Assignment Number: 2 (A)

Title:

Implement a database using MySQL(DDL,DML)

Problem statement:

Using the ER diagram drawn in Assignment 1, Create a database called LibraryDb.

Objective:

- 1. To Understand Design of Databases.
- 2. To understand and execute a few DDL and DML statements, clauses using SQL.

Queries:

1. Show the structure of the Book master table

```
mysql> Create database Lib_Manag;
Query OK, 1 row affected (0.01 sec)
mysql> use Lib_Manag;
Database changed
mysql> Create Table Book_Master(
    -> MB_ID INT PRIMARY KEY,
    -> Title VARCHAR(50),
    -> Author VARCHAR(100),
    -> ISBN VARCHAR(50),
    -> Category VARCHAR(50),
-> B_Count INT,
    -> Available_Book INT
    -> );
Query OK, 0 rows affected (0.02 sec)
mysql> Describe Book_Master;
  Field
                                                  Default | Extra |
                                  | Null | Key |
                  | Type
  MB_ID
                                            PRI
                    int
                                    NO
                                                  NULL
  Title
                    varchar(50)
                                    YES
                                                  NULL
  Author
                    varchar(100)
                                    YES
                                                  NULL
  ISBN
                    varchar(50)
                                    YES
                                                  NULL
                    varchar(50)
  Category
                                    YES
                                                  NULL
                                    YES
  B_Count
                    int
                                                  NULL
                                    YES
  Available_Book
                    int
                                                  NULL
  rows in set (0.00 sec)
```

2. Show the students information

```
mysql- use tip_manag
Database changed
mysql> Create Table Student(
-> S_ID VARCHAR(20) PRIMARY KEY,
-> Name VARCHAR(50),
-> Email VARCHAR(50),
              -> Mobile No BIGINT.
 Query OK, 0 rows affected (0.03 sec)
 mysql> Describe Student;
                                                                                          | Null | Key | Default | Extra |
   Field
                                         | Type
    S_ID | varchar(20) |
Name | varchar(50) |
Email | varchar(50) |
Mobile_No | bigint
DOB | data
                                                                                                                                          NULL
NULL
NULL
                                                                                              YES
YES
                                                                                              YES
  5 rows in set (0.00 sec)
mysql> INSERT INTO Student Values

-> ('B1500', 'Aarav Sharma', 'aarav.sharma@example.com', 9876543210, '2000-01-15'),

-> ('B1501', 'Vivaan Patel', 'vivaan.patel@example.com', 9123456789, '1999-02-20'),

-> ('B1502', 'Aditya Verma', 'aditya.verma@example.com', 9988776655, '2001-03-10'),

-> ('B1503', 'Vihaan Gupta', 'vihaan.gupta@example.com', 9871234567, '2002-04-25'),

-> ('B1504', 'Arjun Rao', 'arjun.rao@example.com', 9876543210, '2000-06-15'),

-> ('B1506', 'Sai Kumar', 'sai kumar@example.com', 9876543210, '2000-06-15'),

-> ('B1506', 'Reyansh Singh', 'reyansh.singh@example.com', 912365789, '2003-07-20'),

-> ('B1507', 'Krishna Iyer', 'krishna.iyer@example.com', 9988776655, '1997-08-05'),

-> ('B1508', 'Rohan Mehta', 'rohan.mehta@example.com', 9871234567, '2001-09-12'),

-> ('B1509', 'Anaya Joshi', 'anaya.joshi@example.com', 9123456789, '2002-10-30');

Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0
  mysgl> INSERT INTO Student Values
mysql> Select * From Studnet;
ERROR 1146 (42S02): Table 'lib_manag.studnet' doesn't exist
mysql> Select * FROM Student;
      S ID | Name
                                                                                  | Email
                                                                                                                                                                                  | Mobile_No | DOB
                         Aarav Sharma
Vivaan Patel
Aditya Verma
Vihaan Gupta
Arjun Rao
Sai Kumar
Reyansh Singh
Krishna Iyer
Rohan Mehta
Anaya Joshi
                                                                                                                                                                                      9876543210
                                                                                      aarav.sharma@example.com
vivaan.patel@example.com
                                                                                                                                                                                                                                 2000-01-15
1999-02-20
      B1500
                                                                                                                                                                                      9876543210
9123456789
9988776655
9871234567
9988776655
       B1501
                                                                                      vivaan.patelgexample.com aditya.verma@example.com vihaan.gupta@example.com arjun.rao@example.com sai.kumar@example.com reyansh.singh@example.com krishna.iyer@example.com rohan.mehta@example.com anaya.joshi@example.com
       B1502
                                                                                                                                                                                                                                  2001-03-10
       B1503
B1504
                                                                                                                                                                                                                                  2002-04-25
1998-05-30
                                                                                                                                                                                | 9988776655 |
| 9876543210 |
| 9123456789 |
| 9988776655 |
| 9871234567 |
| 9123456789 |
                                                                                                                                                                                                                                 2000-06-15
2003-07-20
1997-08-05
      B1505
B1506
       B1507
      B1508
B1509
                                                                                                                                                                                                                                 2001-09-12
2002-10-30
  .
10 rows in set (0.00 sec)
```

