Name: Pramit Sil

Roll No: 24

Enrollment No: ADT23SOCB1544

## **Department of Information Technology**

### **DPBL Assignment No: 4**

#### Title:

Implement Nested queries DDL,DML

#### **Problem statement:**

Following tables are created in the previous assignment.

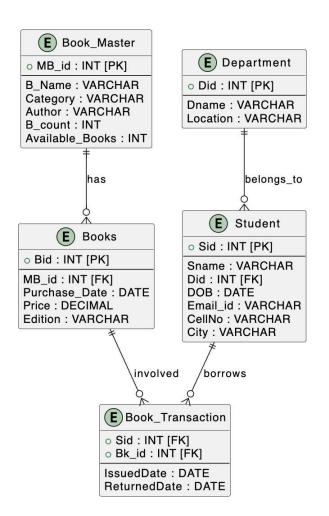
Book\_Master (MB\_id, B\_Name, Category, Author, B\_count, Available\_Books)

Books (Bid, MB\_id, Purchase\_Date, Price, Edition)

Book\_Transaction(Sid, Bk\_id, IssuedDate, ReturnedDate)

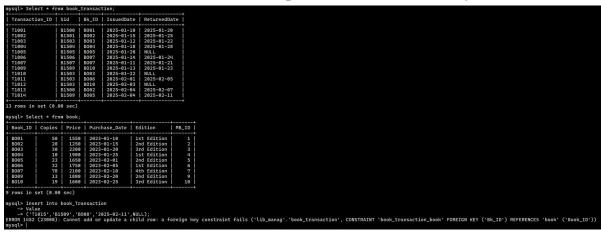
Student(Sid, Sname, Did, DOB, Email\_id, CellNo, City)

Department(Did, Dname, Location)



# **Queries:**

1. Add a book in transaction which is not present in Books . What's your observation?



Since 'BO08' is not present in the book table, the insert statement's attempt to add a record for transaction 'T1015' involving student 'B1509' and book 'BO08' may violate any applicable foreign key constraints.

2. Make sure MB\_id field in Books will have only those values which are present in MB\_id in Book\_Master;

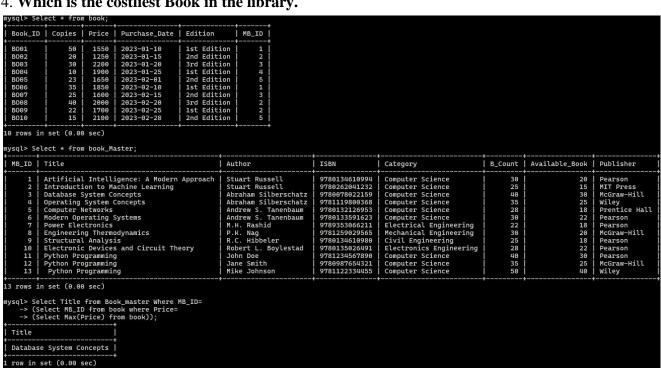
Field	Type	Null	Key	Default	Extra
Book_ID   Copies   Price   Purchase_Date   Edition   MB_ID	varchar(10)   int   bigint   date   varchar(20)   int	NO   YES   YES   YES   YES	PRI MUL	NULL NULL NULL NULL NULL	
rows in set (0.	00 sec)				
/sql> Describe b  Field	ook_master; +   Type	-+   Null	-+   Key	+ /   Default	-+ :   Extra

HP_ID	Title				Author		ISBN	Category	B_Count	Available_Book	Publisher
1	Artificia	l Intell	igence: A Modern	Approach	Stuart Rus	ssell	9780134610994	Computer Science	30	20	Pearson
2	Introduct:	ion to M	achine Learning		Stuart Rus	sell	9780262041232	Computer Science	25	15	MIT Press
3	Database :	System C	oncepts		Abraham Si	lberschatz	9780078022159	Computer Science	40	30	McGraw-Hill
4	Operating	System	Concepts	ĺ	Abraham Si	ilberschatz	9781119800368	Computer Science	35	25	Wiley
5	Computer	Networks		ĺ	Andrew S.	Tanenbaum	9780132126953	Computer Science	28	18	Prentice Ha
6	Modern Op	erating !	Systems		Andrew S.	Tanenbaum	9780133591623	Computer Science	30	22	Pearson
7	Power Ele	ctronics		ĺ	M.H. Rashi	id	9789353066211	Electrical Engineering	22	18	Pearson
8	Engineeri	ng Therm	odynamics	i	P.K. Nag		9781259029565	Mechanical Engineering	30	20	McGraw-Hill
9	Structura	l Analys	is	i	R.C. Hibbe	eler	9780134610980	Civil Engineering	25	18	Pearson
10	Electroni	c Device	s and Circuit The	eory	Robert L.	Boylestad	9780135026491	Electronics Engineering	28	22	Pearson
11	Python Pr	ogrammin	g		John Doe		9781234567890	Computer Science	40	30	Pearson
12	D. +1 D-	ogrammin	ñ	i	Jane Smith	1	9780987654321	Computer Science	35	25	McGraw-Hill
12 1											
13   3 rows in	Python Property Python Property Python Property Python Property Python Property Python	rogrammi 9 sec)		i	Mike Johns		9781122334455	Computer Science	50	1 40	Wiley
13   3 rows in /sql> Sel	Python P n set (0.0 lect * fro	rogrammi 9 sec) m book;	ng I	Edition	Mike Johns	son +	9781122334455	Computer Science	50	1 40	Wiley
13   3 rows in /sql> Sel Book_ID	Python P: n set (0.0 lect * fro   Copies	rogrammi 9 sec) m book;   Price	ng     Purchase_Date	+	Mike Johns	son +	9781122334455	Computer Science	50 	46	Wiley
13   3 rows in /sql> Sel Book_ID BO01	Python P: n set (0.0) lect * froi   Copies	rogrammi 9 sec) m book;   Price   1550	Purchase_Date	1st Editi	Mike Johns   MB_ID	t   	9781122334455	Computer Science	50 	46	Wiley
13   3 rows in /sql> Sel Book_ID B001 B002	Python Pin set (0.0) Lect * froi Copies 50 20	rogrammi 0 sec) m book;   Price   1550   1250	Purchase_Date	1st Editi   2nd Editi	Mike Johns   MB_ID	t   	9781122334455	Computer Science	50	40	Wiley
13   3 rows in ysql> Sel Book_ID BO01 BO02 BO03	Python P: 1 set (0.0) Lect * froi   Copies   50   20   30	rogrammi 9 sec) m book;   Price   1550   1250   2200	Purchase_Date   2023-01-10   2023-01-15   2023-01-20	1st Editi   2nd Editi   3rd Editi	Mike Johns  MB_ID  on   1  on   2  on   3	t   	9781122334455	Computer Science	j 50 I	49	Wiley
13   3 rows in /sql> Sel Book_ID BO01 B002 B003 B004	Python P: n set (0.0 lect * from   Copies   50   20   30   10	rogrammi 0 sec) m book;   Price   1550   1250   2200   1900	Purchase_Date   Purchase_Date   2023-01-10   2023-01-15   2023-01-20   2023-01-25	1st Editi   2nd Editi   3rd Editi   3rd Editi   1st Editi	Mike Johns   MB_ID   nn   1   nn   2   nn   3   nn   4	t   	9781122334455	Computer Science	50	40	Wiley
13   3 rows in /sql> Sel Book_ID B001 B002 B003 B004 B005	Python P: n set (0.0) Lect * from   Copies   50   20   30   10	rogrammi 0 sec) m book;   Price   1550   1250   2200   1900   1650	purchase_Date   Purchase_Date   2023-01-15   2023-01-20   2023-02-25   2023-02-01	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi	Mike Johns   MB_ID on   1 on   2 on   3 on   4 on   5	t   	9781122334455	Computer Science	j 50 +	J 49	Wiley
13     rows in   rows in   rows in   rows in   rows in   rows in   Book_ID   Book_ID   Book_Book   Book_Book   Book_Book   Book_Book   Book_Book   Book_Book   Book_Book   Book_Book   Book_Book   Book   Boo	Python P: n set (0.0) lect * from   Copies   50   20   30   10   23   35	rogrammi 0 sec) m book;   Price   1550   1250   2200   1900   1650   1850	Purchase_Date	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi   1st Editi	Mike Johns    MB_ID  on   1  on   2  on   3  on   4  on   5  on   1	t   	9781122334455	Computer Science	50	40	Wiley
13   Frows in Sql> Sel Book_ID BO01 BO02 BO03 BO04 BO05 BO06 BO06 BO07	Python P: n set (0.0) lect * froi   Copies   50   20   30   10   23   35   25	rogrammi  9 sec) m book;   Price   1559   1250   2200   1900   1650   1850   1690	Purchase_Date    2023-01-10   2023-01-15   2023-01-25   2023-02-01   2023-02-10   2023-02-10   2023-02-10	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi   1st Editi   2nd Editi	Mike Johns    MB_ID    MB_ID	t   	9781122334455	Computer Science	50	49	Wiley
13   s rows in sql> Sel Book_ID BO01 BO02 BO03 BO04 BO05 BO06 BO07 BO08	Python P: n set (0.0) lect * froi   Copies   50   20   30   10   23   35   40	9 sec) m book; l Price 1550 1250 2200 1900 1650 1650 1660 2000	Purchase_Date 	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi   1st Editi   1st Editi   2nd Editi   3rd Editi	Mike Johns    MB_ID  on   1  on   2  on   3  on   4  on   5  on   1  on   2	+ 	97811223344455	Computer Science	50	40	Wiley
13   Frows in Sql> Sel Book_ID BO01 BO02 BO03 BO04 BO05 BO06 BO06 BO07	Python P: n set (0.0) lect * froi   Copies   50   20   30   10   23   35   25	9 sec) m book; l Price 1550 1250 1260 1980 1650 1850 1600 1700	Purchase_Date    2023-01-10   2023-01-15   2023-01-25   2023-02-01   2023-02-10   2023-02-10   2023-02-10	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi   1st Editi   2nd Editi	MB_ID   1   2   2   2   3   3   4   4   3   5   5   6   1   1   2   3   6   1   2   3   6   1   2   3   5   5   6   1   2   2   5   6   2   2   2   5   2   2   2   5   2   2	+	9781122334455	Computer Science	50	40	Wiley

