yahoo.com','L105','V21','Gurvindr','Singh',7830088453,'gurvi@123','State Admin','05/02/1999');
```

Insert INTO admin

```
values('nileshmodi34@yahoo.com','L106','V22','Nilesh','Modi',6549920821,'nilesh@123','city Admin','29/03/1979');
```

Insert INTO admin

```
values('riya34parmar@gmail.com','L107','V23','Riya','Parmar',6598055275,'riya@123','city Admin','20/09/1992');
```

Insert INTO admin

```
values('rishimehta1101@gmail.com','L108','V24','Rishi','Mehta',604581442,'rishi@123','state Admin','11/01/1990');
```

Insert INTO admin

```
values('vinit2903@gmail.com','L109','V25','Vinit','Patel',5043175001,'vinit@123','city Admin','29/03/1989');
```

Insert INTO admin

```
values('sudhirpatel12@gmail.com','L110','V26','Sudhir','Patel',7830180399,'sudhir@123','city Admin','13/10/1989');
```

Insert INTO admin

```
values('shivani786hal@gmail.com','L111','V27','Shivani','Haldariya',9925143657,'shivani@123','city Admin','27/01/1984');
```

Insert INTO admin

```
values('riya89modi@yahoo.com','L112','V28','Riya','Modi',9265320156,'riya@891','city Admin','24/08/1996');
```

Insert INTO admin

```
values('ranjanguvaliwala56@yahoo.com','L113','V29','Ranjan','Guvaliwala',7820065964,'ranjan@123','city Admin','01/06/1987');
```

**Insert INTO admin**

```
values('deepakguvaliwala@gmail.com','L114','V30','Deepak','Guvali',8934992316,'deepak@123','state Admin','07/06/1988');
```

**Insert INTO admin**

```
values('mihir123gol@gmail.com','L116','V32','Mihir','Golvala',1965332109,'mihir@123','city Admin','14/02/1997');
```

**Insert INTO admin**

```
values('janvi98@gmail.com','L117','V33','janvi','vyas',9873460102,'janvi@123','city Admin','07/09/1995');
```

**Insert INTO admin**

```
values('saurabh56@gmail.com','L118','V34','Saurabh','Dave',9813455442,'saurabh@123','city Admin','05/05/1986');
```

**Insert INTO admin**

```
values('archana12@gmail.com','L119','V35','Archana','Lakdavala',7657701032,'archana@123','city Admin','02/06/1995');
```

**Insert INTO admin**

```
values('mohitparmar34@gmail.com','L120','V36','Mohit','Parmar',9005614229,'mohit@123','city Admin','06/04/1996');
```

	User_id/email_id [PK] character varying (50)	lib_id character	verif_id character	first_name character varying	last_name character varying	Phone_Number numeric (10)	passwrd character varying	desig character varying	dob date
1	kenilmodi10@gmail.com	L101	V16	Kenil	Modi	1234567892	kenil@123	country Admin	1998-01-10
2	vrajmodi11@gmail.com	L101	V17	Vraj	Modi	3425678297	vraj@123	city Admin	1998-03-11
3	aasthamodi22@gmail.com	L102	V18	Aastha	Modi	8903420091	aastha@123	state Admin	1996-02-02
4	ketulmodi7977@gmail.com	L103	V19	Ketul	Modi	9034330056	ketul@123	city Admin	1987-09-07
5	chelsipatel22@gmail.com	L104	V20	Chelsi	Patel	6782380167	chelsi@123	city Admin	1988-06-24
6	gurvisingh45@yahoo.com	L105	V21	Gurvindr	Singh	7830088453	gurvi@123	State Admin	1999-02-05
7	nileshmodi34@yahoo.com	L106	V22	Nilesh	Modi	6549920821	nilesh@123	city Admin	1979-03-29
8	riya34parmar@gmail.com	L107	V23	Riya	Parmar	6598055275	riya@123	city Admin	1992-09-20
9	rishiimehta1101@gmail.com	L108	V24	Rishi	Mehta	604581442	rishi@123	state Admin	1990-01-11
10	vinit2903@gmail.com	L109	V25	Vinit	Patel	5043175001	vinit@123	city Admin	1989-03-29
11	sudhirpatel12@gmail.com	L110	V26	Sudhir	Patel	7830180399	sudhir@123	city Admin	1989-10-13
12	shivani786hal@gmail.com	L111	V27	Shivani	Haldariya	9925143657	shivani@123	city Admin	1984-01-27
13	riya89modi@yahoo.com	L112	V28	Riya	Modi	9265320156	riya@891	city Admin	1996-08-24
14	ranjanguvaliwala56@yahoo.com	L113	V29	Ranjan	Guvaliwala	7820065964	ranjan@123	city Admin	1987-06-01
15	deepakguvaliwala@gmail.com	L114	V30	Deepak	Guvali	8934992316	deepak@123	state Admin	1988-06-07
16	mihir123gol@gmail.com	L116	V32	Mihir	Golvala	1965332109	mihir@123	city Admin	1997-02-14
17	janvi98@gmail.com	L117	V33	janvi	vyas	9873460102	janvi@123	city Admin	1995-09-07
18	saurabh56@gmail.com	L118	V34	Saurabh	Dave	9813455442	saurabh@123	city Admin	1986-05-05
19	archana12@gmail.com	L119	V35	Archana	Lakdavala	7657701032	archana@123	city Admin	1995-06-02
20	mohitparmar34@gmail.com	L120	V36	Mohit	Parmar	9005614229	mohit@123	city Admin	1996-04-06

## 15) Merits/Demerits Table

```
INSERT INTO "Merits/demerits"
values(4.5,'archana12@gmail.com','ranveekhana1802@gmail.com'),
(3.0,'saurabh56@gmail.com','nirupamadas123@gmail.com'),
(3.1,'mihir123gol@gmail.com','ishakeshariya0401@gmail.com'),
(3.2,'deepakguvaliwala@gmail.com','udaybhan0305@gmail.com'),
(2.2,'chelsipatel22@gmail.com','yamigautam1410@hotmail.com'),
(3.5,'riya34parmar@gmail.com','gyeoro24@gmail.com'),
(3.0,'janvi98@gmail.com','sharvarigad14@gmail.com'),
(3.2,'nileshmodi34@yahoo.com','nirupamadas123@gmail.com'),
(3.1,'shivani786hal@gmail.com','sureshagarwal54@yahoo.com'),
(3.9,'gurvisingh45@yahoo.com','varshi15@gmail.com'),
(3.4,'vrajmodi11@gmail.com','gurvinders1221@gmail.com'),
(4.5,'archana12@gmail.com','siyarathod0204@gmail.com'),
(1.5,'aasthamodi22@gmail.com','yasinsheikh786@gmail.com'),
(3.3,'riya89modi@yahoo.com','nityachaudhary65@gmail.com');
```

	rating numeric (2,1)	Admin_User_Id/email_id character varying (50)	User_Id/email_Id character varying (50)
1	4.5	archana12@gmail.com	ranveekhana1802@gmail.co...
2	3.0	saurabh56@gmail.com	nirupamadas123@gmail.com
3	3.1	mihir123gol@gmail.com	ishakeshariya0401@gmail.c...
4	3.2	deepakguvaliwala@gmail.co...	udaybhan0305@gmail.com
5	2.2	chelsipatel22@gmail.com	yamigautam1410@hotmail....
6	3.5	riya34parmar@gmail.com	gyeoro24@gmail.com
7	3.0	janvi98@gmail.com	sharvarigad14@gmail.com
8	3.2	nileshmodi34@yahoo.com	nirupamadas123@gmail.com
9	3.1	shivani786hal@gmail.com	sureshagarwal54@yahoo.co...
10	3.9	gurvisingh45@yahoo.com	varshi15@gmail.com
11	3.4	vrajmodi11@gmail.com	gurvinders1221@gmail.com
12	4.5	archana12@gmail.com	siyarathod0204@gmail.com
13	1.5	aasthamodi22@gmail.com	yasinsheikh786@gmail.com
14	3.3	riya89modi@yahoo.com	nityachaudhary65@gmail.co...

**16)Quantity Table**