3. List the Title, authors of the book along with Domain/category

```
| Field | Type | Null | Key | Default | Extra |
| HB_ID | int | No | PRI | NULL |
| Title | varchar(109) | VES | NULL |
| Author | varchar(109) | VES | NULL |
| ISBN | varchar(59) | VES | NULL |
| Second | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int | VES | NULL |
| Available | Book | Int |
```

4. Add a column Publisher in book master table. (Show the structure of the table.) (or any other column in any table)

MB_ID Title Author ISBN Category B_Count Available_Book rows in set (0.00	Int varchar(50) varchar(100) varchar(50) varchar(50) varchar(50) int int	Null NO YES YES YES YES YES	Key PRI	Default NULL NULL NULL NULL NULL	Extra	† - -				
MB_ID Title Author ISBN Category B_Count Available_Book rows in set (0.00	int varchar(50) varchar(100) varchar(50) varchar(50) int int	NO YES YES YES YES YES		NULL NULL NULL NULL	Extra	† † !				
Title Author ISBN Category B_Count Available_Book rows in set (0.00)	varchar(50) varchar(100) varchar(50) varchar(50) int int	YES YES YES YES YES	PRI	NULL NULL NULL		* 				
Title Author ISBN Category B_Count Available_Book rows in set (0.00)	varchar(50) varchar(100) varchar(50) varchar(50) int int	YES YES YES YES		NULL NULL NULL		i				
ISBN Category B_Count Available_Book	varchar(50) varchar(50) int int	YES YES YES		NULL						
Category B_Count Available_Book 	varchar(50) int int	YES YES				!				
B_Count Available_Book	int	YES				}				
Available_Book 	-		:	NULL		i				
/sql> Alter Table	+ 0 sec)		!!!	NULL		į				
						+				
	Book Master									
	Publisher VARCH	IAR(50);								
uery OK, 0 rows a	ffected (0.01 s	sec)								
cords: 0 Duplic	ates: 0 Warnin	ngs: 0								
/sql> describe bo	ok_master;									
Field			l Vev	Default	Evtra	+ 				
						÷				
MB_ID Title	int varchar(50)	NO YES	PRI	NULL NULL		!				
Author	varchar(100)	YES		NULL		}				
ISBN	varchar(50)	YES		NULL		<u> </u>				
Category	varchar(50)	YES		NULL		i				
B_Count	int	YES		NULL		!				
Available_Book	int	YES	!!!	NULL		!				
Publisher	varchar(50) +	YES	 	NULL		! +				
rows in set (0.0	0 sec)									
/sql> Select * Fr	om Book_Master;									
MB_ID Title						Author	ISBN	Category	B_Count	+ Available_Book
1 Database	Management Sys	tems				Raghu Ramakrishnan	9780071232516	Database	50	23
2 Computer	Networking: A	Top-Dov	vn Appı	roach		James F. Kurose	9780134734804	Networking	20	13
	tion to Algorit					Thomas H. Cormen	9780262033848	Algorithms	30	20
	ing Mechanics:					J.L. Meriam	9781119472020	Engineering	10 23	5
	namics: An Engi Systems Enginee		Appro	oacn		Yunus Çengel Norman S. Nise	9780073383174 9781119471207	Engineering Engineering	23 32	15 30
	systems Enginee al Analysis	Tilly				Norman S. Nise Russell C. Hibbeler	9781119471287	Engineering Engineering	78	I 45
						Frank M. White	9780134010072	Engineering	123	100
8 Fluid Me	al Engineering:	Princi	iples 8	Applicati		Allan R. Hambley	9780133961600	Engineering	13	5
8 Fluid Med 9 Electrica	s Science and E					William D. Callíster		Engineering		

5. Change Publisher values of all the Books (As they are Null now) (or whatever column you have added, change its values)