#### 3. Display all mechanical student names

mysql> Se	lect * from stud	lent;					
S_ID	Name	Email			Mobile_No	DOB	Dep_ID
	Aarav Sharma Vivaan Patel Vihaan Gupta Arjun Rao Sai Kumar Reyansh Singh Krishna Iyer Rohan Mehta Anaya Joshi set (0.00 sec) lect * from depi	Vivaan@gma vihaan.gup arjun.rao( sai.kumar( reyansh.si krishna.iy rohan.meht anaya.josh	ota@gmail.com @gmail.com	i       	9876543210 9123456789 9871234567 9988776655 9876543210 9123456789 9988776655 9871234567	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	D001 D003 D002 D001 D005 D004 D003 D002 D001
Dep_ID	+   Department_Nam	ie	Location	Bu	.dget_Cr		
D001   D002   D003   D004   D005	Computer Scier Electrical Eng Mechanical Eng Civil Engineer Electronics En	gineering   gineering   ring	6th Floor   2nd Floor   2nd Floor   3rd Floor   7th Floor		20.00   10.00   5.00   3.00   2.00		
mysql> Se -> (Si -> Whi +		om Departmer	nt .	erin	g");		

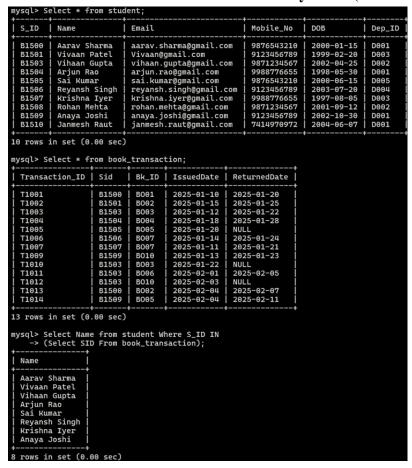
#### 4. Which is the costliest Book in the library.



# 5. Display the books information costlier than the price of the 'Operating System Concepts' book.

MB_ID   Title				Author		ISBN	Category	B_Count	Available_Book	Publisher
2   Introduct 3   Database 4   Operating 5   Computer 6   Modern Op 7   Power Ele 8   Engineer 9   Structura	ion to M. System C. System ( Networks erating ( ctronics ng Therm l Analys c Device ogrammin ogrammin	Concepts Systems odynamics is s and Circuit Th g			sell lberschatz lberschatz Tanenbaum Tanenbaum d ler Boylestad	9780262641232 9780078022159 9781119880368 9780132126953 9780133591623 9780133591623 9780134610980 9780134610980 978013567890 97801234567890 9780987654321	Computer Science Computer Science Computer Science Computer Science Electrical Engineering Mechanical Engineering Civil Engineering Electronics Engineering	38 25 48 35 28 39 22 39 25 28 49 35	15 39 25 18 22 21 18 20 18 22 38	MIT Press McGraw-Hill Wiley Prentice Hal Pearson Pearson McGraw-Hill Pearson Pearson
rows in set (0.0 sql> select * fro Book_ID   Copies	m book;	Purchase_Date		M8_ID						
B001         50           B002         20           B003         30           B004         10           B005         23           B006         35           B007         25           B088         40           B009         22           B010         15	1250 2200 1900 1650 1850 1600 2000		l 1st Editi 2nd Editi 3rd Editi 1st Editi 2nd Editi 2nd Editi 2nd Editi 2nd Editi 3rd Editi 1st Editi	on   2 on   3 on   4 on   5 on   1 on   3 on   2 on   2						
orows in set (0.0 /sql> Select Title -> (Select MB_I -> (select Pric	from book from b	ok_master where   ook where Price> ook Where MB_ID= ook_Master Where	HB_ID IN	+	em Concepts	")));				