```
Insert into "Quantity" values(9788129104595,'L101',5),  
(9780143103295,'L101',7),  
(9788186172810,'L102',9),  
(9780143422259,'L102',11),  
(9780143444343,'L103',3),  
(9788184004328,'L103',4),  
(9783785756003,'L104',2),  
(9780142414934,'L104',1),  
(9780747507420,'L105',10),  
(9789381841181,'L106',3),  
(9781565115187,'L106',5),  
(9780141345659,'L105',6),  
(9783954713851,'L107',8),  
(9783442315536,'L107',9),  
(9783863524586,'L108',12),  
(9788809810570,'L108',13),  
(9781101524275,'L109',11),  
(9780716726180,'L109',15),  
(9780141182704,'L110',20),  
(9780143130727,'L110',10),  
(9780007617012,'L111',2),  
(9780143441984,'L111',3),  
(9780143442691,'L112',4),  
(9788184007906,'L113',6),
```

(9780143427490,'L113',7),  
(9780143427506,'L114',8),  
(9781612680194,'L114',8),  
(9789387944893,'L115',1),  
(9780091929114,'L115',2),  
(9780753555194,'L116',2),  
(9780143109099,'L116',5),  
(9789353336899,'L117',5),  
(9788129137708,'L117',11),  
(9789385152146,'L118',12),  
(9780143449522,'L119',15),  
(9781637455081,'L118',10),  
(9789380741116,'L119',5),  
(9781449474195,'L120',6),  
(9781408855652,'L120',6),  
(9788129144973,'L101',7),  
(9788129135094,'L102',7),  
(9780241370148,'L103',8),  
(9781861976109,'L110',1),  
(9789390166268,'L117',2);

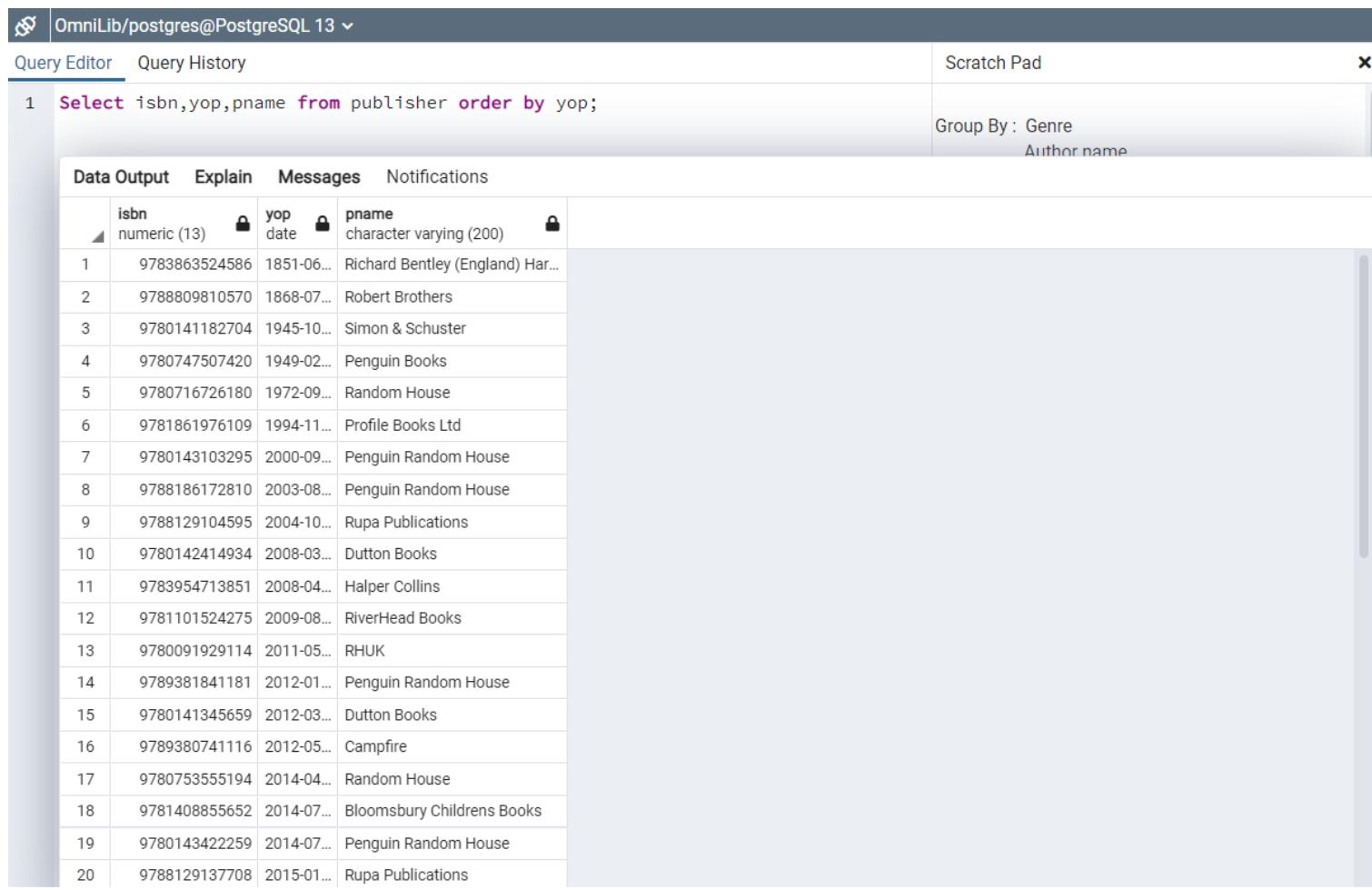
	ISBN numeric (13)	Lib_Id character varying (20)	Qty numeric (20)
1	9788129104595	L101	5
2	9780143103295	L101	7
3	9788186172810	L102	9
4	9780143422259	L102	11
5	9780143444343	L103	3
6	9788184004328	L103	4
7	9783785756003	L104	2
8	9780142414934	L104	1
9	9780747507420	L105	10
10	9789381841181	L106	3
11	9781565115187	L106	5
12	9780141345659	L105	6
13	9783954713851	L107	8
14	9783442315536	L107	9
15	9783863524586	L108	12
16	9788809810570	L108	13
17	9781101524275	L109	11
18	9780716726180	L109	15
19	9780141182704	L110	20
20	9780143130727	L110	10

	ISBN numeric (13)	Lib_Id character varying (20)	Qty numeric (20)
25	9780143427490	L113	7
26	9780143427506	L114	8
27	9781612680194	L114	8
28	9789387944893	L115	1
29	9780091929114	L115	2
30	9780753555194	L116	2
31	9780143109099	L116	5
32	9789353336899	L117	5
33	9788129137708	L117	11
34	9789385152146	L118	12
35	9780143449522	L119	15
36	9781637455081	L118	10
37	9789380741116	L119	5
38	9781449474195	L120	6
39	9781408855652	L120	6
40	9788129144973	L101	7
41	9788129135094	L102	7
42	9780241370148	L103	8
43	9781861976109	L110	1
44	9789390166268	L117	2

## 5.3 Basic Queries

**1) Select isbn,yop,pname from publisher order by yop;**



OmniLib/postgres@PostgreSQL 13 ▾

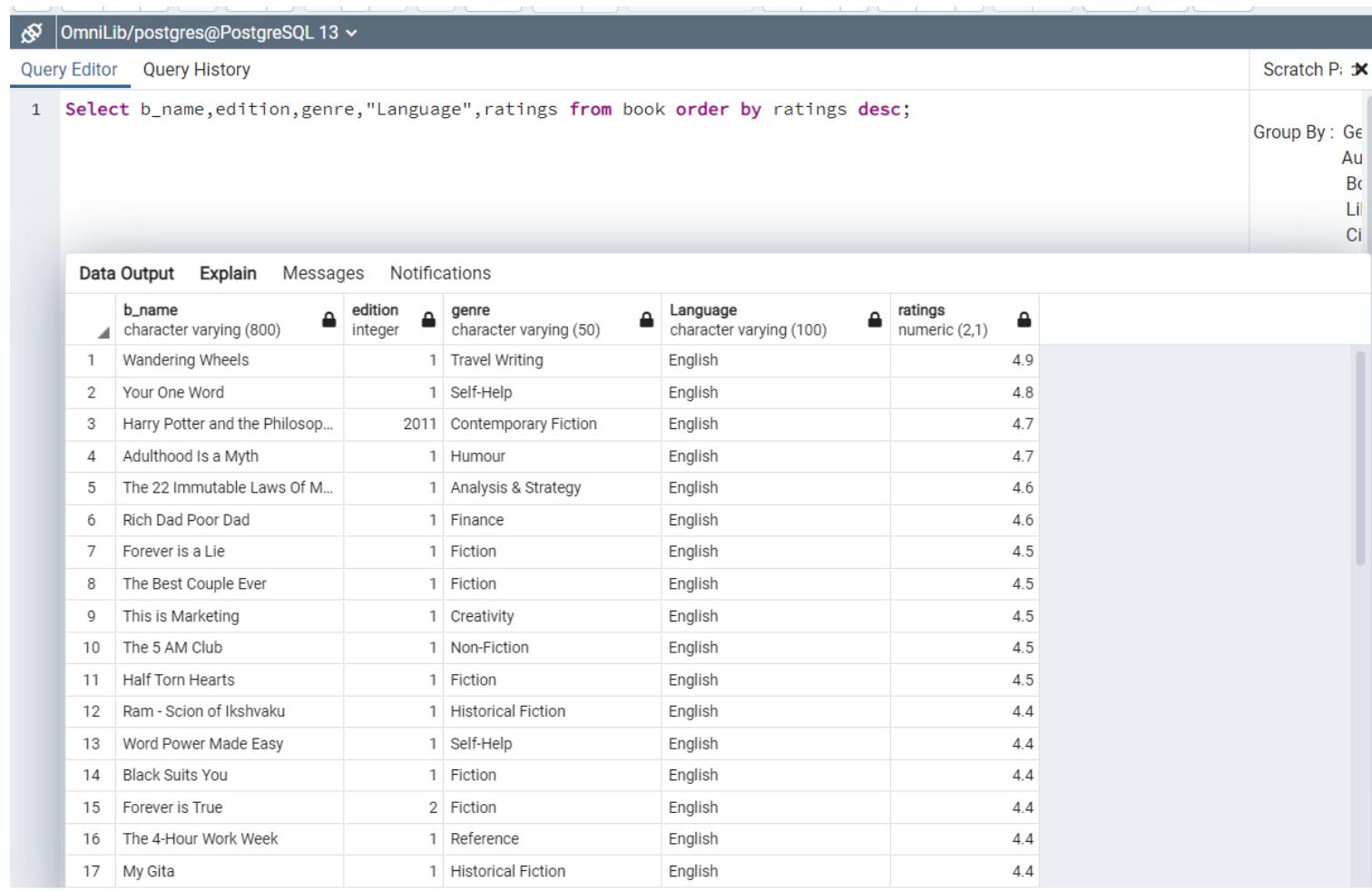
Query Editor    Query History    Scratch Pad x

```
1  Select isbn,yop,pname from publisher order by yop;
```

Group By : Genre  
Author name

	isbn	yop	pname
1	9783863524586	1851-06...	Richard Bentley (England) Har...
2	9788809810570	1868-07...	Robert Brothers
3	9780141182704	1945-10...	Simon & Schuster
4	9780747507420	1949-02...	Penguin Books
5	9780716726180	1972-09...	Random House
6	9781861976109	1994-11...	Profile Books Ltd
7	9780143103295	2000-09...	Penguin Random House
8	9788186172810	2003-08...	Penguin Random House
9	9788129104595	2004-10...	Rupa Publications
10	9780142414934	2008-03...	Dutton Books
11	9783954713851	2008-04...	Halper Collins
12	9781101524275	2009-08...	RiverHead Books
13	9780091929114	2011-05...	RHUK
14	9789381841181	2012-01...	Penguin Random House
15	9780141345659	2012-03...	Dutton Books
16	9789380741116	2012-05...	Campfire
17	9780753555194	2014-04...	Random House
18	9781408855652	2014-07...	Bloomsbury Childrens Books
19	9780143422259	2014-07...	Penguin Random House
20	9788129137708	2015-01...	Rupa Publications

**2) Select b\_name,edition,genre,"Language",ratings from book order by ratings desc;**



```
1  Select b_name,edition,genre,"Language",ratings from book order by ratings desc;
```

	b_name character varying (800)	edition integer	genre character varying (50)	Language character varying (100)	ratings numeric (2,1)
1	Wandering Wheels	1	Travel Writing	English	4.9
2	Your One Word	1	Self-Help	English	4.8
3	Harry Potter and the Philosoph...	2011	Contemporary Fiction	English	4.7
4	Adulthood Is a Myth	1	Humour	English	4.7
5	The 22 Immutable Laws Of M...	1	Analysis & Strategy	English	4.6
6	Rich Dad Poor Dad	1	Finance	English	4.6
7	Forever is a Lie	1	Fiction	English	4.5
8	The Best Couple Ever	1	Fiction	English	4.5
9	This is Marketing	1	Creativity	English	4.5
10	The 5 AM Club	1	Non-Fiction	English	4.5
11	Half Torn Hearts	1	Fiction	English	4.5
12	Ram - Scion of Ikshvaku	1	Historical Fiction	English	4.4
13	Word Power Made Easy	1	Self-Help	English	4.4
14	Black Suits You	1	Fiction	English	4.4
15	Forever is True	2	Fiction	English	4.4
16	The 4-Hour Work Week	1	Reference	English	4.4
17	My Gita	1	Historical Fiction	English	4.4

**3) Select genre,count(isbn) from book group by genre;**

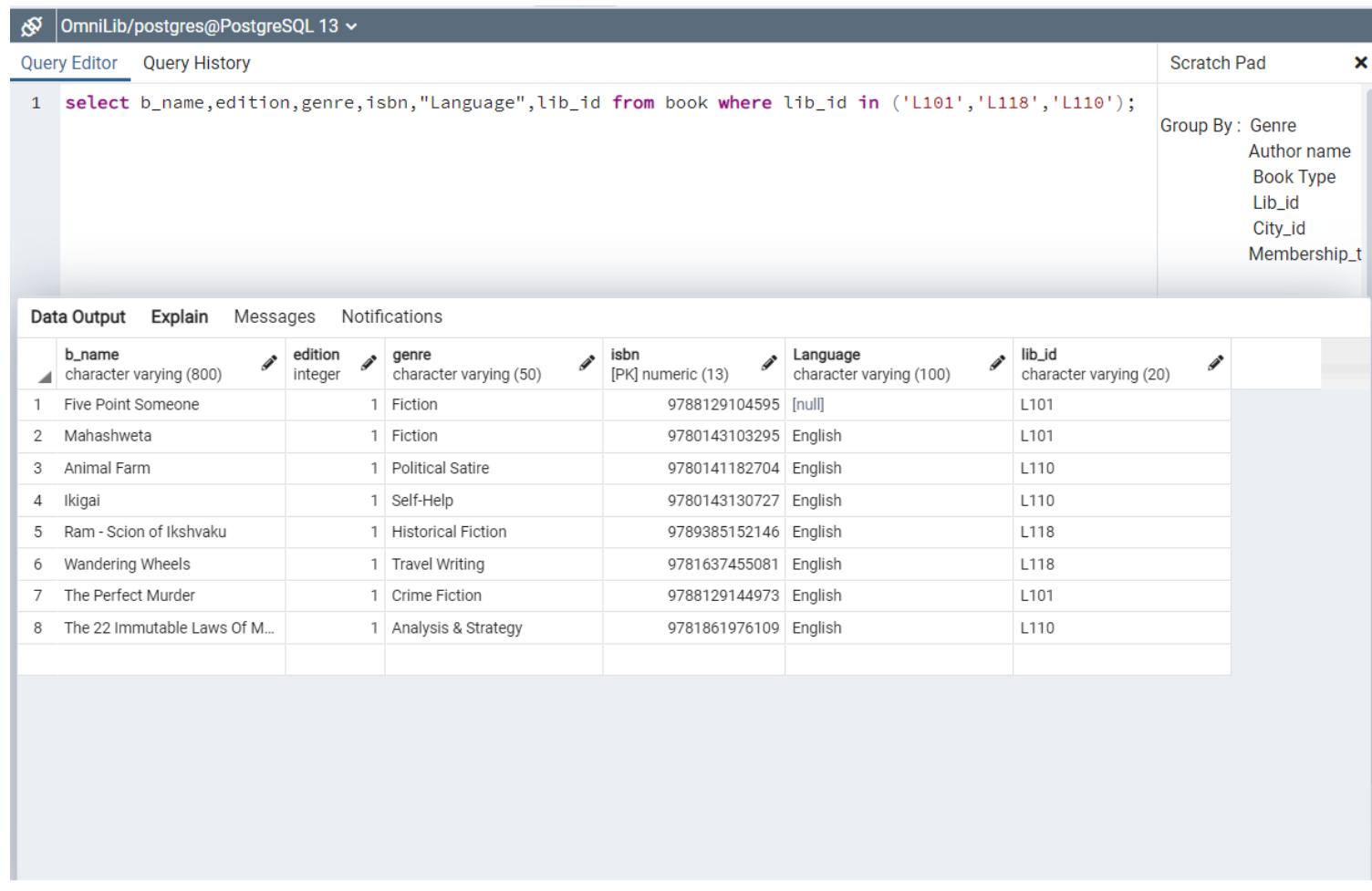
The screenshot shows the OmniDB interface with a query executed in the Query Editor tab. The query is:

```
Select genre, count(isbn) from book group by genre;
```

The results are displayed in a Data Output table:

	genre	count
1	Historical Fiction	2
2	Reference	1
3	Personal Transformation	1
4	Contemporary Fiction	1
5	Young Adult Fiction	1
6	Crime Fiction	1
7	Non-fiction	1
8	Short stories	1
9	Analysis & Strategy	2
10	Self-Help	5
11	Creativity	1
12	Non-Fiction	2
13	Finance	1
14	Children Literature	1
15	Domestic Fiction	1
16	Adventure Fiction	1
17	Autobiography	2
18	Psychological Fiction	1
19	Economics	1

4) select b\_name,edition,genre,isbn,"Language",lib\_id from book where lib\_id in ('L101','L118','L110');



The screenshot shows the OmniDB interface with the following details:

- Query Editor:** The query is displayed as:
 

```
1 select b_name,edition,genre,isbn,"Language",lib_id from book where lib_id in ('L101','L118','L110');
```
- Scratch Pad:** A sidebar on the right lists group by options: Genre, Author name, Book Type, Lib\_id, City\_id, and Membership\_t.
- Data Output:** The results are presented in a table with the following columns and data:
 

	b_name character varying (800)	edition integer	genre character varying (50)	isbn [PK] numeric (13)	Language character varying (100)	lib_id character varying (20)	
1	Five Point Someone	1	Fiction	9788129104595	[null]	L101	
2	Mahashweta	1	Fiction	9780143103295	English	L101	
3	Animal Farm	1	Political Satire	9780141182704	English	L110	
4	Ikigai	1	Self-Help	9780143130727	English	L110	
5	Ram - Scion of Ikshvaku	1	Historical Fiction	9789385152146	English	L118	
6	Wandering Wheels	1	Travel Writing	9781637455081	English	L118	
7	The Perfect Murder	1	Crime Fiction	9788129144973	English	L101	
8	The 22 Immutable Laws Of M...	1	Analysis & Strategy	9781861976109	English	L110	

**5)Select first\_name,last\_name,phone\_number,dob,"User\_id/email\_id",lib\_id from "User" where dob between '01-01-1995' AND '31-12-2005';**

The screenshot shows the OmniDB interface with the following details:

- Query Editor:** Contains the SQL query: `Select first_name, last_name, phone_number, dob, "User_id/email_id", lib_id from "User" where dob between '01-01-1995' AND '31-12-2005';`
- Data Output:** Shows the results of the query in a table format.
- Table Headers:** first\_name, last\_name, phone\_number, dob, User\_id/email\_id, lib\_id
- Table Data:**

	first_name	last_name	phone_number	dob	User_id/email_id	lib_id
1	Dinky	Lakhani	9392348212	2001-06...	gyeoro024@gmail.com	L107
2	Sharvari	Gadkari	8392348212	2001-02...	sharvarigad14@gmail.com	L117
3	Nirupama	Das	9392348212	2000-07...	nirupamadas123@gmail.com	L118
4	Suresh	Agarwal	9392322222	1999-12...	sureshagarwal54@yahoo.com	L111
5	Aastha	Modi	9912372729	2001-02...	aasthamodi02@gmail.com	L107
6	Varshita	Goti	9392897045	2000-09...	varshi15@gmail.com	L105
7	Gurvinder	Singh	9456734523	2001-06...	gurvinders1221@gmail.com	L101
8	Yasin	Sheikh	8877663456	1996-04...	yasinSheikh786@gmail.com	L102
9	Isha	Keshariya	9999996660	2001-01...	ishakeshariya0401@gmail.com	L116
10	Shobita	Dhar	9397680050	1997-12...	shobitadhar@yahoo.com	L115
11	Ranveer	Khurana	9399877896	1998-02...	ranveekhana1802@gmail.com	L119
- Scratch Pad:** Contains various grouping and ordering options.

**6) Select distinct(author\_name),gender from author where author\_name like 'S%' ;**

The screenshot shows the OmniDB interface with the following details:

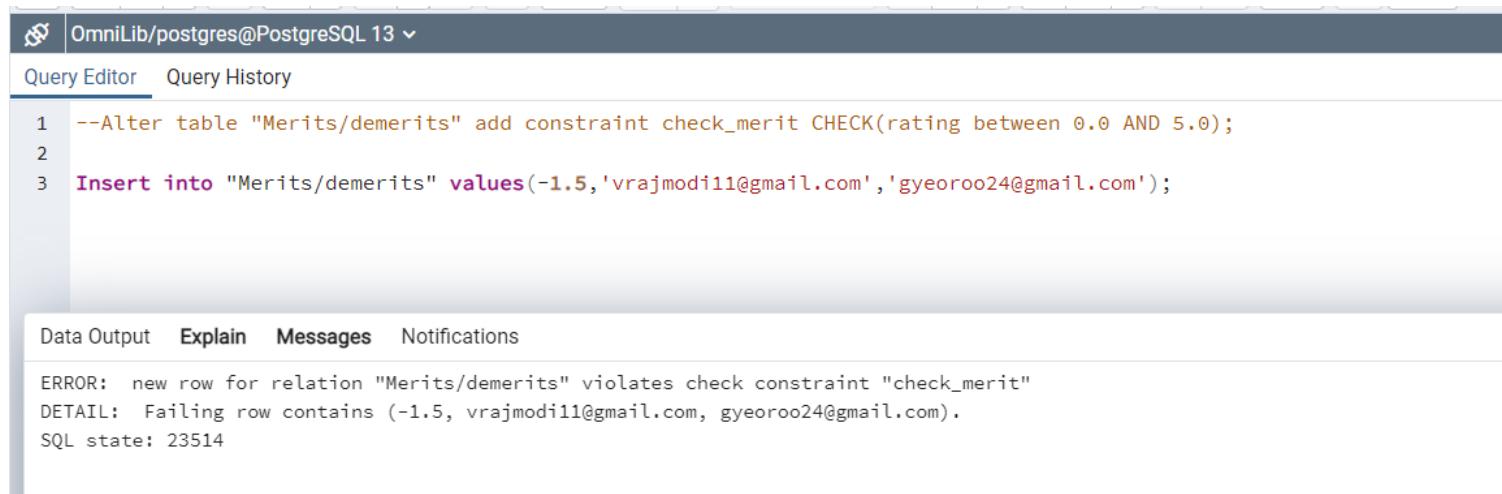
- Query Editor:** Contains the SQL query: `Select distinct(author_name), gender from author where author_name like 'S%' ;`
- Data Output:** Shows the results of the query in a table format.
- Table Headers:** author\_name, gender
- Table Data:**

	author_name	gender
1	Sarah Anderson	F
2	Seth Godin	M
3	Siddhartha Gigoo	M
4	Sudha Murty	F
5	Sushant Kaushik	M
- Scratch Pad:** Contains various grouping and ordering options.

**7) Alter table "Merits/demerits" add constraint check\_merit CHECK(rating between 0.0 AND 5.0);**

**Insert into "Merits/demerits" values**

**(-1.5,'vrajmodi11@gmail.com','gyeoroo24@gmail.com');**



The screenshot shows the OmniLib PostgreSQL 13 Query Editor interface. The query window contains the following SQL code:

```

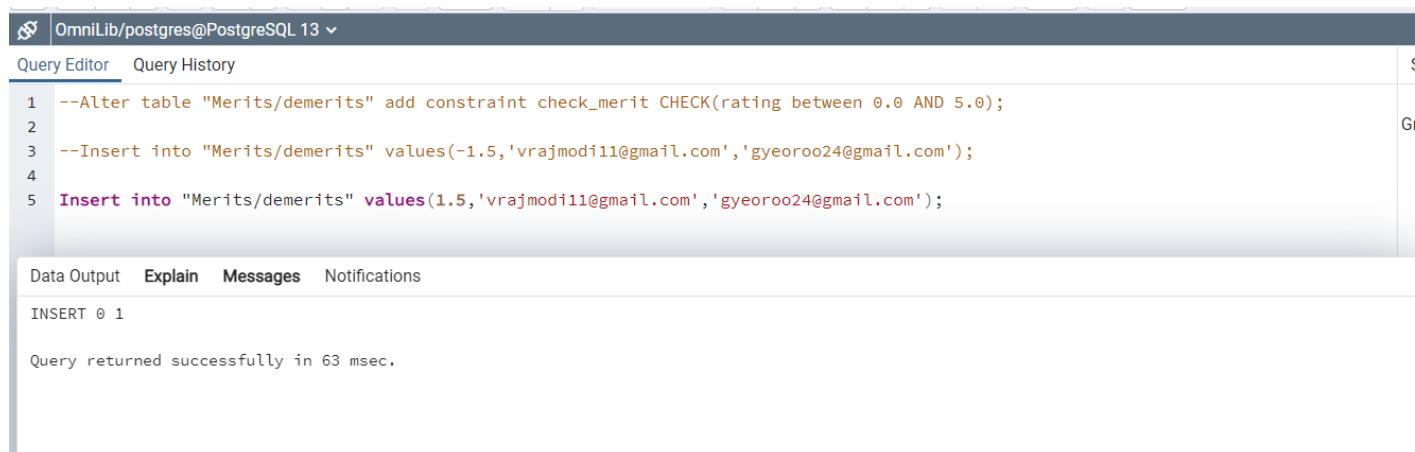
1 --Alter table "Merits/demerits" add constraint check_merit CHECK(rating between 0.0 AND 5.0);
2
3 Insert into "Merits/demerits" values(-1.5,'vrajmodi11@gmail.com','gyeoroo24@gmail.com');

```

Below the query window, there are tabs for Data Output, Explain, Messages, and Notifications. The Messages tab displays the following error message:

ERROR: new row for relation "Merits/demerits" violates check constraint "check\_merit"  
 DETAIL: Failing row contains (-1.5, vrajmodi11@gmail.com, gyeoroo24@gmail.com).  
 SQL state: 23514

**Insert into "Merits/demerits" values (1.5,'vrajmodi11@gmail.com','gyeoroo24@gmail.com');**



The screenshot shows the OmniLib PostgreSQL 13 Query Editor interface. The query window contains the following SQL code:

```

1 --Alter table "Merits/demerits" add constraint check_merit CHECK(rating between 0.0 AND 5.0);
2
3 --Insert into "Merits/demerits" values(-1.5,'vrajmodi11@gmail.com','gyeoroo24@gmail.com');
4
5 Insert into "Merits/demerits" values(1.5,'vrajmodi11@gmail.com','gyeoroo24@gmail.com');

```

Below the query window, there are tabs for Data Output, Explain, Messages, and Notifications. The Data Output tab displays the following output:

INSERT 0 1  
 Query returned successfully in 63 msec.

8) Alter table "admin" add constraint check\_email CHECK("User\_id/email\_id" LIKE '%@%.%');

Insert into admin values

```
('ashvathama1234.com','L101','V36','Ashvathama','Yadav',9382942333,'ksdflnskna','Admin Assistant','21-03-2001');
```



The screenshot shows a PostgreSQL 13 query editor interface. The title bar says "OmniLib/postgres@PostgreSQL 13". The main area contains two lines of SQL code:

```
1 --Alter table "admin" add constraint check_email CHECK("User_id/email_id" LIKE '%@%.%');
2 Insert into admin values('ashvathama1234.com','L101','V36','Ashvathama','Yadav',9382942333,'ksdflnskna','Admin Assistant','21-03-2001');
```

Below the code, there are tabs for "Data Output", "Explain", "Messages", and "Notifications". The "Messages" tab is selected, displaying the following error message:

```
ERROR: new row for relation "admin" violates check constraint "check_email"
DETAIL: Failing row contains (ashvathama1234.com, L101, V36, Ashvathama, Yadav, 9382942333, ksdflnskna, Admin Assistant, 2001-03-21).
SQL state: 23514
```

## 5.4 Joins and Subqueries

### Inner join

#### Users who haven't paid through UPI

1)select "User\_id/email\_id","User".payment\_id,upi from  
"User" join payment on "User".payment\_id = payment.payment\_id  
where payment.upi = '-';

The screenshot shows a PostgreSQL query editor interface. The title bar says 'OmniLib/postgres@PostgreSQL 13'. The main area has tabs for 'Query Editor' (which is selected), 'Query History', and 'Scratch Pad'. In the 'Query Editor' tab, there is a code editor with the following SQL query:

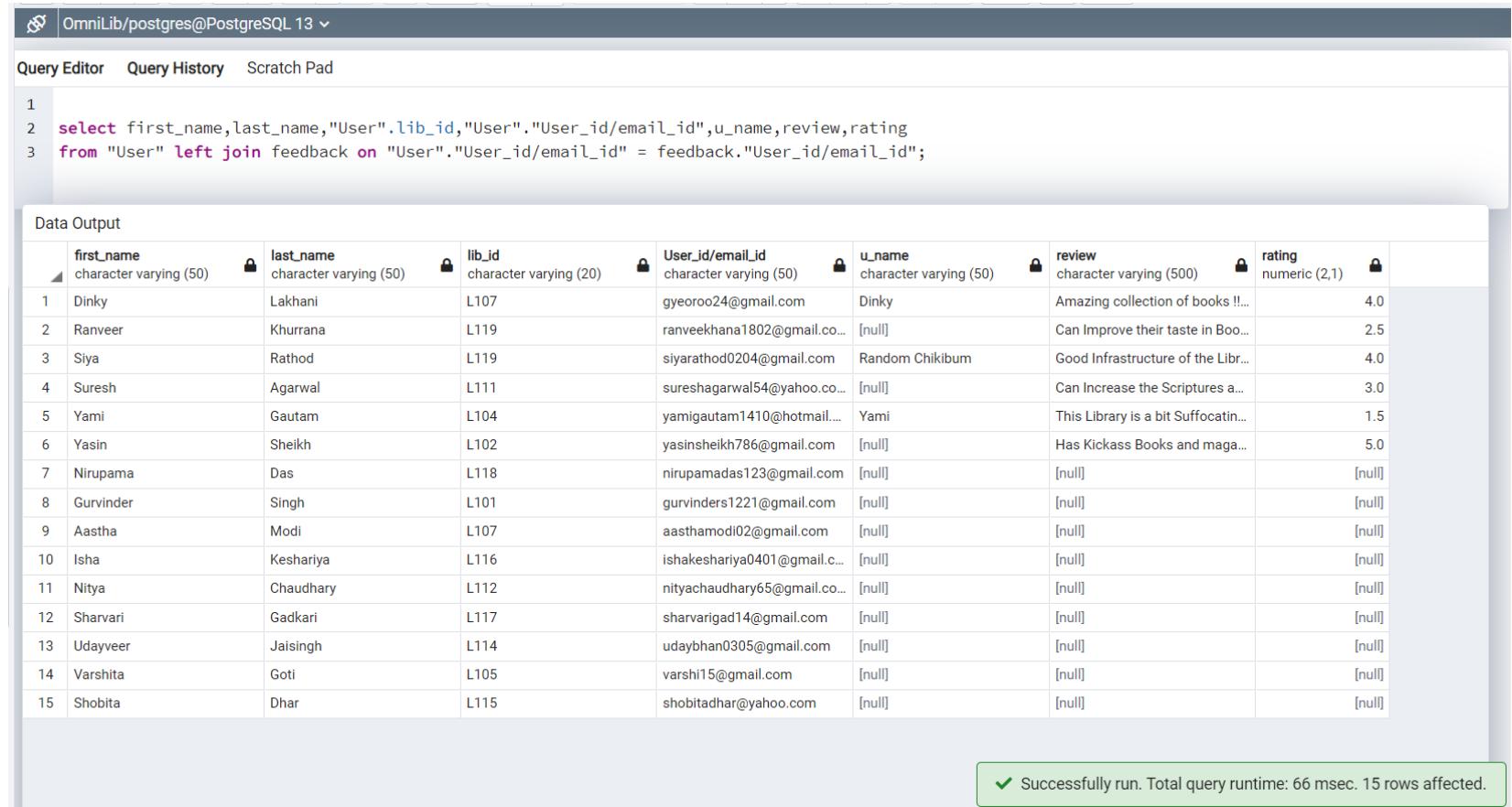
```
1 select "User_id/email_id","User".payment_id,upi from "User" join payment on "User".payment_id = payment.payment_id where payment.upi = '-';
2
```

Below the code editor is a 'Data Output' section. It contains a table with three columns: 'User\_id/email\_id', 'payment\_id', and 'upi'. The table has two rows of data:

	User_id/email_id	payment_id	upi
1	sureshagarwal54@yahoo.co...	PM00104	-
2	nityachaudhary65@gmail.co...	PM00105	-

**Left Join**

**2) select first\_name,last\_name,"User".lib\_id,"User"."User\_id/email\_id",  
u\_name,review,rating  
from "User" left join feedback on  
"User"."User\_id/email\_id" = feedback."User\_id/email\_id";**