mysql> Se	elect * From Book_Master;						
MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	Database Management Systems	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	NULL
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848		30	20	NULL
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	NULL
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	NULL
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	NULL
7	Structural Analysis	Russell C. Hibbeler	9780134610672		78	45	NULL
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	NULL
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	NULL
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	NULL
10 rows :	in set (0.00 sec)		•				
Query OK	PDATE Book_Master SET Publisher = 'Wiley' WHERE Title , 0 rows affected (0.00 sec) :hed: 1 Changed: 0 Warnings: 0	= 'Database Management	Systems';				

```
mysql> UPDATE Book_master SET Publisher = 'Pearson' WHERE Title = 'Computer Networking: A Top-Down Approach';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'MIT Press' WHERE Title = 'Introduction to Algorithms';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'Wiley' WHERE Title = 'Engineering Mechanics: Dynamics';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'McGraw-Hill' WHERE Title = 'Thermodynamics: An Engineering Approach';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'Wiley' WHERE Title = 'Control Systems Engineering';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'Pearson' WHERE Title = 'Structural Analysis';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'McGraw-Hill' WHERE Title = 'Fluid Mechanics';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'McGraw-Hill' WHERE Title = 'Electrical Engineering: Principles & Applications';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Book_master SET Publisher = 'McGraw-Hill' WHERE Title = 'Electrical Engineering: An Introduction';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	Database Management Systems	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hill
	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hill
	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hill
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley

6. List the Title, Domain of the books which are published by "McGraw Hill".

mysql> Select * From Book_Master;			r	,			
MB_ID Title		Author	ISBN	Category	B_Count	Available_Book	Publisher
1 Database Management Systems 2 Computer Networking: A Top-Down Approach 3 Introduction to Algorithms 4 Engineering Mechanics: Dynamics 5 Thermodynamics: An Engineering Approach 6 Control Systems Engineering 7 Structural Analysis 8 Fluid Mechanics: 9 Electrical Engineering: Principles & Applic 10 Materials Science and Engineering: An Intro 10 rows in set (0.00 sec) nysql> Select Title, Category From Book_Master -> Where Publisher='McGraw-Hill';		Raghu Ramakrishnan James F. Kurose I Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise Russell C. Hibbeler Frank M. White Allan R. Hambley William D. Callister	9780071232516 9780134/734804 97801626933848 97811194/72020 9780073383174 97811194/71207 9780134610672 97800774/72360 9780133961600 97811194/71153	Networking Algorithms Engineering Engineering Engineering Engineering Engineering Engineering	23 32 78 123	13 20 5 15 30 45 100	
Title	Categor	y İ					
Thermodynamics: An Engineering Approach Fluid Mechanics Electrical Engineering: Principles & Applications	Enginee: Enginee: Enginee:	ring					
+3 rows in set (0.00 sec)		+					

7. Remove the student whose id is S121 (make sure he is not taken any book)

```
DOB DATE
-> );
Query OK, 0 rows affected (0.03 sec)
mysql> Describe Student;
 Field
                          | Null | Key
                                        Default | Extra
            | Type
 S_ID
Name
              varchar(20)
varchar(50)
                                   PRI
                                         NULL
                            YES
                                         NULL
 Email
Mobile_No
              varchar(50)
                                         NULL
              bigint
                            YES
                                         NULL
5 rows in set (0.00 sec)
```