6. List the names of the students who have accessed library book. (without duplicates)



## 7. List the student Names who have not accessed a single book from Library.

ysql> Se	lect * f	rom stud	ent;					
S_ID	Name	i	Email			Mobile_No	DOB	Dep_I
B1500	Aarav Sl	narma	aarav.sl	harma@gmail.co	om	9876543210	2000-01-15	D001
B1501	Vivaan R	Patel	Vivaan@g	gmail.com	İ	9123456789	1999-02-20	D003
B1503	Vihaan (	Gupta		gupta@gmail.co	m	9871234567	2002-04-25	D002
B1504	Arjun Ra			ao@gmail.com	ا	9988776655	1998-05-30	D001
B1505	Sai Kuma			ar@gmail.com	ا	9876543210	2000-06-15	D005
B1506	Reyansh			.singh@gmail.c		9123456789	2003-07-20	D004
B1507	Krishna			.iyer@gmail.co		9988776655	1997-08-05	D003
B1508	Rohan Me			ehta@gmail.com		9871234567	2001-09-12	D002
B1509	Anaya Jo			oshi@gmail.com		9123456789	2002-10-30	D001
B1510	Janmesh	Raut	janmesh.	.raut@gmail.co	om	7414970972	2004-06-07	D001
Transac	tion_ID	Sid	Bk_ID	IssuedDate	Ret	turnedDate		
Iransac		51a 	+	IssuedDate	Ret	+		
T1001		B1500	B001	2025-01-10		25-01-20		
T1002		B1501	B002	2025-01-15		25-01-25		
T1003		B1503	B003	2025-01-12		25-01-22		
T1004 T1005		B1504 B1505	B004 B005	2025-01-18     2025-01-20	NUL	25-01-28		
T1005		B1505	B003	2025-01-20     2025-01-14		25-01-24		
T1007		B1507	B007	2025-01-14		25-01-24		
T1009		B1509	B010	2025-01-13		25-01-23		
T1010		B1503	B003	2025-01-22	NUL			
T1011		B1503	B006	2025-02-01		25-02-05		
T1012		B1503	B010	2025-02-03	NUL	L j		
T1013		B1500	B002	2025-02-04	202	25-02-07		
T1014		B1509	B005	2025-02-04	202	25-02-11		
T1014	n set (0	B1509	B005					
	elect Name Select SII			here S_ID NOT saction);	IN			
	+							
Name	ļ							
Rohan M	lehta l							
Janmesh								
Carmicsii	Rauc							

8. Display the book names which are returned today(13-2-2025).(remove duplication)

mysql> Sel	ect * fr	om book	master;									
MB_ID	Title					Author		ISBN	Category	B_Count	Available_Book	Publisher
2   3   4   5   6   7   8   9   10	Introduc Database Operatin Computer Modern O Power El Engineer Structur	tion to System g System network perating ectronic ing Ther al Analy ic Devic rogrammi rogrammi	Machine Concepts Concepts Systems Systems Commodynam Visis Ces and G	ts s		Stuart Abrahas Abrahas Andrew Andrew M.H. Ra P.K. Na R.C. H	ig ibbeler L. Boylestad se sith	2   9781119800368   9780132126953   9780133591623   9789353066211   9781259029565   9780134610980	Computer Science Indicate Engineering Hechaical Engineering Historical Engineering Computer Science Computer Science Computer Science	30 25 40 35 28 30 22 30 25 28 40 35	20 15 30 25 18 22 18 20 18 22 30 25 40	Pearson MIT Press McGram-Hill Wiley Prentice Hall Pearson McGram-Hill Pearson Pearson Pearson Pearson Pearson Pearson
13 rows in	set (0.	00 sec)										
mysql> Sel	ect * fr	om book										
Book_ID	Copies	Price	Purc	hase_Date	Edition	I MB.	ID					
B001	50			-01-10	1st Edit		1					
B002 B003	20	2200	2023	-01-15 -01-20	2nd Edit		2   3					
B084	10			-01-25	1st Edit		4					
B095 B096	23			-02-01   -02-10	2nd Edit:		5   1					
B097	25	1 1600	2023	-02-15	2nd Edit:	on	3					
B008 B009	49			-02-20   -02-25	3rd Edit		2   2					
B010	15			-02-28	2nd Edit		5					
10 rows in mysql> Sel +	ect * fr	om book	transac Bk_ID	·	e   Retur	nedDate						
T1001		B1500	B001	2025-01-10								
T1001	- 1	B1500	B001	2025-01-1								
T1003		B1503	B003	2025-01-1								
T1004		B1504 B1505	B004 B005	2025-01-10		91-28						
T1006	i	B1506	8007	2025-01-14		91-24						
T1007	- 1	B1507 B1509	B007	2025-01-1								
T1009		B1509 B1503	B010 B003	2025-01-1		91-23						
T1011	i	B1503	8006	2025-02-03	1   2025-	2-05						
T1012	. !	B1503 B1500	B010 B002	2025-02-0								
T1013	i	B1509	B005	2025-02-04								
T1015		B1501	B004	2025-02-0		2-13						
14 rows in	set (0.	00 sec)										
-> (Se	lect MB_	ID from	book Who	ter Where Mi ere BooK_ID ansaction wi	IN	nedDate	Current_Date	));				
Title												
Operatin	g System	Concept	s									
row in s	et (0.00	sec)										

# $9. \ \textbf{Display BookNames which are issued today} (\textbf{13-2-2025}) \ \textbf{.} (\textbf{remove duplication})$