```

1
2 select first_name, last_name, "User".lib_id, "User"."User_id/email_id", u_name, review, rating
3 from "User" left join feedback on "User"."User_id/email_id" = feedback."User_id/email_id";

```

**Data Output**

	first_name character varying (50)	last_name character varying (50)	lib_id character varying (20)	User_id/email_id character varying (50)	u_name character varying (50)	review character varying (500)	rating numeric (2,1)
1	Dinky	Lakhani	L107	gyeoro24@gmail.com	Dinky	Amazing collection of books !...	4.0
2	Ranveer	Khurrrana	L119	ranveekhana1802@gmail.co...	[null]	Can Improve their taste in Boo...	2.5
3	Siya	Rathod	L119	siyaratthod0204@gmail.com	Random Chikibum	Good Infrastructure of the Libr...	4.0
4	Suresh	Agarwal	L111	sureshagarwal54@yahoo.co...	[null]	Can Increase the Scriptures a...	3.0
5	Yami	Gautam	L104	yamigautam1410@hotmail....	Yami	This Library is a bit Suffocatin...	1.5
6	Yasin	Sheikh	L102	yasinsheikh786@gmail.com	[null]	Has Kickass Books and maga...	5.0
7	Nirupama	Das	L118	nirupamadas123@gmail.com	[null]	[null]	[null]
8	Gurvinder	Singh	L101	gurvinders1221@gmail.com	[null]	[null]	[null]
9	Aastha	Modi	L107	aasthamodi02@gmail.com	[null]	[null]	[null]
10	Isha	Keshariya	L116	ishakeshariya0401@gmail.c...	[null]	[null]	[null]
11	Nitya	Chaudhary	L112	nityachaudhary65@gmail.co...	[null]	[null]	[null]
12	Sharvari	Gadkari	L117	sharvarigad14@gmail.com	[null]	[null]	[null]
13	Udayveer	Jaisingh	L114	udaybhan0305@gmail.com	[null]	[null]	[null]
14	Varshita	Goti	L105	varshi15@gmail.com	[null]	[null]	[null]
15	Shobita	Dhar	L115	shobitadhar@yahoo.com	[null]	[null]	[null]

✓ Successfully run. Total query runtime: 66 msec. 15 rows affected.

Right Join

**3) select first\_name,last\_name,"admin".lib\_id,"admin"."User\_id/email\_id",rating,  
 "Merits/demerits"."User\_id/email\_id"  
 from "Merits/demerits" right join "admin"  
 on "admin"."User\_id/email\_id" = "Merits/demerits"."Admin\_User\_id/email\_id";**

Query Editor   Query History   Scratch Pad

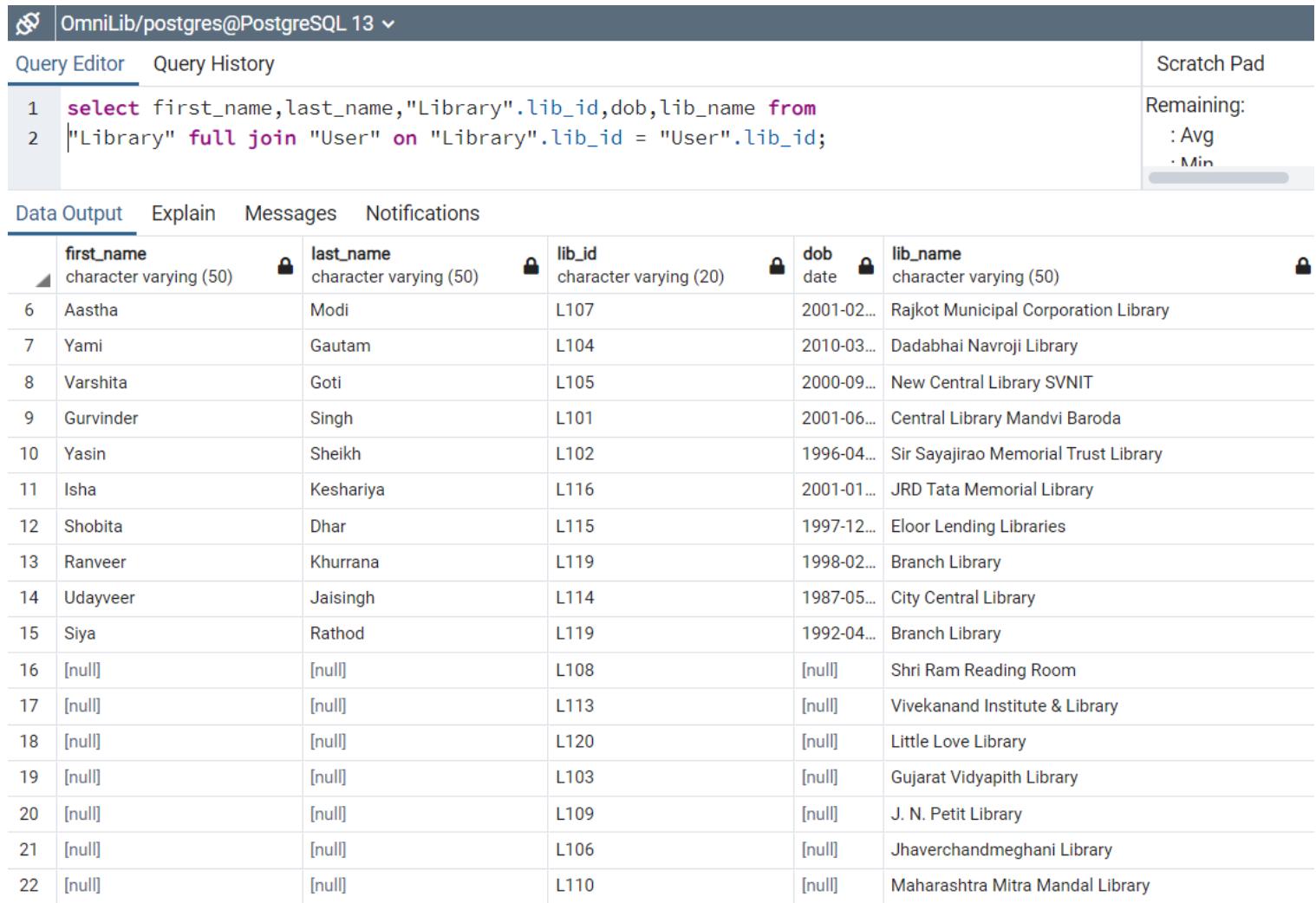
```
1 select first_name, last_name, "admin".lib_id, "admin"."User_id/email_id", rating, "Merits/demerits"."User_id/email_id"
2 from "Merits/demerits" right join "admin" on "admin"."User_id/email_id" = "Merits/demerits"."Admin_User_id/email_id";
3
```

Data Output

	first_name character varying (50)	last_name character varying (50)	lib_id character varying (20)	User_id/email_id character varying (50)	rating numeric (2,1)	User_id/email_id character varying (50)
1	Archana	Lakdavala	L119	archana12@gmail.com	4.5	ranveekhana1802@gmail.co...
2	Saurabh	Dave	L118	saurabh56@gmail.com	3.0	nirupamadas123@gmail.com
3	Mihir	Golvala	L116	mihir123gol@gmail.com	3.1	ishakeshariya0401@gmail.c...
4	Deepak	Guvali	L114	deepakguvaliwala@gmail.co...	3.2	udaybhan0305@gmail.com
5	Chelsi	Patel	L104	chelsipatel22@gmail.com	2.2	yamigautam1410@hotmail....
6	Riya	Parmar	L107	riya34parmar@gmail.com	3.5	gyeoro24@gmail.com
7	janvi	vyas	L117	janvi98@gmail.com	3.0	sharvarigad14@gmail.com
8	Nilesh	Modi	L106	nileshmodi34@yahoo.com	3.2	nirupamadas123@gmail.com
9	Shivani	Haldariya	L111	shivani786hal@gmail.com	3.1	sureshagarwal54@yahoo.co...
10	Gurvindr	Singh	L105	gurvisingh45@yahoo.com	3.9	varshi15@gmail.com
11	Vraj	Modi	L101	vrajmodi11@gmail.com	3.4	gurvinders1221@gmail.com
12	Archana	Lakdavala	L119	archana12@gmail.com	4.5	siyarthod0204@gmail.com
13	Aastha	Modi	L102	aasthamodi22@gmail.com	1.5	yasinsheikh786@gmail.com
14	Riya	Modi	L112	riya89modi@yahoo.com	3.3	nityachaudhary65@gmail.co...
15	Vraj	Modi	L101	vrajmodi11@gmail.com	1.5	gyeoro24@gmail.com
16	Mohit	Parmar	L120	mohitparmar34@gmail.com	[null]	[null]
17	Kenil	Modi	L101	kenilmodi10@gmail.com	[null]	[null]
18	Vinit	Patel	L109	vinit2903@gmail.com	[null]	[null]
19	Ranjan	Guvaliwala	L113	ranjanguvaliwala56@yahoo....	[null]	[null]
20	Ketul	Modi	L103	ketulmodi7977@gmail.com	[null]	[null]
21	Sudhir	Patel	L110	sudhirpatel12@gmail.com	[null]	[null]
22	Rishi	Mehta	L108	rishimehta1101@gmail.com	[null]	[null]

Full join

**4) select first\_name,last\_name,"Library".lib\_id,dob,lib\_name from "Library" full join "User" on "Library".lib\_id = "User".lib\_id;**



The screenshot shows a PostgreSQL database interface with the following details:

- Connection:** OmniLib/postgres@PostgreSQL 13
- Query Editor:** Contains the SQL query:
 

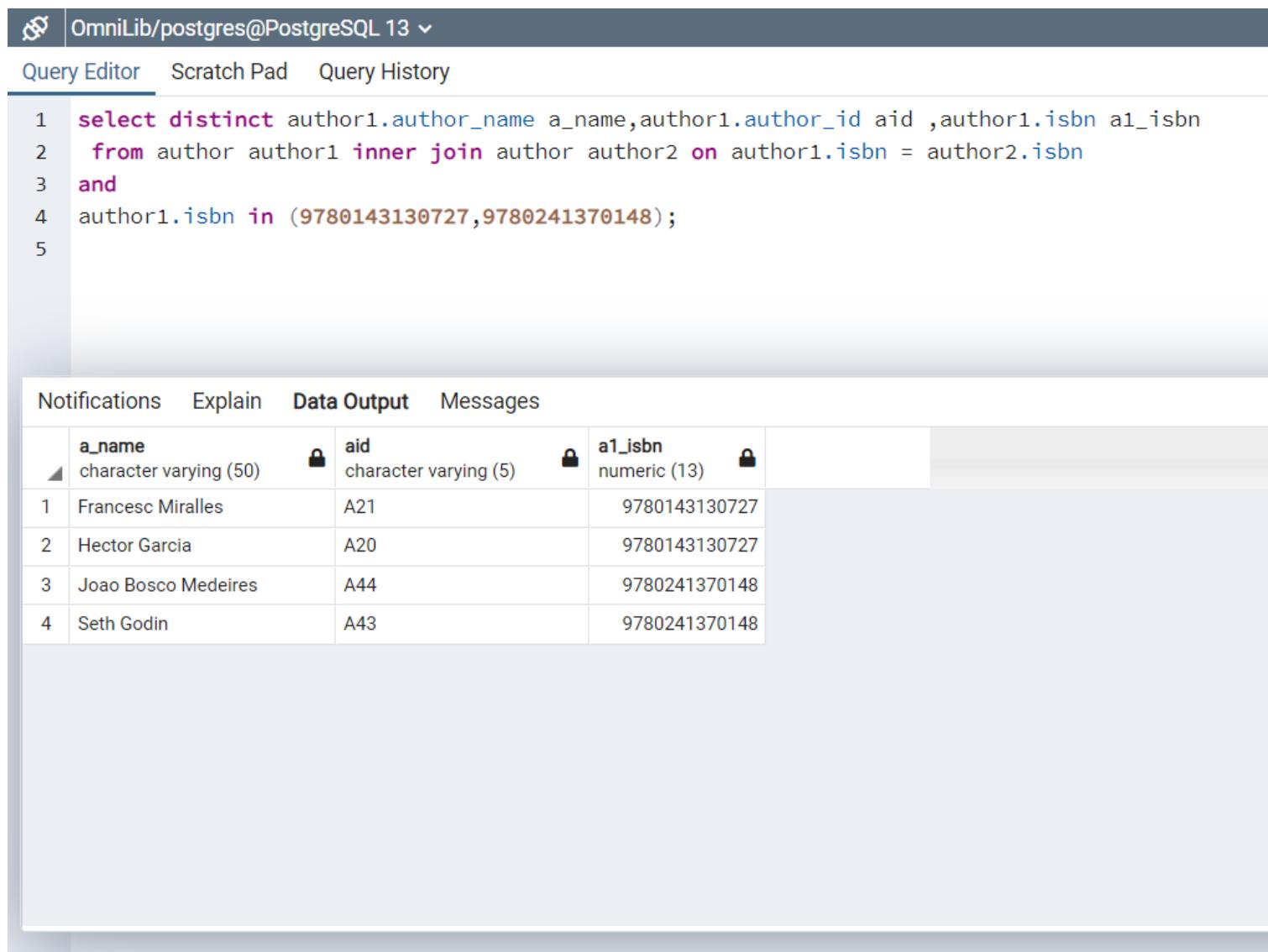
```
1 select first_name, last_name, "Library".lib_id, dob, lib_name from
2 "Library" full join "User" on "Library".lib_id = "User".lib_id;
```
- Scratch Pad:** Shows statistics: Remaining:, : Avg, : Min.
- Data Output:** Displays the results of the query in a table format.

**Table Data:**

	first_name	last_name	lib_id	dob	lib_name
6	Aastha	Modi	L107	2001-02...	Rajkot Municipal Corporation Library
7	Yami	Gautam	L104	2010-03...	Dadabhai Navroji Library
8	Varshita	Goti	L105	2000-09...	New Central Library SVNIT
9	Gurvinder	Singh	L101	2001-06...	Central Library Mandvi Baroda
10	Yasin	Sheikh	L102	1996-04...	Sir Sayajirao Memorial Trust Library
11	Isha	Keshariya	L116	2001-01...	JRD Tata Memorial Library
12	Shobita	Dhar	L115	1997-12...	Eloor Lending Libraries
13	Ranveer	Khurrana	L119	1998-02...	Branch Library
14	Udayveer	Jaisingh	L114	1987-05...	City Central Library
15	Siya	Rathod	L119	1992-04...	Branch Library
16	[null]	[null]	L108	[null]	Shri Ram Reading Room
17	[null]	[null]	L113	[null]	Vivekanand Institute & Library
18	[null]	[null]	L120	[null]	Little Love Library
19	[null]	[null]	L103	[null]	Gujarat Vidyapith Library
20	[null]	[null]	L109	[null]	J. N. Petit Library
21	[null]	[null]	L106	[null]	Jhaverchandmeghani Library
22	[null]	[null]	L110	[null]	Maharashtra Mitra Mandal Library

Self Join**Authors having certain ISBN**

5) select distinct author1.author\_name a\_name,author1.author\_id aid ,author1.isbn a1\_isbn  
 from author author1 inner join author author2 on author1.isbn = author2.isbn  
 and  
 author1.isbn in (9780143130727,9780241370148);



The screenshot shows the OmniLib PostgreSQL interface. The top bar indicates the connection is to OmniLib/postgres@PostgreSQL 13. Below the bar, there are tabs for Query Editor (which is selected), Scratch Pad, and Query History.

```

1 select distinct author1.author_name a_name,author1.author_id aid ,author1.isbn a1_isbn
2   from author author1 inner join author author2 on author1.isbn = author2.isbn
3   and
4 author1.isbn in (9780143130727,9780241370148);
5

```

Below the code area, there are tabs for Notifications, Explain, Data Output (which is selected), and Messages. The Data Output tab displays the results of the query:

	a_name character varying (50)	aid character varying (5)	a1_isbn numeric (13)
1	Francesc Miralles	A21	9780143130727
2	Hector Garcia	A20	9780143130727
3	Joao Bosco Medeires	A44	9780241370148
4	Seth Godin	A43	9780241370148

## Books having multiple authors

6) select t1.author\_name,t1.isbn from author t1 , author t2  
where t1.isbn = t2.isbn AND t1.author\_id<>t2.author\_id;

The screenshot shows a PostgreSQL query editor interface. The top bar displays the connection information: OmniLib/postgres@PostgreSQL 13. Below the bar, there are tabs for 'Query Editor' (which is active) and 'Query History'. The main area contains the SQL code for selecting books with multiple authors. The code is as follows:

```
12 select t1.author_name,t1.isbn from author t1,author t2
13 where t1.isbn = t2.isbn AND t1.author_id<>t2.author_id;
14
15
16
17
18
19
20
21
22
23
24
```

Below the code, there are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is selected, showing a table with two columns: 'author\_name' and 'isbn'. The data rows are:

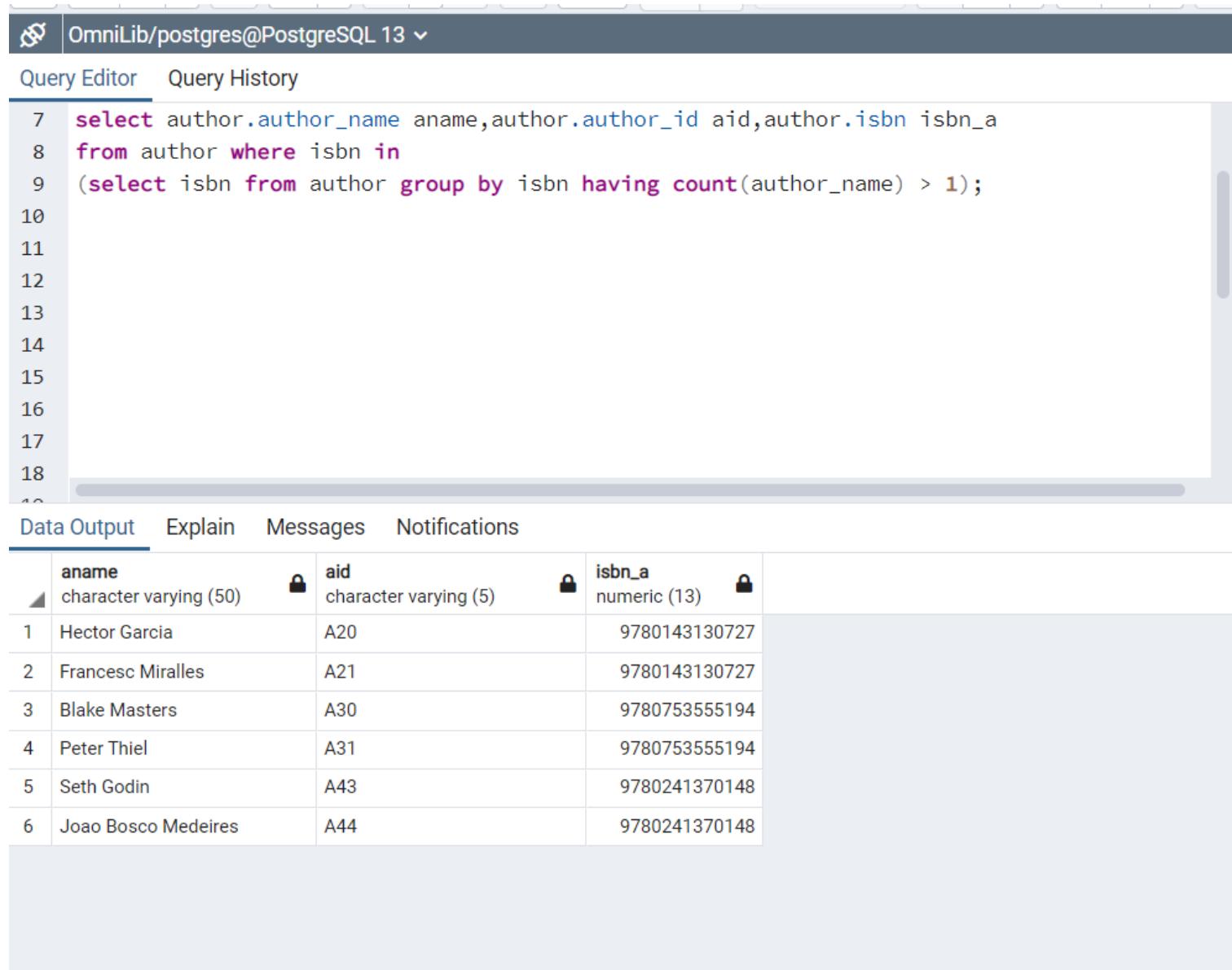
	author_name	isbn
1	Hector Garcia	9780143130727
2	Francesc Miralles	9780143130727
3	Blake Masters	9780753555194
4	Peter Thiel	9780753555194
5	Seth Godin	9780241370148
6	Joao Bosco Medeires	9780241370148

## Sub queries

### Correlated

#### Books having multiple authors

7) select author.author\_name fname,author.author\_id aid,author.isbn isbn\_a  
 from author where isbn in  
 (select isbn from author group by isbn having count(author\_name) > 1);