```
mysql> Select * From Student;
 S_ID
         Name
                         | Email
                                                     Mobile_No
                                                                  DOB
                                                                   2000-01-15
 B1500
                                                      9876543210
          Aarav Sharma
                           aarav.sharma@gmail.com
                                                     9123456789
 B1501
          Vivaan Patel
                           vivaan.patel@gmail.com
                                                                   1999-02-20
 B1502
          Aditya Verma
                           aditya.verma@gmail.com
                                                      9988776655
                                                                   2001-03-10
 B1503
          Vihaan Gupta
                           vihaan.gupta@gmail.com
                                                      9871234567
                                                                   2002-04-25
 B1504
          Arjun Rao
                           arjun.rao@gmail.com
                                                     9988776655
                                                                   1998-05-30
 B1505
          Sai Kumar
                           sai.kumar@gmail.com
                                                      9876543210
                                                                   2000-06-15
                                                      9123456789
 B1506
          Reyansh Singh
                           reyansh.singh@gmail.com
                                                                   2003-07-20
                          krishna.iyer@gmail.com
 B1507
          Krishna Iyer
                                                      9988776655
                                                                   1997-08-05
 B1508
          Rohan Mehta
                           rohan.mehta@gmail.com
                                                      9871234567
                                                                   2001-09-12
                          anaya.joshi@gmail.com
 B1509
                                                      9123456789
                                                                   2002-10-30
          Anaya Joshi
10 rows in set (0.00 sec)
mysql> DELETE FROM Student WHERE S_ID = 'B1502';
Query OK, 1 row affected (0.00 sec)
```

8. Change the Title of the book "FML" to "Fundamentals of Machine Learning"

B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	Database Management Systems	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hil
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hil
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hil
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley
-> Se -> WH y OK,	odate Book_master xt Title ='DBMS' HERE Title = 'Database Management Systems'; 1 row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0						
-> Se -> WH y OK, matc	et Title ='DBMS' HERE Title = 'Database Management Systems'; . 1 row affected (0.00 sec)						
-> Se -> WH y OK, matc l> Se	xt Title ='DBMS' IERE Title = 'Database Management Systems'; l row affected (0.00 sec) hed: l Changed: l Warnings: 0	 Author	ISBN	 Category	B_Count	Available_Book	Publisher
-> Se -> WH y OK, matc l> Se	tt Title ='DBMS' RERE Title = 'Database Management Systems'; 1 row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master;	 Author Raghu Ramakrishnan	ISBN 9780071232516	Category	B_Count		Publisher
-> Se -> WH y OK, matc l> Se + _ID	tt Title ='DBMS' ETERE Title = 'Database Management Systems'; I row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach	+		t	·		·
-> Se -> WH y OK, matc l> Se + _ID +	tt Title ='DBMS' IRRE Title = 'Database Management Systems'; I row affected (0.00 sec) hed: 1 Changed: 1 Warnings: 0 elect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms	+ Raghu Ramakrishnan	9780071232516	+ Database	 50	23	- Wiley
-> Se -> WH y OK, matc l> Se + _ID + 1 2	tt Title = 'DBMS' IERE Title = 'Database Management Systems'; I row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics	 Raghu Ramakrishnan James F. Kurose	 9780071232516 9780134734804	Database Networking Algorithms Engineering	50 20 30	23 13	Wiley Wiley Pearson MIT Press Wiley
-> Se -> WH y OK, matc l> Se + _ID 1 2 3	tt Title = 'DBMS' ERER Title = 'Database Management Systems'; 1 row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: A Engineering Approach	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel	9780071232516 9780134734804 9780262033848 9781119472020 9780073383174	Database Networking Algorithms Engineering Engineering	50 20 30 10 23	23 13 20	Wiley Wiley Pearson MIT Press Wiley McGraw-Hil
-> Se -> WH y OK, matc l> Se + _ID + 2 3 4	tt Title = 'DBMS' I row affected (0.00 sec) thed: 1 Changed: 1 Warnings: 0 tlect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Nozman S. Nise	9780071232516 9780134734804 9780262033848 9781119472020	Database Networking Algorithms Engineering	50 20 30 10 23 32	23 13 20 5	Wiley Wiley Pearson MIT Press Wiley
-> Se -> WH y OK, matc l> Se + _ID + 1 2 3 4 5	tt Title = 'DBMS' [RER Title = 'Database Management Systems'; 1 row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering Structural Analysis	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel	9780071232516 9780134734804 9780262033848 9781119472020 9780073383174 9781119471207 9780134610672	Database Networking Algorithms Engineering Engineering	50 20 30 10 23 32 78	23 13 20 5	Wiley Pearson MIT Press Wiley McGraw-Hi Wiley Pearson
-> Se -> WH y OK, s matc Se S_ID 2 3 4 5 6	tt Title = 'DBMS' IERR Title = 'Database Management Systems'; I row affected (0.00 sec) thed: I Changed: I Warnings: 0 elect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering Structural Analysis Fluid Mechanics	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise Russell C. Hibbeler Frank M. White	9780071232516 9780134734804 97801262033848 9781119472020 9780073383174 9781119471207 9780134610672 9780077472360	Database Networking Algorithms Engineering Engineering Engineering Engineering	50 20 30 10 23 32 78 123	23 13 20 5 15 30	Wiley Pearson MIT Press Wiley McGraw-Hi Wiley Pearson McGraw-Hi
-> Se -> WH y OK, matc + 3_ID 2 2 3 4 5 6	tt Title = 'DBMS' [RER Title = 'Database Management Systems'; 1 row affected (0.00 sec) ched: 1 Changed: 1 Warnings: 0 clect * From Book_master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering Structural Analysis	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise Russell C. Hibbeler Frank M. White	9780071232516 9780071232516 9780134734804 9780262033848 9781119472020 9780073383174 9781119471207 9780134610672 9780077472360 9780133961600	Database Networking Algorithms Engineering Engineering Engineering Engineering Engineering	50 20 30 10 23 32 78	23 13 20 5 15 30 45 100	Wiley Pearson MIT Press Wiley McGraw-Hi Wiley Pearson

9. List the Names(Titles) of the books and author name related to Cloud domain.

B_ID	Title		Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS		Raghu Ramakrishnan	+ 9780071232516	Database	 l 50	23	+ Wilev
2 j	Computer Networking: A Top-Down Approach		James F. Kurose	9780134734804	Networking	20	13	Pearson
3 j	Introduction to Algorithms		Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4 j	Engineering Mechanics: Dynamics		J.L. Meriam	9781119472020	Engineering	j 10	j 5	Wilev
5 j	Thermodynamics: An Engineering Approach		Yunus Cengel	9780073383174	Engineering	23	j 15	McGraw-Hill
6 İ	Control Systems Engineering		Norman'S. Nise	9781119471207	Engineering	32	j 30	Wilev
7 İ	Structural Analysis		Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8 j	Fluid Mechanics		Frank M. White	9780077472360	Engineering	123	100	McGraw-Hill
9 j	Electrical Engineering: Principles & Applica	ations	Allan R. Hambley	9780133961600	Engineering	j 13	j 5	McGraw-Hill
								i
ql> Se	Materials Science and Engineering: An Introd in set (0.00 sec)	duction	William D. Callister	9781119471153 +	Engineering +	19 +	10 	Wiley +
ql> Se -> Wh	n set (0.00 sec)		William D. Callister	9781119471153 	Engineering	19 	10	Wiley
ql> Se	n set (0.00 sec)	duction	William D. Callister	9781119471153 	Engineering 	19 	10 	Wiley

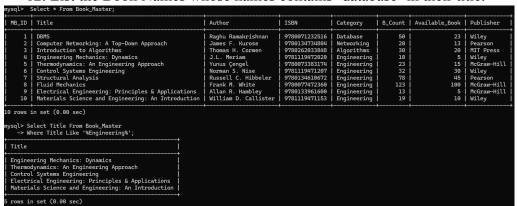
10. List the names of books whose number of copies are less than 5.

1B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS	t Raghu Ramakrishnan	 9780071232516	Database	50	l 23	 Wilev
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hil
6	Control Systems Engineering	Norman'S. Nise	9781119471207	Engineering	32	30	Wiley
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hil
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hil
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley
rows	in set (0.00 sec)	+	·			+	+
sql> Se -> Wh	in set (0.00 sec) elect Title From Book_master eere B_Count<=25;	•					
sql> Se	elect Title From Book_master					•	

11. List the student Names whose names either start or end with "N".

mysql> S	elect * From Stud	dent;	·	
S_ID	Name	Email	Mobile_No	DOB
B1500 B1501 B1503 B1504 B1505 B1506 B1507 B1508 B1509	Aarav Sharma Vivaan Patel Vihaan Gupta Arjun Rao Sai Kumar Reyansh Singh Krishna Iyer Rohan Mehta Anaya Joshi	aarav.sharma@gmail.com vivaan.patel@gmail.com vihaan.gupta@gmail.com arjun.rao@gmail.com sai.kumar@gmail.com reyansh.singh@gmail.com krishna.iyer@gmail.com anaya.joshi@gmail.com anaya.joshi@gmail.com	9876543210 9123456789 9871234567 9988776655 9876543210 9123456789 9988776655 9871234567 9123456789	2000-01-15 1999-02-20 2002-04-25 1998-05-30 2000-06-15 2003-07-20 1997-08-05 2001-09-12 2002-10-30
+9 rows in	 n set (0.00 sec)	!	+	++

12. List the Book Names whose names contains 'database' in their title.



13. What is the count of the books which are issued but not returned yet?