				Autho	r		ISBN	Category	B_Count	Available_Book	Publisher
		A Modern	Approach	Stuar	t Rus	sell	9780134610994	Computer Science	30	20	Pearson
uction to				Stuar			9780262041232		25	15	MIT Press
se System				Abrah	am Si	lberschatz	9780078022159	Computer Science	40	30	McGraw-Hill
		.5					9781119800368	Computer Science	35	25	Wiley
											Prentice Ha
		67.									Pearson
						d					Pearson
		cs									McGraw-Hill
		and the second		R.C.	Hibbe	ler					Pearson
		ircuit ine	ory			Boylestad					Pearson
											Pearson McGraw-Hill
											Wiley
	-										
from book;						+					
es   Price	Purch	ase_Date	Edition	l H	B_ID	1					
					1	!					
						!					
						i					
						i					
						i					
						i .					
						i –					
			e   Retur	nedDate	i						
B1500	B091	2025-01-1	0   2025-	91-29	-						
B1501	B002	2025-01-1		01-25	i .						
B1501	B002 B003	2025-01-1 2025-01-1	5   2025-0 2   2025-0		1						
B1503 B1504	B003 B004	2025-01-1	5   2025-0 2   2025-0	91-22	-						
B1503     B1504     B1505	B093 B094 B095	2025-01-1 2025-01-1 2025-01-1 2025-01-2	5   2025-0 2   2025-0 8   2025-0 0   NULL	91-22 91-28							
B1503 B1504 B1505 B1506	B093 B094 B095 B097	2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-01-1	5   2025-0 2   2025-0 8   2025-0 0   NULL 4   2025-0	91-22 91-28 91-24							
B1503 B1504 B1505 B1506 B1507	B003 B004 B005 B007 B007	2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1	5   2025-0 2   2025-0 8   2025-0 0   NULL 4   2025-0 1   2025-0	91-22 91-28 91-24 91-21							
B1503     B1504     B1505     B1506     B1507     B1509	B003 B004 B005 B007 B007 B010	2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1 2025-01-1	5   2025-4 2   2025-4 8   2025-4 9   NULL 4   2025-4 1   2025-4 3   2025-4	91-22 91-28 91-24 91-21							
B1503   B1504   B1505   B1506   B1507   B1509   B1503	B003 B004 B005 B007 B007 B010 B003	2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1 2025-01-1 2025-01-2	5   2025-4 2   2025-4 8   2025-4 9   NULL 4   2025-4 1   2025-4 3   2025-4 2   NULL	91-22 91-28 91-24 91-21 91-23							
B1503   B1504   B1505   B1506   B1507   B1509   B1503   B1503	B003 B004 B005 B007 B007 B010 B003 B006	2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-02-0	5   2025-4 2   2025-4 8   2025-4 0   NULL 4   2025-4 1   2025-4 3   2025-4 2   NULL 1   2025-4	91-22 91-28 91-24 91-21 91-23							
B1503   B1504   B1505   B1506   B1507   B1509   B1503   B1503	B093 B094 B095 B097 B097 B019 B093 B096 B019	2025-01-1 2025-01-1 2025-01-2 2025-01-2 2025-01-1 2025-01-1 2025-01-2 2025-02-0 2025-02-0	5   2025-4 2   2025-4 8   2025-4 0   NULL 4   2025-4 1   2025-4 3   2025-4 2   NULL 1   2025-4 3   NULL	91-22 91-28 91-24 91-21 91-23 92-95							
B1503   B1504   B1505   B1506   B1507   B1509   B1503   B1503   B1503	B003 B004 B005 B007 B007 B010 B003 B006 B010 B002	2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-02-0 2025-02-0 2025-02-0	5   2025-4 2   2025-4 8   2025-4 9   NULL 4   2025-4 3   2025-4 2   NULL 1   2025-4 3   NULL 3   NULL 4   2025-4	91-22 91-28 91-24 91-21 91-23 92-95							
B1503 B1504 B1505 B1506 B1507 B1509 B1503 B1503 B1503 B1500 B1509	B003 B004 B005 B007 B007 B010 B003 B006 B010 B002 B005	2025-01-1 2025-01-1 2025-01-2 2025-01-2 2025-01-1 2025-01-1 2025-01-2 2025-02-0 2025-02-0 2025-02-0 2025-02-0	5   2025-( 2   2025-( 2   2025-( 0   NULL 4   2025-( 1   2025-( 1   2025-( 2   NULL 1   2025-( 3   NULL 4   2025-( 4   2025-( 4   2025-( 4   2025-( 4   2025-( 4   2025-(	91-22 91-28 91-24 91-21 91-23 92-95 92-97 92-11							
B1503   B1504   B1505   B1506   B1507   B1509   B1503   B1503   B1503	B003 B004 B005 B007 B007 B010 B003 B006 B010 B002	2025-01-1 2025-01-1 2025-01-2 2025-01-1 2025-01-1 2025-01-1 2025-01-2 2025-02-0 2025-02-0 2025-02-0	5   2025-4 2   2025-4 8   NULL 4   2025-4 1   2025-4 3   2025-4 1   2025-4 1   2025-4 1   2025-4 2025-4 4   2025-4 4   2025-4 2025-4 3   2025-4	91-22 91-28 91-24 91-21 91-23 92-95 92-97 92-11							
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#### 10. Display the Book names which are read by student B1503.