```

OmniLib/postgres@PostgreSQL 13
Query Editor Query History
7  select author.author_name fname,author.author_id aid,author.isbn isbn_a
8  from author where isbn in
9  (select isbn from author group by isbn having count(author_name) > 1);
10
11
12
13
14
15
16
17
18
Data Output Explain Messages Notifications

```

	fname	aid	isbn_a
1	Hector Garcia	A20	9780143130727
2	Francesc Miralles	A21	9780143130727
3	Blake Masters	A30	9780753555194
4	Peter Thiel	A31	9780753555194
5	Seth Godin	A43	9780241370148
6	Joao Bosco Medeires	A44	9780241370148

## Employees of library having Second Maximum Salary

8) select first\_name,last\_name,salary from employee where salary= (select max(salary) from employee) where salary<> (select max(salary) from employee);

The screenshot shows the OmniLib PostgreSQL query editor interface. The title bar says "OmniLib/postgres@PostgreSQL 13". The tabs "Query Editor" and "Query History" are visible, with "Query Editor" being active. The code area contains the following SQL query:

```

1 --select * from employee;
2 select first_name, last_name, salary from
3 employee where salary=
4 (select max(salary) from employee
5 where salary<> (select max(salary) from employee));

```

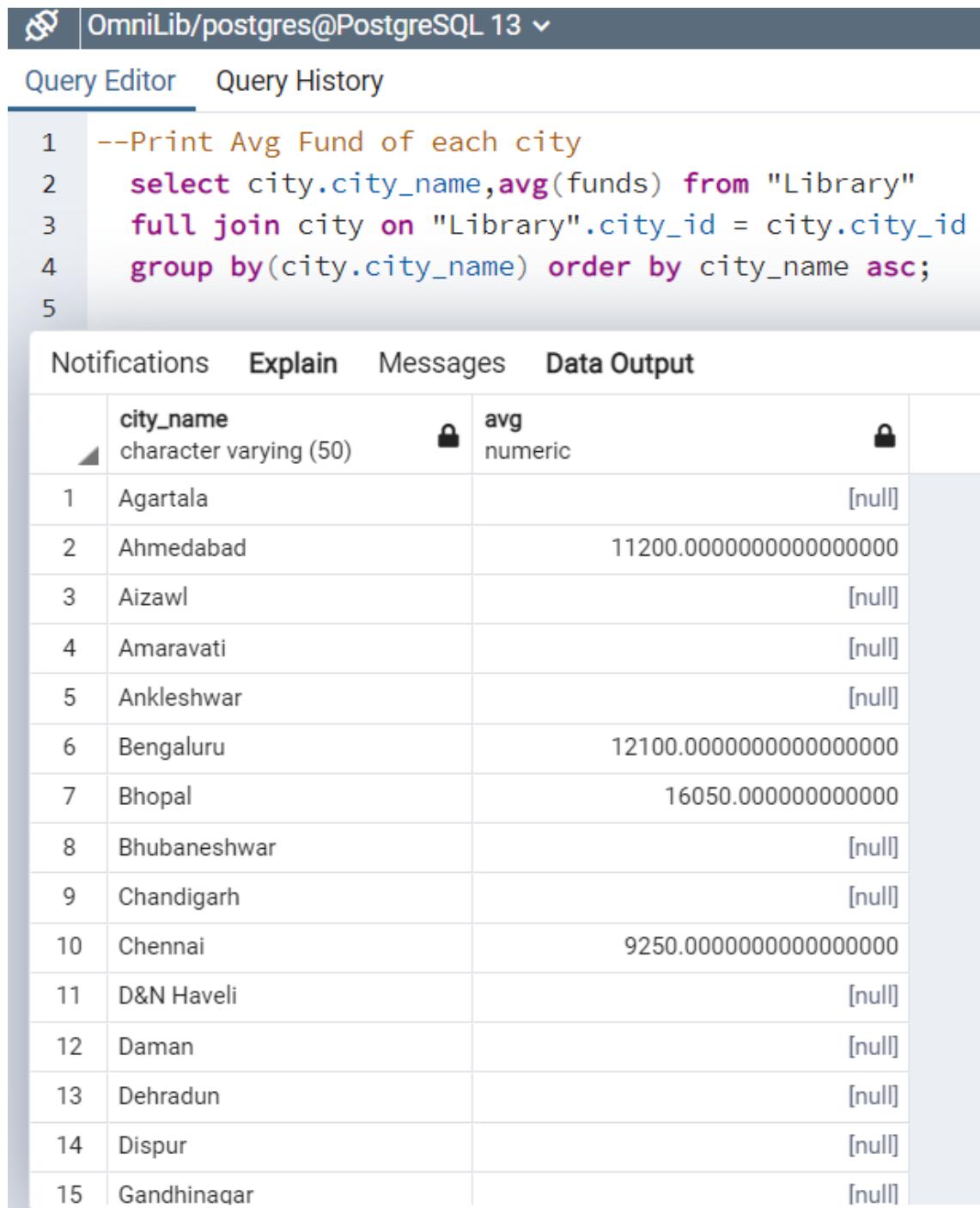
Below the code, there are tabs for "Notifications", "Data Output", "Explain", and "Messages". The "Data Output" tab is selected, displaying a table with the results of the query:

	first_name	last_name	salary
1	Darshan	Mali	26000
2	Darsh	Patel	26000
3	Margi	Chaudhry	26000
4	Kashish	Panvala	26000
5	Hiya	Bidivala	26000
6	Priyanshi	Sarvan	26000

## Average fund of cities

9) select city.city\_name,avg(funds) from "Library"

full join city on "Library".city\_id = city.city\_id group by(city.city\_name) order by city\_name asc;



The screenshot shows a PostgreSQL 13 database connection named 'OmniLib/postgres@PostgreSQL 13'. The 'Query Editor' tab is active, displaying the following SQL code:

```

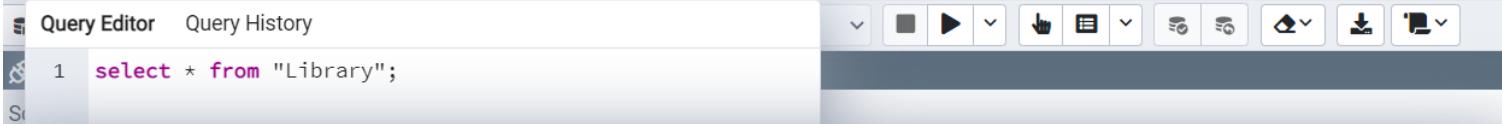
1 --Print Avg Fund of each city
2 select city.city_name,avg(funds) from "Library"
3 full join city on "Library".city_id = city.city_id
4 group by(city.city_name) order by city_name asc;
5

```

Below the code, there are tabs for Notifications, Explain, Messages, and Data Output. The Data Output tab is selected, showing a table with two columns: 'city\_name' and 'avg'. The data consists of 15 rows, each representing a city and its average fund value. The values for most cities are null, except for Ahmedabad which has a value of 11200.000000000000000000.

	city_name	avg
	character varying (50)	numeric
1	Agartala	[null]
2	Ahmedabad	11200.000000000000000000
3	Aizawl	[null]
4	Amaravati	[null]
5	Ankleshwar	[null]
6	Bengaluru	12100.000000000000000000
7	Bhopal	16050.000000000000000000
8	Bhubaneshwar	[null]
9	Chandigarh	[null]
10	Chennai	9250.000000000000000000
11	D&N Haveli	[null]
12	Daman	[null]
13	Dehradun	[null]
14	Dispur	[null]
15	Gandhinagar	[null]

**Select \* from “Library”;**

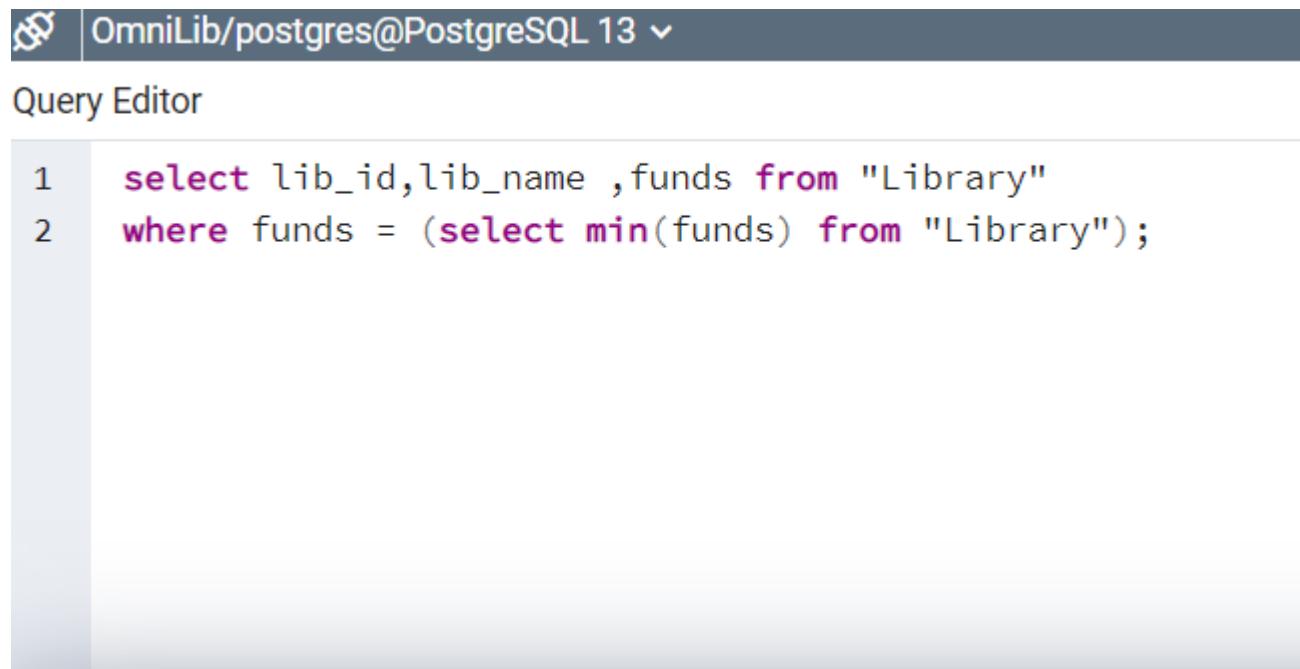


The screenshot shows the OmniDB Query Editor interface. The top bar has tabs for "Query Editor" (selected), "Query History", and various icons for database management. Below the toolbar, a query window displays the command: "select \* from "Library";". The main area is a data grid titled "Data Output" with columns: address, funds, lib\_name, lib\_id, and city\_id. The data grid contains 20 rows of library information.

	address character varying (500)	funds numeric (8,2)	lib_name character varying (50)	lib_id [PK] character varying (20)	city_id character varying (5)
1	Bank Rd, Beside Bank of, Bajw...	5000.00	Central Library Mandvi Baroda	L101	C707
2	Station Rd, M.S.U. Compound,...	17000.00	Sir Sayajirao Memorial Trust ...	L102	C707
3	SMES, Gujarat Vidyapith Rd, S...	5500.00	Gujarat Vidyapith Library	L103	C702
4	3046, Gandhi Rd, Old City, Dha...	16900.00	Dadabhai Navroji Library	L104	C702
5	SVNIT Surat, Keval Chowk, Sur...	20000.00	New Central Library SVNIT	L105	C703
6	6V27+H3X, Near Archana Sch...	2500.00	Jhaverchandmeghani Library	L106	C703
7	7QX6+GXX, Indian Park, Rajkot	4000.00	Rajkot Municipal Corporatio...	L107	C704
8	9, University Road, Jala Ram ...	8900.00	Shri Ram Reading Room	L108	C704
9	312, Dr Dadabhai Naoroji Rd, ...	7000.00	J. N. Petit Library	L109	C1401
10	near Bandra Gymkhana, Mum...	11000.00	Maharashtra Mitra Mandal L...	L110	C1401
11	Sai Nagri Society, Shop No A2,...	16700.00	Bookaholic Library	L111	C1301
12	Kumthekar Road, Sadashiv Pe...	15400.00	The Phoenix Library	L112	C1301
13	Ramakrishna Math Marg, Do...	13000.00	Vivekanand Institute & Library	L113	C2401
14	8GW9+49R, Sai Ram Nagar, C...	12300.00	City Central Library	L114	C2401
15	G-9, Blue Cross Chambers, Be...	12200.00	Eloor Lending Libraries	L115	C1101
16	IISc Campus, Gulmohar Marg, ...	12000.00	JRD Tata Memorial Library	L116	C1101
17	Shiv Market, Bhooton Wali Gal...	11000.00	VPS Educational Library	L117	U501
18	Shiv Market, Bhooton Wali Gal...	12500.00	VPS Educational Library	L118	U501
19	1/26, 1st Circular St, Jawahar ...	16700.00	Branch Library	L119	C2301
20	54 C, 3rd Street, River View Co...	1800.00	Little Love Library	L120	C2301

**Independent****Library having minimum fund**

10) select lib\_id,lib\_name ,funds from "Library"  
**where funds = (select min(funds) from "Library");**



The screenshot shows the OmniLib PostgreSQL 13 Query Editor interface. The title bar says "OmniLib/postgres@PostgreSQL 13". The main area is labeled "Query Editor" and contains the following SQL code:

```

1  select lib_id,lib_name ,funds from "Library"
2  where funds = (select min(funds) from "Library");

```

Notifications   Explain   Messages   Data Output

	lib_id [PK] character varying (20)	lib_name character varying (50)	funds numeric (8,2)
1	L120	Little Love Library	1800.00

## 5.5 PL/SQL

### 1) PL/SQL

Checks if Payment Amount is from 400,750,1000,300

DO \$\$

DECLARE

    payment\_amount INTEGER :=100;

BEGIN

    if payment\_amount = 400 then

        elsif payment\_amount = 750 then

        elsif payment\_amount = 1000 then

        elsif payment\_amount = 3000 then

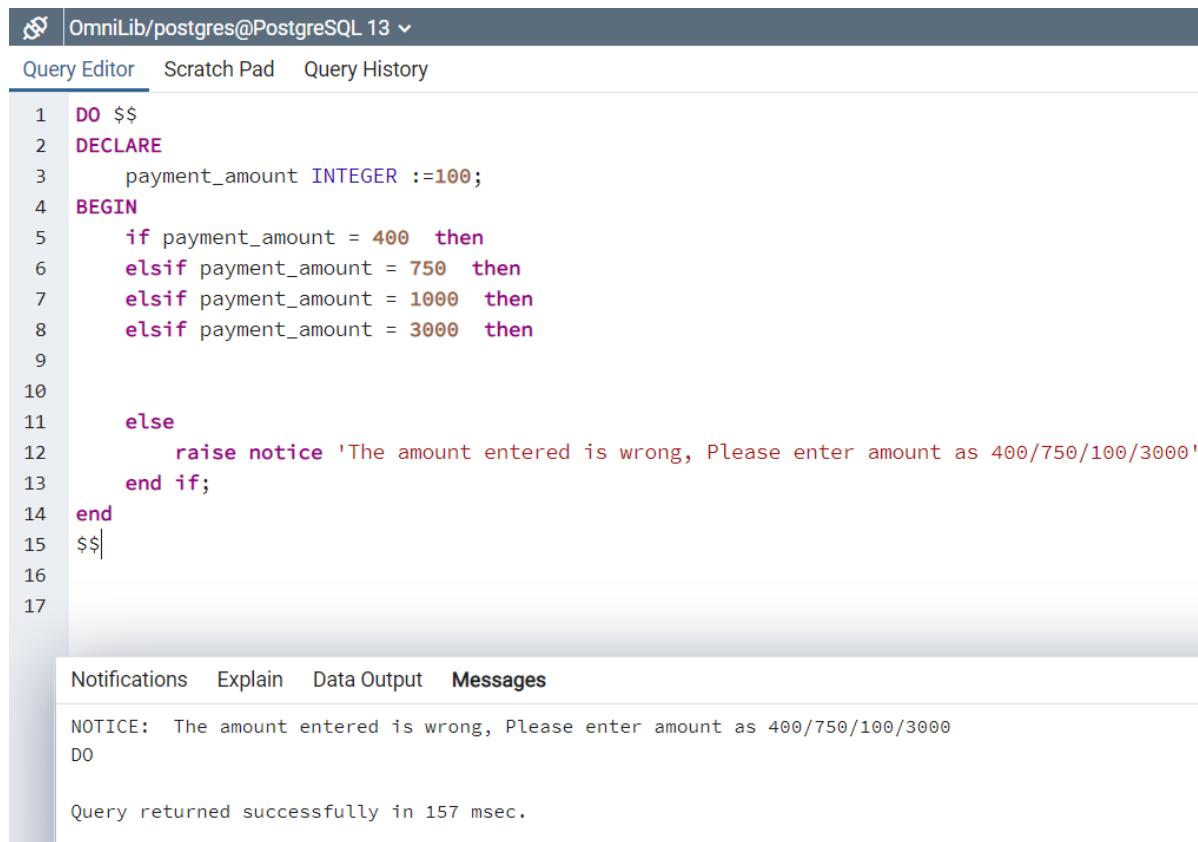
        else

            raise notice 'The amount entered is wrong, Please enter amount as  
400/750/100/3000';

    end if;

end

\$\$



OmniLib/postgres@PostgreSQL 13 ▾

Query Editor   Scratch Pad   Query History

```

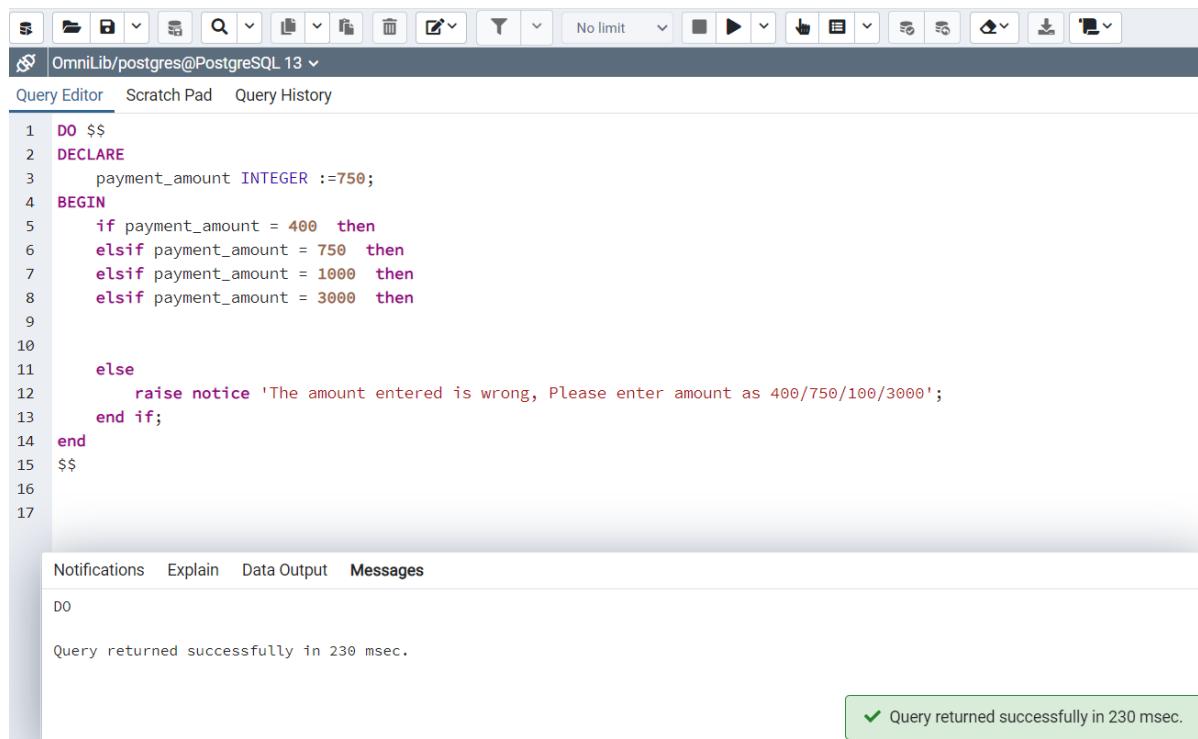
1 DO $$ 
2 DECLARE
3     payment_amount INTEGER :=100;
4 BEGIN
5     if payment_amount = 400 then
6     elsif payment_amount = 750 then
7     elsif payment_amount = 1000 then
8     elsif payment_amount = 3000 then
9
10
11     else
12         raise notice 'The amount entered is wrong, Please enter amount as 400/750/100/3000';
13     end if;
14 end
$$_

```

Notifications   Explain   Data Output   **Messages**

NOTICE: The amount entered is wrong, Please enter amount as 400/750/100/3000  
DO

Query returned successfully in 157 msec.



OmniLib/postgres@PostgreSQL 13 ▾

Query Editor   Scratch Pad   Query History

```

1 DO $$ 
2 DECLARE
3     payment_amount INTEGER :=750;
4 BEGIN
5     if payment_amount = 400 then
6     elsif payment_amount = 750 then
7     elsif payment_amount = 1000 then
8     elsif payment_amount = 3000 then
9
10
11     else
12         raise notice 'The amount entered is wrong, Please enter amount as 400/750/100/3000';
13     end if;
14 end
$$_

```

Notifications   Explain   Data Output   **Messages**

DO

Query returned successfully in 230 msec.

✓ Query returned successfully in 230 msec.

## 5.6 Functions

### 2) Function

**Function get\_record displays the payment amount as well as name and payment\_type of a user**

**Function**

```
create or replace function get_record (
```

```
    pid varchar(20)
```

```
)
```

```
    returns table (
```

```
        amt numeric(4,0),
```

```
        pay_ty varchar(20),
```

```
        user_f varchar(50),
```

```
        user_l varchar(50)
```

```
)
```

```
language plpgsql
```

```
as $$
```

```
begin
```

```
    return query
```

```
        select
```

```
            amount,
```

```
            pay_type::varchar(20),
```

```
            first_name,
```

```
            last_name
```

```
        from
```

```
            membership join "User" on membership.payment_id = "User".payment_id
```