```
mysql> Select *From Book_Transaction;
| Transaction_ID | Sid
                                Bk_ID | IssuedDate
                                                          ReturnedDate
                                       2025-01-10
2025-01-15
2025-01-12
2025-01-18
2025-01-20
2025-01-14
2025-01-11
2025-01-17
2025-01-13
  T1001
                       B1500
                                                          2025-01-20
                                                          2025-01-25
  T1002
                       B1501
  T1003
                       B1503
                                                          2025-01-22
  T1004
                       B1504
                                     4
                                                          2025-01-28
  T1005
                       B1505
                                     5
                                                          NULL
  T1006
                       B1506
                                                          2025-01-24
                                     7
8
  T1007
                       B1507
                                                          2025-01-21
  T1008
                       B1508
                                                          NULL
                       B1509
  T1009
                                                          2025-01-23
9 rows in set (0.00 sec)
mysql> SELECT COUNT(*)
    -> FROM Book_Transaction
    -> WHERE ReturnedDate IS NULL;
 COUNT(*) |
          2 |
1 row in set (0.00 sec)
```

14. Show the Book Names and the author in sorted order of Book Name.

B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS	Raghu Ramakrishnan	9780071232516	Database	 50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hi
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-H:
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-H:
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley

mysql> SELECT Title, Author -> FROM Book_Master -> ORDER BY Title;	
Title	Author
Computer Networking: A Top-Down Approach Control Systems Engineering DBMS Electrical Engineering: Principles & Applications Engineering Mechanics: Dynamics Fluid Mechanics Introduction to Algorithms Materials Science and Engineering: An Introduction Structural Analysis Thermodynamics: An Engineering Approach	James F. Kurose Norman S. Nise Raghu Ramakrishnan Allan R. Hambley J.L. Meriam Frank M. White Thomas H. Cormen William D. Callister Russell C. Hibbeler Yunus Çengel
10 rows in set (0.00 sec)	·

15. List the names of the books whose available copies are atleast 10.

MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-H
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-H
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-H
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley

16. List the titles which are either written by "Sam Newman" or listed under "Cloud" domain.

3 Intro 4 Engir	tter Networking: A Top-Down Approach duction to Algorithms deering Mechanics: Dynamics	Author Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam	ISBN 9780071232516 9780134734804 9780262033848	Database	B_Count 50 20	j 13	 Wiley Pearson
2 Compu 3 Intro 4 Engir	duction to Algorithms	James F. Kurose Thomas H. Cormen	9780134734804	Networking	20	13	Pearson
3 Intro 4 Engir	duction to Algorithms	Thomas H. Cormen					
4 Engir			9780262033848	Algorithms	l 30	1 20	MITT D
	eering Mechanics: Dynamics	l I I Mandam				20	MIT Press
5 Therm		J.L. Heriam	9781119472020	Engineering	10	5	Wiley
	odynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hill
6 Contr	rol Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
7 Struc	tural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8 Fluid	Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hill
9 Elect	rical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hill
10 Mater	rials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	j 19	j 10	Wiley