MB_ID	Title					Author		ISBN	Category	B_Count	Available_Book	Publisher
2   . 3   1 4   0 5   0	Artificia Introduct Database Operating Computer Modern Op	ion to M System C System Networks	achine oncepts Concept	s	Approach	Stuart Abraham Abraham Andrew	Russell Russell Silberschatz Silberschatz S. Tanenbaum S. Tanenbaum	9780134610994 9780262041232 9780078022159 9781119800368 9780132126953 9780133591623	Computer Science Computer Science Computer Science Computer Science Computer Science Computer Science	30   25   40   35   28	20 15 30 25 18 22	Pearson   MIT Press   McGraw-Hill   Wiley   Prentice Hal   Pearson
	Power Ele					M.H. Ra	shid	9789353066211	Electrical Engineering	22	18	Pearson
	Engineeri			cs		P.K. Na		9781259029565	Mechanical Engineering	30	20	McGraw-Hill
	Structura					R.C. H		9780134610980	Civil Engineering	25	18	Pearson
				ircuit The	ory		L. Boylestad	9780135026491	Electronics Engineering	28	22	Pearson
	Python Pr					John Do		9781234567890	Computer Science	40	30	Pearson
13	Python Pr					Jane St Mike Jo		9780987654321	Computer Science   Computer Science	35 50	25 40	McGraw-Hill   Wiley
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Book_ID	Copies	Price	Purch	ase_Date	Edition	MB.	ID					
3001	50	1550	2023-	91-10	1st Edit	ion	1					
8002	20	1250	2023-	01-15	2nd Edit	ion	2					
1003	30	2200	2023-	01-20	3rd Edit	ion	3					
3004	10	1900		01-25	1st Edit		4					
3005	23	1650		02-01	2nd Edit		5					
3006	35	1850		02-10	1st Edit		1					
3007	25	1600		02-15	2nd Edit		3					
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B019	15	2100		02-25	1st Edit		5					
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S_ID	Name	Email	Mobile_No	DOB	Dep_ID
B1500	Aarav Sharma	aarav.sharma@gmail.com	9876543210	2000-01-15	D001
B1501	Vivaan Patel	Vivaan@gmail.com	9123456789	1999-02-20	D003
B1503	Vihaan Gupta	vihaan.gupta@gmail.com	9871234567	2002-04-25	D002
B1504	Arjun Rao	arjun.rao@gmail.com	9988776655	1998-05-30	D001
B1505	Sai Kumar	sai.kumar@gmail.com	9876543210	2000-06-15	D005
B1506	Reyansh Singh	reyansh.singh@gmail.com	9123456789	2003-07-20	D004
B1507	Krishna Iyer	krishna.iyer@gmail.com	9988776655	1997-08-05	D003
B1508	Rohan Mehta	rohan.mehta@gmail.com	9871234567	2001-09-12	D002
B1509	Anaya Joshi	anaya.joshi@gmail.com	9123456789	2002-10-30	D001
B1510	Janmesh Raut	janmesh.raut@gmail.com	7414970972	2004-06-07	D001
/sql> So -> (!	Select MB_ID from	book_Master Where MB_ID IM book Where Book_ID IN book_Transaction Where SI			
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2   Introduction to Machine Learning   Stuart Russell   9780726941232   Computer Science   25   15   MIT P	MB_ID   T	Title				Author		ISBN	Category	B_Count	Available_Book	Publisher
2   Introduction to Machine Learning   Stuart Russell   9780262041232   Computer Science   25   15   MIT Pt	1 /	Artificial	Intelli	igence: A Modern	Approach	Stuart	ussell	9780134610994	Computer Science	30	20	Pearson
3						Stuart	ussell	9780262041232	Computer Science	25	15	MIT Press
4						Abraham	Silberschatz	9780078022159	Computer Science	40	30	McGraw-Hill
6 Modern Operating Systems   Andrew S. Tanenbaum   780133591623   Computer Science   30   22   Dearson   7   Power Electronics   M.H. Rashid   9789335906211   Electrical Engineering   22   18   Pearson   7   Power Electronic Davices and Circuit Theory   Robert L. Boylestad   9781259029565   Mechanical Engineering   30   20   McGram   9   Structural Analysis   R.C. Hibbeler   978913461998   Civil Engineering   25   18   Pearson   10   Electronic Davices and Circuit Theory   Robert L. Boylestad   97813495504991   Electronic Davices Engineering   28   22   Pearson   28   22   Pearson   28   21   Python Programming   Jane Smith   978998769491   Computer Science   40   30   Pearson   30   Python Programming   Jane Smith   978098769491   Computer Science   35   25   McGram   31   Python Programming   Mike Johnson   9781122334455   Computer Science   50   40   Wiley   Wile						Abraham	Silberschatz	9781119800368	Computer Science	35	25	Wiley
7   Power Electronics	5 1 0	Computer N	etworks			Andrew	. Tanenbaum	9780132126953	Computer Science	28	18	Prentice Hal
8   Engineering Thermodynamics	6   1	Modern Ope	rating 5	Systems		Andrew	. Tanenbaum	9780133591623	Computer Science	30	22	Pearson
8   Engineering Thermodynamics						M.H. Ra	hid	9789353066211	Electrical Engineering	22	18	Pearson
10   Electronic Devices and Circuit Theory   Robert L. Boylestad   9780138026491   Electronics Engineering   28   22   Pearson   11   Python Programming   John Doe   9780138026491   Electronics Engineering   28   30   Pearson   29   29   20   20   20   20   20   20	8   8	Engineerin	g Thermo	odynamics		P.K. Na		9781259029565		30	20	McGraw-Hill
18   Electronic Devices and Circuit Theory   Robert L. Boylestad   7880138926491   Electronics Engineering   28   22   Pearst   11   Python Programming   John Doe   7880138926491   Electronics Engineering   28   32   Pearst   12   Python Programming   John Doe   7880138987890   Computer Science   48   38   Pearst   13   Python Programming   John Smith   7880987654321   Computer Science   35   25   McGraw   13   Python Programming   Mike Johnson   7881122334455   Computer Science   58   48   Wiley   Wiley   Wiley   Wiley   Select * from book;   Select * from book;   Select * from book;   Select * from book;   Select * from Book   Price   Purchase_Date   Edition   MB_ID   Select   Select *	9   9	Structural	Analysi	is		R.C. Hi	beler	9780134610980	Civil Engineering	25	18	Pearson
11   Python Programming	10   8	Electronic	Devices	s and Circuit Th	vros	Robert	. Boylestad	9780135026491		28	22	Pearson
13   Python Programming   Mike Johnson   9781122334455   Computer Science   50   40   Wiley rows in set (0.00 sec)   Sql> Select * from book;   Book_ID   Copies   Price   Purchase_Date   Edition   MB_ID     Bool   50   1550   2023-01-10   1st Edition   1   Bool   20   1250   2023-01-15   2nd Edition   2   Bool   30   200   2023-01-20   3rd Edition   3   Bool   10   1990   2023-01-25   1st Edition   4   Bool   10   1990   2023-01-25   1st Edition   4   Bool   2023-01-20   3rd Edition   5   Bool   2023-02-01   2nd Edition   5   Bool   2023-02-01   1st Edition   2023-02-01   2023-02-01   2023-02-01   2023-02-02-01   2023-02-02-02-02-02-02-02-02-02-02-02-02-02-	11   5	Python Pro	gramming	1				9781234567890		40	30	Pearson
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arjun.rao@gmail.com
sai.kumar@gmail.com
reyansh.singh@gmail.com
krishna.iyer@gmail.com
rohan.mehta@nmail.com 2002-04-25 Vihaan Gupta B1503 9871234567 D002 Arjun Rao Sai Kumar 1998-05-30 B1504 9988776655 D001 B1505 9876543210 2000-06-15 D005 Reyansh Singh Krishna Iyer 2003-07-20 B1506 9123456789 D004 9988776655 B1507 1997-08-05 D003 rohan.mehta@gmail.com anaya.joshi@gmail.com janmesh.raut@gmail.com B1508 Rohan Mehta 9871234567 2001-09-12 D002 Anaya Joshi Janmesh Raut B1509 9123456789 2002-10-30 D001 B1510 7414970972 2004-06-07 D001 10 rows in set (0.00 sec) mysql> Select Title from book\_Master Where MB\_ID IN -> (Select MB\_ID from book Where Book\_ID IN -> (Select Bk\_ID from book\_Transaction Where SID= -> (Select S\_ID from Student Where Name="Sai Kumar"))); Title Computer Networks Artificial Intelligence: A Modern Approach

# $12. \ \textbf{Find out the department of Janmesh Raut.}$

mysql> Se	lect * from stud	ient;					
S_ID	Name	Email		Mobi	le_No	DOB	Dep_ID
	Aarav Sharma Vivaan Patel Vihaan Gupta Arjun Rao Sai Kumar Reyansh Singh Krishna Iyer Rohan Mehta Anaya Joshi Janmesh Raut  In set (0.00 sec	Vivaan@gma vihaan.gup arjun.rao@ sai.kumao reyansh.si krishna.iy rohan.meht anaya.josh janmesh.ra	ota@gmail.com @gmail.com	9123   9871   9988   9876   9123   9988   9871	5543210 5456789 234567 5776655 5543210 6456789 5776655 234567 6456789 1970972	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 2004-06-07	D001   D003   D002   D001   D005   D004   D003   D002   D001   D0
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# 13. Find out which Books have been returned most recently.