```
        where
```

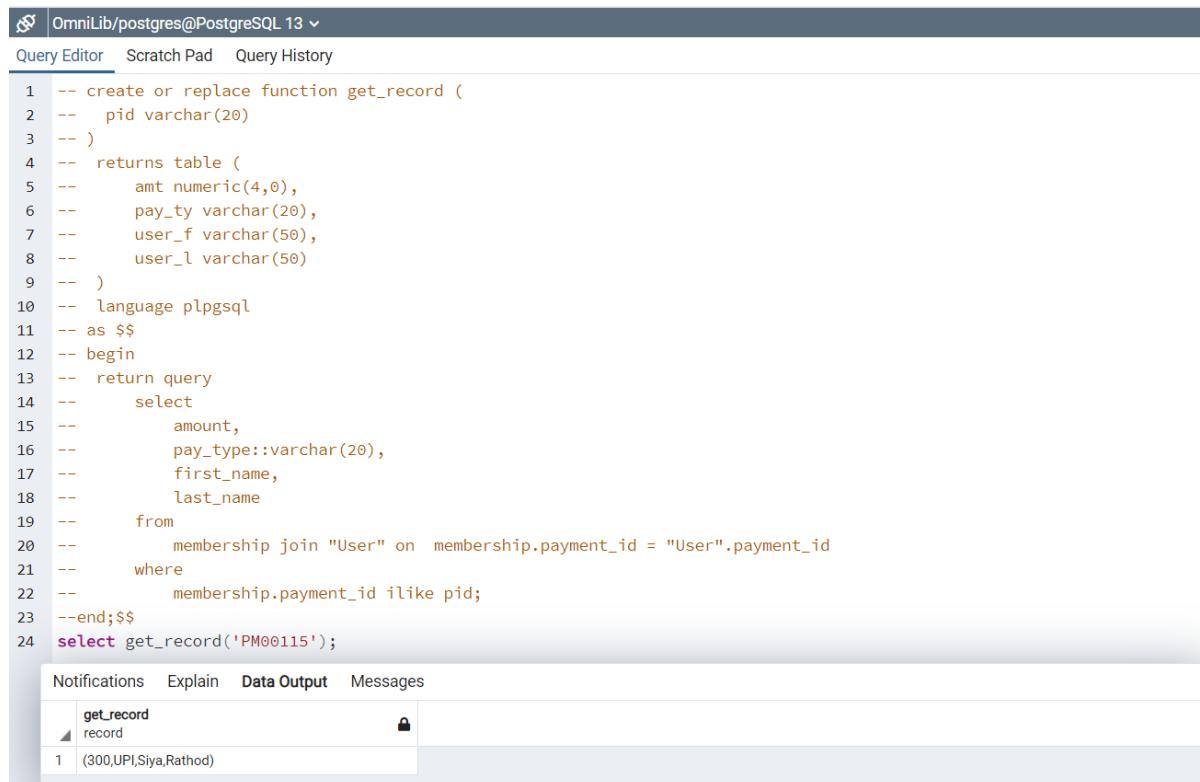
```

membership.payment_id ilike pid;
end;$$

```

**Run:**

```
select get_record('PM00115');
```



The screenshot shows a PostgreSQL query editor interface. The title bar reads "OmniLib/postgres@PostgreSQL 13". The main area contains the following SQL code:

```

1 -- create or replace function get_record (
2 --   pid varchar(20)
3 -- )
4 --   returns table (
5 --     amt numeric(4,0),
6 --     pay_ty varchar(20),
7 --     user_f varchar(50),
8 --     user_l varchar(50)
9 --   )
10 -- language plpgsql
11 -- as $$$
12 -- begin
13 --   return query
14 --     select
15 --       amount,
16 --       pay_type::varchar(20),
17 --       first_name,
18 --       last_name
19 --     from
20 --       membership join "User" on membership.payment_id = "User".payment_id
21 --     where
22 --       membership.payment_id ilike pid;
23 -- end;$$
24 select get_record('PM00115');

```

Below the code, there are tabs for Notifications, Explain, Data Output, and Messages. The Data Output tab is selected, showing a single row of results:

get_record	record	lock
1	(300,UPI,Siya,Rathod)	

## 5.7 Triggers

### 5.7.1)Trigger

**Function check\_Qty()** checks the quantity of a book and if its value becomes equal to zero or lesser , it triggers and exception.

```
-- create or replace function check_Qty() returns trigger as $$
```

```
-- BEGIN
```

```
--     if NEW."Qty" <=0 then
```

```
--         raise exception 'Book Not available at the moment';
```

```
--     end if;
```

```
--     return NEW;
```

```
-- END;
```

```
-- $$
```

```
-- LANGUAGE plpgsql;
```

```
-- create trigger Qty_check
```

```
-- BEFORE INSERT OR UPDATE
```

```
-- ON "Quantity"
```

```
-- FOR EACH ROW
```

```
-- EXECUTE PROCEDURE check_Qty();
```

**Run:**

```
--Select * from "Quantity";
```

```
Update "Quantity" set "Qty" = 0 where "Quantity"."Lib_id" = 'L101';
```

The screenshot shows the OmniDB interface. At the top, the title bar says "OmniLib/postgres@PostgreSQL 13". Below it, the menu bar includes "Query Editor" (which is underlined), "Scratch Pad", and "Query History". The main area contains a code editor with the following SQL script:

```

1 -- create or replace function check_qty() returns trigger as $$ 
2 --   BEGIN
3 --     if NEW."Qty" <=0 then
4 --       raise exception 'Book Not available at the moment';
5 --     end if;
6 --     return NEW;
7 --   END;
8 -- $$ 
9 -- LANGUAGE plpgsql;
10
11 -- create trigger Qty_check
12 -- BEFORE INSERT OR UPDATE
13 -- ON "Quantity"
14 -- FOR EACH ROW
15 -- EXECUTE PROCEDURE check_qty();
16 --Select * from "Quantity";
17 Update "Quantity" set "Qty" = -1 where "Quantity"."Lib_id" = 'L101';
18

```

Below the code editor, there are tabs for "Notifications", "Explain", "Messages", and "Data Output". The "Messages" tab is selected, displaying the following error message:

ERROR: Book Not available at the moment  
CONTEXT: PL/pgSQL function check\_qty() line 4 at RAISE  
SQL state: P0001

This screenshot shows another instance of the OmniDB interface. The title bar is identical: "OmniLib/postgres@PostgreSQL 13". The menu bar includes "Query Editor" (underlined), "Scratch Pad", and "Query History". The code editor contains the same SQL script as the first screenshot:

```

1 -- create or replace function check_qty() returns trigger as $$ 
2 --   BEGIN
3 --     if NEW."Qty" <=0 then
4 --       raise exception 'Book Not available at the moment';
5 --     end if;
6 --     return NEW;
7 --   END;
8 -- $$ 
9 -- LANGUAGE plpgsql;
10
11 -- create trigger Qty_check
12 -- BEFORE INSERT OR UPDATE
13 -- ON "Quantity"
14 -- FOR EACH ROW
15 -- EXECUTE PROCEDURE check_qty();
16 --Select * from "Quantity";
17 Update "Quantity" set "Qty" = 0 where "Quantity"."Lib_id" = 'L101';
18

```

Below the code editor, the "Messages" tab is selected, showing the same error message:

ERROR: Book Not available at the moment  
CONTEXT: PL/pgSQL function check\_qty() line 4 at RAISE  
SQL state: P0001

### 5.7.2)Trigger

**Checks if any particular field that is required is empty in employee table**

```
CREATE OR REPLACE FUNCTION emp_record() RETURNS trigger AS $emp_record$
```

```
    Declare
```

```
        fl int := 0;
```

```
BEGIN
```

```
    -- Check that empname and salary are given
```

```
    IF NEW.first_name IS NULL THEN
```

```
        RAISE EXCEPTION 'First name cannot be null';
```

```
        fl:=1;
```

```
    END IF;
```

```
    IF NEW.salary IS NULL THEN
```

```
        RAISE EXCEPTION 'Cannot have null salary';
```

```
        fl:=1;
```

```
    END IF;
```

```
    IF NEW.desig NOT IN ('librarian','watchman','staff') THEN
```

```
        RAISE EXCEPTION 'not allowed for %', NEW.desig;
```

```
        fl:=1;
```

```
    END IF;
```

```
    IF NEW.salary < 15000 THEN
```

```
        RAISE EXCEPTION 'Cannot have a salary less than 15000 of %', NEW.first_name;
```

```
        fl:=1;
```

```
    END IF;
```

```
--
```

```
    IF fl=0 then
```

```
--      INSERT INTO employee
VALUES(NEW.desig,NEW.first_name,NEW.last_name,NEW.salary,NEW.emp_id,NEW.lib_id);
--  End if;

      RETURN NEW;

END;

$emp_record$ LANGUAGE plpgsql;

-- Who

-- CREATE TRIGGER emp_rec

-- BEFORE

-- INSERT OR UPDATE ON employee

--  FOR EACH ROW EXECUTE FUNCTION emp_record();
```

**Run:**

```
--Select * from employee;

--Insert into "employee" values('teacher','Nitya','Joshi',10000,'E111','L105');

--Insert into "employee"(desig,last_name,salary,emp_id,lib_id)
values('librarian','Joshi',10000,'E111','L105');

--Insert into "employee" values('librarian','Nitya','Joshi',10000,'E111','L105');

--Insert into "employee" values('librarian','Nitya','Joshi',20000,'E111','L105');
```

The screenshot shows a PostgreSQL query editor interface. The title bar says "OmniLib/postgres@PostgreSQL 13". The tabs at the top are "Query Editor" (which is selected), "Scratch Pad", and "Query History". The main area contains the following SQL code:

```
1 --Select * from employee;
2 Insert into "employee"(desig,last_name,salary,emp_id,lib_id) values('librarian','Joshi',10000,'E111','L105');
```

Below the code, there is a "Messages" tab which is currently selected. It displays the following error message:

ERROR: First name cannot be null  
CONTEXT: PL/pgSQL function emp\_record() line 5 at RAISE  
SQL state: P0001

The screenshot shows a PostgreSQL query editor interface. The title bar says "OmniLib/postgres@PostgreSQL 13". The tabs at the top are "Query Editor" (selected), "Scratch Pad", and "Query History". The main area contains the following SQL code:

```
1 --Select * from employee;
2 --Insert into "employee"(desig,last_name,salary,emp_id,lib_id) values('librarian','Joshi',10000,'E111','L105');
3 Insert into "employee" values('librarian','Nitya','Joshi',10000,'E111','L105');
```

Below the code, the "Messages" tab is selected and shows the following error message:

ERROR: Cannot have a salary less than 15000 of Nitya  
CONTEXT: PL/pgSQL function emp\_record() line 14 at RAISE  
SQL state: P0001

## 5.8 Cursors

### 1) Cursor

To display which book is issued by a user at this time

```
create or replace function book_issued(uid varchar(50)) returns text as $$  
declare  
    name text default '';  
    emprec record;  
    booki cursor(uid varchar(50))  
        for select first_name,last_name,"User"."User_id/email_id",isbn  
        from "User" join "Return/Issue" on  
            "User"."User_id/email_id" = "Return/Issue"."User_id/email_id" and  
            "User"."User_id/email_id" = uid;  
    begin  
        open booki(uid);  
        loop  
            fetch booki into emprec;  
            exit when not found;  
            name := emprec.first_name || ',' || emprec.last_name || ',' ||  
                emprec."User_id/email_id" || ',' || emprec.isbn;  
        end loop;  
        close booki;  
        return name;  
    end; $$  
language plpgsql;
```

**Run:**

```
select book_issued('sharvarigad14@gmail.com');
```

The screenshot shows the OmniLib PostgreSQL 13 query editor interface. The title bar reads "OmniLib/postgres@PostgreSQL 13". The main area displays a SQL script for creating a cursor function named book\_issued. The function uses a cursor booki to select user information from the User and Return/Issue tables based on a provided user ID (uid). The results are returned as a text string. The script includes comments explaining the purpose and structure. Below the script, the "Data Output" tab is selected, showing a single row of results: "book\_issued" and "text". The result row contains the value "Sharvari , Gadkari , sharvarigad14@gmail.com , 9788129137708".

```
-- -- Cursor
-- -- :::::::To display which book is issued by a user at this time
-- create or replace function book_issued(uid varchar(50)) returns text as $$

-- declare
-- name text default '';
-- emprec record;
-- booki cursor(uid varchar(50))
--     for select first_name,last_name,"User"."User_id/email_id",isbn
--     from "User" join "Return/Issue" on
--         "User"."User_id/email_id" = "Return/Issue"."User_id/email_id" and "User"."User_id/email_id" = uid;
-- begin
-- open booki(uid);
-- loop
-- fetch booki into emprec;
-- exit when not found;
-- 
```

	book_issued	text
1	Sharvari , Gadkari , sharvarigad14@gmail.com , 9788129137708	

## **6.FUTURE ENHANCEMENTS OF THE SYSTEM**

This system aspires to advance in the following areas:

- Graphical User Interface(GUI) for easy access.
- Security of the current Database System.
- Recommendation system , which will recommend users books according to their past purchases or interests.
- Allow users to change cities without hassle by simply changing their city\_id in their E-card and new libraries will be available to them.
- Allow delivery of the rented books to the users.
- Advance into E-books category.
- Aspires to increase the employment rate in tech-industry.

## **7.BIBLIOGRAPHY**

- For the successful implementation of this project, we referred to a few websites and books.
- We created the ER Diagram on “**ERDPlus.com**” and Schema Diagram on “**pgAdmin4**”.
- Mostly we referred to the online material as well as academic material for the syntax of procedures, triggers, cursors and queries in general.

**Reference book:**

**Data Base System Concepts -Henry F. Korth & A. Silberschatz 2nd Ed. McGraw-Hill 1991**

**Reference Websites:**

- [www.ERDplus.com/help](http://www.ERDplus.com/help)
- <https://stackoverflow.com/>