```
mysql> SELECT Title, Author, Category
   -> FROM Book_Master
   -> WHERE Author = 'Russell C. Hibbeler'
          OR Category = 'Engineering';
 Title
                                                       | Author
                                                                               | Category
 Engineering Mechanics: Dynamics
                                                         J.L. Meriam
                                                                                Engineering
                                                        Yunus Çengel
Norman S. Nise
                                                                                 Engineering
 Thermodynamics: An Engineering Approach
 Control Systems Engineering
                                                                                 Engineering
 Structural Analysis
                                                        Russell C. Hibbeler
                                                                                 Engineering
 Fluid Mechanics
                                                         Frank M. White
                                                                                 Engineering
                                                                                 Engineering
 Electrical Engineering: Principles & Applications
                                                        Allan R. Hambley
 Materials Science and Engineering: An Introduction
                                                        William D. Callister
                                                                                 Engineering
 rows in set (0.00 sec)
```

17. List the books names which are written by "Peter Galvin" and listed under the domain "Operating System".

n	mysql> SELECT * From Book_master;										
į	MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher			
i	1	DBMS	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley			
1	2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson			
-	3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press			
-	4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley			
-	5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hill			
-	6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley			
1		Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson			
-	8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hill			
-	9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hill			
!	10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley			
1	10 rows in set (0.00 sec)										

18. How many books of 'Introduction to Python Programming' written by 'Rossum' are available in the library as of now? Also find out total number of books of the same tittle purchased by the library. (Single Query)

MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hil
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hil
9		Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hil
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley

19. Change the email id of the student S222 to <u>Pravin.Mehta@gmail.com</u>.

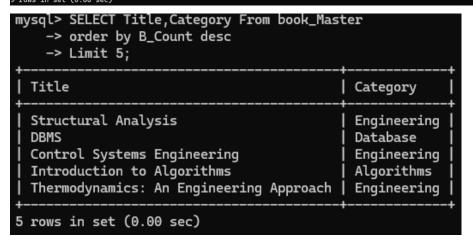
```
sql> use lib_manag
Database changed
mysql> select * from student;
                                                     | Mobile_No
  S_ID
        Name
                           Email
                                                                     DOB
                                                                     2000-01-15
1999-02-20
  B1500
          Aarav Sharma
                           aarav.sharma@gmail.com
                                                       9876543210
  B1501
          Vivaan Patel
                           vivaan.patel@gmail.com
                                                       9123456789
                                                                     2002-04-25
  B1503
          Vihaan Gupta
                           vihaan.gupta@gmail.com
                                                       9871234567
                                                                     1998-05-30
  B1504
          Arjun Rao
                           arjun.rao@gmail.com
                                                       9988776655
                                                                     2000-06-15
  B1505
          Sai Kumar
                           sai.kumar@gmail.com
                                                       9876543210
  B1506
          Reyansh Singh
                                                                     2003-07-20
                           reyansh.singh@gmail.com
                                                       9123456789
                                                                     1997-08-05
                           krishna.iyer@gmail.com
  B1507
          Krishna Iyer
                                                       9988776655
  B1508
                                                       9871234567
                                                                     2001-09-12
          Rohan Mehta
                           rohan.mehta@gmail.com
          Anaya Joshi
  B1509
                           anaya.joshi@gmail.com
                                                       9123456789
                                                                     2002-10-30
9 rows in set (0.00 sec)
mysgl> Update Student
    -> Set Email="Vivaan@gmail.com"
    -> Where S_ID="B1501"
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from student;
 S_ID
        Name
                           Email
                                                     | Mobile_No
                                                                     DOB
                                                                     2000-01-15
  B1500
          Aarav Sharma
                           aarav.sharma@gmail.com
                                                       9876543210
  B1501
          Vivaan Patel
                           Vivaan@gmail.com
                                                       9123456789
                                                                     1999-02-20
                           vihaan.gupta@gmail.com
                                                                     2002-04-25
  B1503
          Vihaan Gupta
                                                       9871234567
                           arjun.rao@gmail.com
  B1504
          Arjun Rao
                                                                     1998-05-30
                                                       9988776655
          Sai Kumar
                           sai.kumar@gmail.com
                                                       9876543210