MB_ID	Title				Author		ISBN	Category	B_Count	Available_Book	Publisher
2   3   4   5   6   7   8   9   10	Introduction Database Soperating Computer Modern Operating Power Electronic Engineerin Structural Electronic Python Pro	ion to Mo System Co System ( Vetworks Parating ( Stronics of Therm L Analys; Devices Ogramming	Concepts Systems odynamics is s and Circuit The		Abraham Si Andrew S. Andrew S. M.H. Rashi P.K. Nag R.C. Hibbe Robert L. John Doe	sell lberschatz lberschatz Tanenbaum Tanenbaum d d Boylestad	9780134610994 9780262041232 9780078022159 97801119800368 9780132126953 9780133591623 9780133666211 9781259029565 9780134610980 9780135026491 9781234567890	Computer Science Computer Science Computer Science Computer Science Computer Science Computer Science Electrical Engineering Hechanical Engineering Electronics Engineering Computer Science Computer Science Computer Science	30 25 40 35 28 30 22 30 25 25 28 40	20 15 30 25 18 22 18 20 18 22 30	Pearson MIT Press McGraw-Hill Wiley Prentice Hal Pearson McGraw-Hill Pearson Pearson Pearson Pearson Pearson Pearson
13   3 rows in	Python Pro Python Pro set (0.00	sec)		i	Jane Smith Mike Johns		9780987654321 9781122334455	Computer Science	50	40	Wiley
13   Frows in	Python Prosect set (0.00	rogrammi sec) n book;		   Edition		+					
rows in sql> Sel Book_ID	Python Prosect set (0.00	rogrammi sec) n book;	ng 	Edition	Mike Johns	+					
rows in sql> Sel Book_ID	Python Property Python Property Propert	rogrammi sec) n book; Price	ng     Purchase_Date		Mike Johns   MB_ID	+					
13   rows in sql> Sel 300k_ID	Python Property of Set (0.06) Lect * from Copies	rogrammi sec) n book; Price	Purchase_Date	1st Editi	Mike Johns   MB_ID	+					
rows in sql> Sel Book_ID B001 B002 B003	Python Property of Python Python Property of Python Property of Python Property of Python Python Property of Python Property of Python Property of Python Python Property of Python Property of Python Pyt	rogrammi sec) n book; Price 1550 1250	Purchase_Date	1st Editi   2nd Editi	Mike Johns    MB_ID  on   1  on   2  on   3	+					
13   rows in sql> Sel Book_ID 8001 8002 8003 8004	Python Property of the Propert	programmic sec) n book; Price 1550 1250 2200	Purchase_Date    2023-01-10   2023-01-15   2023-01-20	1st Editi   2nd Editi   3rd Editi	Mike Johns   MB_ID   n	+					
13   rows in sql> Sel Book_ID 8001 8002 8003 8004 8005	Python Pr set (0.00 lect * from   Copies     50     20     30	price 1550 1250 1250 1260 1980	Purchase_Date    2023-01-10   2023-01-15   2023-01-20   2023-01-25	1st Editi   2nd Editi   3rd Editi   1st Editi	MB_ID   10n   2   2   2   2   2   2   2   2   2	+					
13   rows in sql> Sel Book_ID BO01 BO02 BO03 BO04 BO05 BO06	Python Pr n set (0.00 lect * from   Copies     50     20     30     10	price 1550 1250 1250 1260 1990 1650	Purchase_Date  2023-01-10 2023-01-5 2023-01-20 2023-02-01	1st Editi   2nd Editi   3rd Editi   1st Editi   2nd Editi	Mike Johns    MB_ID  on   1  on   2  on   3  on   4  on   5  on   5	+					
13   rows in sql> Sel Book_ID BO01 BO02 BO03 BO04 BO05 BO06 BO07	Python Pr set (0.00 lect * from Copies   50   20   30   10   23   35	price 1559 1259 2200 1900 1659 1859	Purchase_Date    2023-01-10   2023-01-15   2023-01-20   2023-02-01   2023-02-01   2023-02-01	l 1st Editi 2nd Editi 3rd Editi 1st Editi 2nd Editi 1st Editi	MB_ID	+					
rows in	Python Property of Set (0.00 ct * from 1 copies   50   20   30   10   23   35   25   25   25	price 1550 1250 1250 1260 1650 1650 1650	Purchase_Date    Purchase_Date   2023-01-16   2023-01-15   2023-02-01   2023-02-10   2023-02-10   2023-02-10	l 1st Editi 2nd Editi 3rd Editi 1st Editi 2nd Editi 1st Editi 2nd Editi	Mike Johns    MB_ID  on   1  on   2  on   3  on   4  on   5  on   1  on   2	+					

```
ysql> Select * from book_transaction
  Transaction_ID | Sid
                                   | Bk_ID | IssuedDate | ReturnedDate
                                                                    2025-01-20
2025-01-25
2025-01-22
2025-01-28
                          B1500
B1501
B1503
B1504
B1506
B1507
B1509
B1503
B1503
B1503
B1500
B1509
B1509
B1501
B1505
                                     B001
B002
B003
B004
B005
B007
B010
B003
B006
B010
B002
B005
B004
B006
                                                 2025-01-22
2025-02-01
2025-02-03
2025-02-04
                                                                   2025-02-05
NULL
2025-02-07
15 rows in set (0.00 sec)
Category
                                                                                                                                      | B_Count | Available_Book | Publisher
        4 | Operating System Concepts | Abraham Silberschatz | 9781119800368 | Computer Science
                                                                                                                                               35
                                                                                                                                                                       25 | Wiley
 row in set (0.00 sec)
```

#### 15. What is the name of recently purchased book.

mysql> Sele	ect * from	i book_ma	aster;									
MB_ID   1	Title				Auth	or		ISBN	Category	B_Count	Available_Book	Publisher
1 /	Artificial	Intelli	igence: A Modern	Approach	Stuar	rt Russ	ell	9780134610994	Computer Science	30	20	Pearson
			achine Learning			rt Russ		9780262041232	Computer Science	25	15	MIT Press
3   0	Database S	ystem Co	oncepts		Abra	ham Sil	berschatz	9780078022159	Computer Science	40	30	McGraw-Hill
4 0	Operating	System (	em Concepts			ham Sil	berschatz	9781119800368	Computer Science	35	25	Wiley
5   0	Computer N	etworks					anenbaum	9780132126953	Computer Science	28	18	Prentice Hall
	Modern Ope						anenbaum	9780133591623	Computer Science	30	22	Pearson
	Power Elec				M.H.	Rashid		9789353066211	Electrical Engineering	22	18	Pearson
	Engineerir				P.K.			9781259029565	Mechanical Engineering	30	20	McGraw-Hill
	Structural					Hibbel		9780134610980	Civil Engineering	25	18	Pearson
			s and Circuit The	ory			oylestad	9780135026491	Electronics Engineering	28	22	Pearson
	Python Pro				John			9781234567890	Computer Science	40	30	Pearson
	Python Pro					Smith		9780987654321	Computer Science	35	25	McGraw-Hill
13	Python Pr	ogrammin	ng		Mike	Johnso	n	9781122334455	Computer Science	50	40	Wiley
13 rows in								,				
+	Copies		Purchase_Date	l Edition	+	MB_ID						
<del>+</del>						<del>-</del>						
B001 B002	50 20	1550 1250	2023-01-10   2023-01-15	1st Editi   2nd Editi		1   2						
B002	20   30	2200	2023-01-15	3rd Editi		3						
B004	10	1900	2023-01-25	1st Editi		4						
B004	23	1650	2023-01-25	2nd Editi		5						
B005	35	1850	2023-02-10	1st Editi		1						
B007	25	1600	2023-02-15	2nd Editi		3						
B008	40	2000	2023-02-20	3rd Editi		2						
B009	22	1700	2023-02-25	1st Editi		8						
B010	15	2100	2023-02-28	2nd Editi		5						
B011	40	2000	2023-03-05	1st Editi		6						
B012	30	1800	2023-03-10	2nd Editi		7						
B013	25	1900	2023-03-15	3rd Editi	on	8						
B014	22	1700	2023-03-20	lst Editi	on	9						
B015	15	2100	2023-03-25	2nd Editi		10						
B016	20	2100	2023-04-01	lst Editi		6						
B017	30	2200	2023-04-05	2nd Editi		7						
B018	35	2000	2023-04-10	1st Editi		8						
B019	40	2300	2023-04-15	3rd Editi		9						
B020	25	1800	2023-04-20	2nd Editi		10						
B021	30	2400	2023-04-25	1st Editi		11						
B022	25	2200	2023-04-30	2nd Editi		12						
B023	40	2500	2023-05-05	3rd Editi		13						
B024	35	2100	2023-05-10	1st Editi		11						
B025	50	2300	2023-05-15	2nd Editi		12						
B026	20	2400	2023-05-20	3rd Editi		13   11						
B027 B028	30 40	2500	2023-05-25	1st Editi		11   5						
B028	1 40 1 25	2600 2700	2023-06-05 2023-06-05	2nd Editi   3rd Editi		5   1						
1029	25	2700	2023 00 03	Jru Eulti								
29 rows in	set (0.00	sec)										

## 16. Which Books(name) are not issued at all.

B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	Artificial Intelligence: A Modern Approach	Stuart Russell	9780134610994	Computer Science	30	20	Pearson
2	Introduction to Machine Learning	Stuart Russell	9780262041232	Computer Science	25	15	MIT Press
3	Database System Concepts	Abraham Silberschatz	9780078022159	Computer Science	40	30	McGraw-Hill
4	Operating System Concepts	Abraham Silberschatz	9781119800368	Computer Science	35	25	Wiley
5	Computer Networks	Andrew S. Tanenbaum	9780132126953	Computer Science	28	18	Prentice Ha
6	Modern Operating Systems	Andrew S. Tanenbaum	9780133591623	Computer Science	30	22	Pearson
7	Power Electronics	M.H. Rashid	9789353066211		22	18	Pearson
8	Engineering Thermodynamics	P.K. Nag	9781259029565		30	20	McGraw-Hill
9	Structural Analysis	R.C. Hibbeler	9780134610980	Civil Engineering	25	18	Pearson
10	Electronic Devices and Circuit Theory	Robert L. Boylestad	9780135026491	Electronics Engineering	28	22	Pearson
11	Python Programming	John Doe	9781234567890	Computer Science	40	30	Pearson
12	Python Programming	Jane Smith	9780987654321	Computer Science	35	25	
13	Python Programming	Mike Johnson	9781122334455	Computer Science	50	40	Wiley

mysql> Select * fi	rom book_	transact	tion;	
Transaction_ID	Sid	Bk_ID	IssuedDate	ReturnedDate
T1001	B1500	B001	2025-01-10	2025-01-20
T1002	B1501	B002	2025-01-15	2025-01-25
T1003	B1503	B003	2025-01-12	2025-01-22
T1004   T1005	B1504 B1505	B004 B005	2025-01-18 2025-01-20	2025-01-28 NULL
T1005	B1505	B003	2025-01-20	2025-01-24
T1005	B1500	B007	2025-01-14	2025-01-24
T1007	B1507	B010	2025-01-11	2025-01-21
T1010	B1503	B003	2025-01-13	NULL
T1011	B1503	B006	2025-02-01	2025-02-05
T1012	B1503	B010	2025-02-03	NULL
T1013	B1500	B002	2025-02-04	2025-02-07
T1014	B1509	B005	2025-02-04	2025-02-11
T1015	B1501	B004	2025-02-03	2025-02-13
T1016	B1505	B006	2025-02-13	2025-02-15
T1017	B1507	B001	2025-02-14	2025-02-15
T1018	B1503	B002	2025-02-14	2025-02-16
T1019	B1505	B003	2025-02-14	2025-02-17
T1020	B1504	B004	2025-02-14	2025-02-16
T1021	B1506	B006	2025-02-14	NULL
+ 20 rows in set (0	+		·	+

mysql> Select \* from book;

Book_ID	Copies	Price	Purchase_Date	Edition	MB_ID
+   B001	50	1550	   2023-01-10	lst Edition	1
B002	20	1250	2023-01-15	2nd Edition	2
B003	30	2200	2023-01-20	3rd Edition	3
B004	10	1900	2023-01-25	1st Edition	4
B005	23	1650	2023-02-01	2nd Edition	5
B006	35	1850	2023-02-10	1st Edition	1
B007	25	1600	2023-02-15	2nd Edition	3
B008	40	2000	2023-02-20	3rd Edition	2
B009	22	1700	2023-02-25	1st Edition	8
B010	15	2100	2023-02-28	2nd Edition	5
B011	40	2000	2023-03-05	1st Edition	6
B012	30	1800	2023-03-10	2nd Edition	7
B013	25	1900	2023-03-15	3rd Edition	8
B014	22	1700	2023-03-20	1st Edition	9
B015	15	2100	2023-03-25	2nd Edition	10
B016	20	2100	2023-04-01	1st Edition	6
B017	30	2200	2023-04-05	2nd Edition	7
B018	35	2000	2023-04-10	1st Edition	8
B019	40	2300	2023-04-15	3rd Edition	9
B020	25	1800	2023-04-20	2nd Edition	10
B021	30	2400	2023-04-25	1st Edition	11
B022	25	2200	2023-04-30	2nd Edition	12
B023	40	2500	2023-05-05	3rd Edition	13
B024	35	2100	2023-05-10	1st Edition	11
B025	50	2300	2023-05-15	2nd Edition	12
B026	20	2400	2023-05-20	3rd Edition	13
B027	30	2500	2023-05-25	1st Edition	11
B028	40	2600	2023-06-05	2nd Edition	5
B029	25	2700	2023-06-05	3rd Edition	1