                                                                     2000-06-15
  B1505
  B1506
          Reyansh Singh
                           reyansh.singh@gmail.com
                                                       9123456789
                                                                     2003-07-20
                           krishna.iyer@gmail.com
  B1507
          Krishna Iyer
                                                       9988776655
                                                                     1997-08-05
          Rohan Mehta
                                                       9871234567
  B1508
                                                                     2001-09-12
                           rohan.mehta@gmail.com
                                                       9123456789
                                                                     2002-10-30
  B1509
          Anaya Joshi
                           anaya.joshi@gmail.com
9 rows in set (0.00 sec)
```

20. Remove the Books having title "Lotus Basics";

sql> se	+						
MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	DBMS	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hill
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson
8	Fluid Mechanics	Frank M. White	9780077472360	Engineering	123	100	McGraw-Hill
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley
sql> DE -> Wh ery OK,	in set (0.00 sec) ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; H. 1 row affected (0.00 sec)						
sql> DE -> WH ery OK, sql> se	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master;			,			
sql> DE -> WH ery OK, sql> se	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec)	Author	ISBN	 Category	B_Count	Available_Book	Publisher
sql> DE -> WH ery OK, sql> se MB_ID	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS	+ Raghu Ramakrishnan	 9780071232516	t Database	† 50	 23	+ Wiley
sql> DE -> Whery OK, sql> se MB_ID	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach	Raghu Ramakrishnan James F. Kurose	 9780071232516 9780134734804	+ Database Networking	50 20	+	+ Wiley Pearson
sql> DE -> WH ery OK, sql> seql> se MB_ID 1 2 3	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms	 Raghu Ramakrishnan James F. Kurose Thomas H. Cormen	9780071232516 9780134734804 9780262033848	t	50 20 30	23 13 20	+ Wiley Pearson MIT Press
sql> DE	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics	 Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam	9780071232516 9780134734804 9780262033848 9781119472020	Database Networking Algorithms Engineering	50 20 30 10	23 13 20	+ Wiley Pearson MIT Press Wiley
sql> DE -> Wh ery OK, sql> seql> seql> 1 2 3 4	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel	9780071232516 9780134734804 9780262033848 9781119472020 9780073383174	Database Networking Algorithms Engineering Engineering	50 20 30 10	23 13 20 5	Wiley Wiley Pearson MIT Press Wiley McGraw-Hill
sql> DE -> WHery OK, sql> seql> ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise	9780071232516 9780134734804 9780262033848 9781119472020 9780073383174 9781119471207	Database Networking Algorithms Engineering Engineering Engineering	50 20 30 10 23	23 13 20 5 15 30	Wiley Pearson MIT Press Wiley McGraw-Hill Wiley	
sql> DE -> Whery OK, sql> se 1B_ID 2 3 4 5 6 7	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering Structural Analysis	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise Russell C. Hibbeler	9780071232516 9780134734804 9780262033848 9781119472020 9780073383174 9781119471207 9780134610672	Database Networking Algorithms Engineering Engineering Engineering Engineering	50 20 30 10 23 23 24 78	23 13 20 5 15 30 45	Wiley Pearson MIT Press Wiley McGraw-Hill Wiley Pearson
sql> DE -> WH rry OK, sql> se 1B_ID 2 3 4 5 6	ELETE FROM Book_Master HERE Title = 'Fluid Mechanics'; , 1 row affected (0.00 sec) elect * from book_Master; Title DBMS Computer Networking: A Top-Down Approach Introduction to Algorithms Engineering Mechanics: Dynamics Thermodynamics: An Engineering Approach Control Systems Engineering	Raghu Ramakrishnan James F. Kurose Thomas H. Cormen J.L. Meriam Yunus Çengel Norman S. Nise	9780071232516 9780134734804 9780134734804 9780262033848 9781119472020 9780073383174 9781119471207 9780134610672 9780133961600	Database Networking Algorithms Engineering Engineering Engineering	50 20 30 10 23	23 13 20 5 15 30 45	Wiley Pearson MIT Press Wiley McGraw-Hill Wiley Pearson

21. Display top 10 book name and their Domain in terms of Book count.

mysql> select * from book_Master;									
MB_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher		
1 1	DBMS	Raghu Ramakrishnan	9780071232516	Database	50	23	Wiley		
2	Computer Networking: A Top-Down Approach	James F. Kurose	9780134734804	Networking	20	13	Pearson		
3	Introduction to Algorithms	Thomas H. Cormen	9780262033848	Algorithms	30	20	MIT Press		
4	Engineering Mechanics: Dynamics	J.L. Meriam	9781119472020	Engineering	10	5	Wiley		
5	Thermodynamics: An Engineering Approach	Yunus Çengel	9780073383174	Engineering	23	15	McGraw-Hill		
6	Control Systems Engineering	Norman S. Nise	9781119471207	Engineering	32	30	Wiley		
7	Structural Analysis	Russell C. Hibbeler	9780134610672	Engineering	78	45	Pearson		
9	Electrical Engineering: Principles & Applications	Allan R. Hambley	9780133961600	Engineering	13	5	McGraw-Hill		
10	Materials Science and Engineering: An Introduction	William D. Callister	9781119471153	Engineering	19	10	Wiley		
++									



22. Create a table fine_paid with sid,amount as fields.

Add 2 records. Display them.

Delete sid column. Display records.

And finally delete the entire table along with records. Check whether it is deleted or Not.

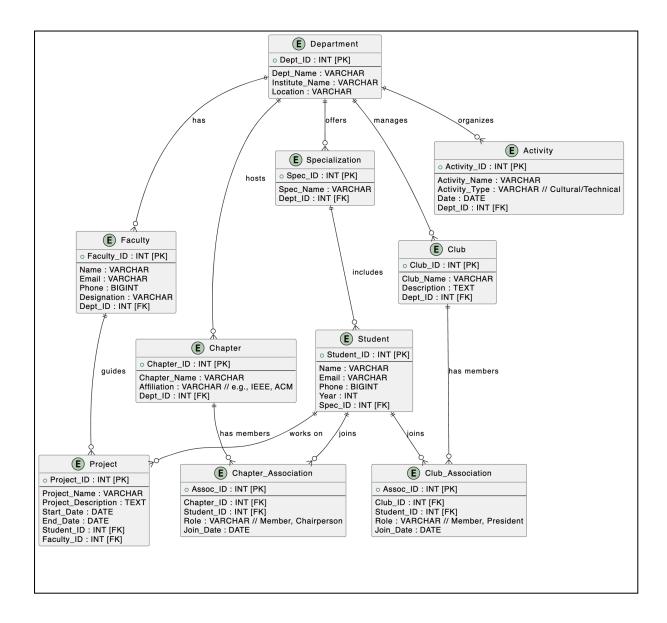
```
mysql> CREATE TABLE fine_paid (
           sid VARCHAR(10),
           amount DECIMAL(10, 2)
    ->
    -> );
Query OK, 0 rows affected (0.02 sec)
mysql> Select * From fine_paid;
Empty set (0.00 sec)
mysql> INSERT INTO fine_paid (sid, amount) VALUES
    -> ('B1500', 50.00),
    -> ('B1501', 100.00);
Query OK, 2 rows affected (0.00 sec)
Records: 2 Duplicates: 0 Warnings: 0
mysql> SELECT * FROM fine_paid;
 sid
          amount
 B1500
           50.00
 B1501 | 100.00
2 rows in set (0.00 sec)
mysql> ALTER TABLE fine_paid DROP COLUMN sid;
Query OK, 0 rows affected (0.01 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> SELECT * FROM fine_paid;
 amount
  50.00
 100.00
2 rows in set (0.00 sec)
mysql> DROP TABLE fine_paid;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SHOW TABLES;
+-----+
| Tables_in_lib_manag |
+-----+
| book |
| book_master |
| book_transaction |
| student |
+-----+
4 rows in set (0.00 sec)
```

23. Create fine_paid table with sid ,amount, status as fields.

Add 2 records. Display them. Remove all records permanently (No undoing).

```
mysql> CREATE TABLE fine_paid (
           sid VARCHAR(10),
           amount DECIMAL(10, 2),
    ->
           status VARCHAR(20)
    -> );
Query OK, 0 rows affected (0.01 sec)
mysql> INSERT INTO fine_paid (sid, amount, status) VALUES
    -> ('B1500', 50.00, 'Paid'),
-> ('B1501', 100.00, 'Unpaid');
Query OK, 2 rows affected (0.01 sec)
Records: 2 Duplicates: 0 Warnings: 0
mysql> SELECT * FROM fine_paid;
  sid
          amount
                    status
           50.00
  B1500
                    Paid
  B1501 |
          100.00 | Unpaid
2 rows in set (0.00 sec)
mysql> TRUNCATE TABLE fine_paid;
Query OK, 0 rows affected (0.03 sec)
mysql> DESCRIBE fine_paid;
  Field
                            Null | Key | Default | Extra
           Type
                            YES
  sid
           varchar(10)
                                          NULL
           decimal(10,2)
  amount
                            YES
                                          NULL
  status | varchar(20)
                            YES
                                          NULL
3 rows in set (0.00 sec)
mysql>
```



Conclusion:

The implementation of LibraryDb using MySQL provides hands-on experience with DDL and DML commands, essential for database management.

This assignment covers crucial operations such as :-

- 1. Creating tables with primary and foreign keys
- 2. Inserting and modifying data
- 3. Retrieving records using queries
- 4. Updating values
- 5. Handling deletions

Through structured queries, students learn to efficiently manage book records, student details, transactions, and fines. Additionally, the assignment emphasizes data integrity, relational constraints, and structured query language (SQL) concepts.