#### 17. Find out which category of books which is most popular. (issued most)

B_ID	Title	Author	ISBN	Category	B_Count	Available_Book	Publisher
1	Artificial Intelligence: A Modern Approach	Stuart Russell	9780134610994	Computer Science	30	20	Pearson
2	Introduction to Machine Learning	Stuart Russell	9780262041232	Computer Science	25	15	MIT Press
3	Database System Concepts	Abraham Silberschatz	9780078022159	Computer Science	40	30	McGraw-Hill
	Operating System Concepts	Abraham Silberschatz	9781119800368	Computer Science	35	25	Wiley
	Computer Networks	Andrew S. Tanenbaum	9780132126953	Computer Science	28	18	Prentice Ha
6	Modern Operating Systems	Andrew S. Tanenbaum	9780133591623	Computer Science	30	22	Pearson
	Power Electronics	M.H. Rashid	9789353066211	Electrical Engineering	22	18	Pearson
8	Engineering Thermodynamics	P.K. Nag	9781259029565	Mechanical Engineering	30	20	McGraw-Hill
9	Structural Analysis	R.C. Hibbeler	9780134610980	Civil Engineering	25	18	Pearson
10	Electronic Devices and Circuit Theory	Robert L. Boylestad	9780135026491	Electronics Engineering	28	22	Pearson
11	Python Programming	John Doe	9781234567890	Computer Science	40	30	Pearson
12	Python Programming	Jane Smith	9780987654321	Computer Science	35	25	McGraw-Hill
13	Python Programming	Mike Johnson	9781122334455	Computer Science	50	40	Wiley

nvsal> Select \* from book: Book\_ID | Copies | Price | Purchase\_Date | Edition | MB\_ID | 2023-01-10 2023-01-15 2023-01-20 2023-02-01 2023-02-15 2023-02-15 2023-02-20 2023-02-28 2023-02-28 2023-03-05 2023-03-15 2023-03-15 2023-04-10 2023-04-15 2023-04-15 2023-04-15 2023-04-20 2023-04-15 2023-04-20 2023-04-20 2023-04-5 2023-04-5 2023-04-5 2023-04-5 2023-04-5 2023-04-5 2023-05-05 2023-05-05 2023-05-05 2023-05-20 2023-05-20 2023-05-20 2023-05-20 2023-05-5 2023-05-5 Edition 1 2 3 4 5 1 3 2 8 5 6 7 8 9 10 Edition Edition 1250 2nd 2200 1900 1st Edition 2nd Edition 1st Edition 2nd Edition 3rd Edition B004 1650 1850 B005 B006 B007 B008 1600 2000 B009 B010 1700 2100 2000 1800 1st 2nd Edition Edition 2nd Edition 1st Edition 2nd Edition 3rd Edition 1st Edition 2nd Edition B011 B012 B013 1900 B014 B015 1700 2100 2100 2200 1st Edition 2nd Edition B016 B017 B018 B019 6 7 8 9 10 11 12 13 11 12 13 2nd Edition
1st Edition
3rd Edition
2nd Edition
1st Edition
2nd Edition
2nd Edition
3rd Edition
1st Edition
1st Edition 2000 2300 1800 B020 B021 2400 2200 2500 2100 B022 2nd Edition
3rd Edition
1st Edition
2nd Edition
3rd Edition
1st Edition
2nd Edition
2nd Edition
3rd Edition B023 B024 2300 2400 2500 2600 B025 B026 B027 B028 B029 2700 29 rows in set (0.00 sec) mysql> Select \* from book\_Transaction; Transaction\_ID | Sid 2025-01-10 2025-01-15 2025-01-15 2025-01-12 2025-01-18 2025-01-20 2025-01-14 2025-01-13 2025-01-13 2025-02-01 2025-02-01 2025-02-04 2025-02-04 2025-02-04 2025-01-20 2025-01-25 2025-01-22 2025-01-28 NULL 2025-01-24 2025-01-21 2025-01-23 NULL T1001 T1002 B1500 B1501 B001 B002 T1002 T1003 T1004 T1005 T1006 T1007 T1009 T1010 B1503 B1504 B1505 B1506 B1507 B1509 B003 B004 B005 B007 B007 B010 B1503 B003 T1011 T1012 B1503 B1503 B006 B010 2025-NULL -02-05 T1013 T1014 T1015 T1016 B1500 B1509 B1501 B1505 B002 B005 2025-02-07 2025-02-11 -02-13 B004 15 rows in set (0.00 sec) mysql> Select Category From Book\_Master
 -> Where MB\_ID IN
 -> (Select MB\_ID from book Where Book\_ID=
 -> (Select Bk\_ID from book\_Transaction group by Bk\_ID Order by Count(IssuedDate) DESC Limit 1)); Category Computer Science

row in set (0.00 sec)

# 19. Which student visits library more frequently( assuming he issues a book every time he visits the library)

S_ID	Name	Email	Mobile_No	DOB	Dep_ID
B1500	Aarav Sharma	aarav.sharma@gmail.com	9876543210	2000-01-15	D001
B1501	Vivaan Patel	Vivaan@gmail.com	9123456789	1999-02-20	D003
B1503	Vihaan Gupta	vihaan.gupta@gmail.com	9871234567	2002-04-25	D002
B1504	Arjun Rao	arjun.rao@gmail.com	9988776655	1998-05-30	D001
B1505	Sai Kumar	sai.kumar@gmail.com	9876543210	2000-06-15	D005
B1506	Reyansh Singh	reyansh.singh@gmail.com	9123456789	2003-07-20	D004
B1507	Krishna Iyer	krishna.iyer@gmail.com	9988776655	1997-08-05	D003
B1508	Rohan Mehta	rohan.mehta@gmail.com	9871234567	2001-09-12	D002
B1509	Anaya Joshi	anaya.joshi@gmail.com	9123456789	2002-10-30	D003
B1510	Janmesh Raut	janmesh.raut@gmail.com	7414970972	2004-06-07	D001

Transaction_ID	Sid	Bk_ID	IssuedDate	ReturnedDate
T1001	B1500	B001	2025-01-10	2025-01-20
T1002	B1501	B002	2025-01-15	2025-01-25
T1003	B1503	B003	2025-01-12	2025-01-22
T1004	B1504	B004	2025-01-18	2025-01-28
T1005	B1505	B005	2025-01-20	NULL
T1006	B1506	B007	2025-01-14	2025-01-24
T1007	B1507	B007	2025-01-11	2025-01-21
T1009	B1509	B010	2025-01-13	2025-01-23
T1010	B1503	B003	2025-01-22	NULL
T1011	B1503	B006	2025-02-01	2025-02-05
T1012	B1503	B010	2025-02-03	NULL
T1013	B1500	B002	2025-02-04	2025-02-07
T1014	B1509	B005	2025-02-04	2025-02-11
T1015	B1501	B004	2025-02-03	2025-02-13
T1016	B1505	B006	2025-02-13	2025-02-15
T1017	B1507	B001	2025-02-14	2025-02-15
T1018	B1503	B002	2025-02-14	2025-02-16
T1019	B1505	B003	2025-02-14	2025-02-17
T1020	B1504	B004	2025-02-14	2025-02-16
T1021	B1506	B006	2025-02-14	NULL

## **Conclusion:**

This assignment deepens our understanding of nested queries using DDL and DML in MySQL. We explored constraints, foreign key dependencies, and complex queries to retrieve meaningful insights. Key learnings include identifying unissued books, tracking frequent library users, filtering data based on conditions, and handling duplicate records, reinforcing practical database management skills.