

# Questions and Solution

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**THIS FILE CONTAINS VARIOUS QUESTIONS AND SQL QUERY FOR THIS QUESTION TO EXPLORING DATA.**

## **Q1. Names of all the members who are having permanent status?**

```
SELECT
    member_name
FROM
    lms_members
WHERE
    LOWER(membership_status) = 'permanent';
```

### **Query Result:**

MEMBER_NAME
Ashish
Hetvi
Mayur
Nikhil
Preity
Priti
Sandeep
Shruti
Smita
Snehal
Writankar
Amit
Ritesh

**Q2. Name of the member and their city who reside in either Pune/Delhi (CI) and are temporary in status**

```
SELECT
    supplier_name
FROM
    lms_suppliers_details
WHERE
    LOWER(address) in ('chennai', 'delhi', 'ahmedabad');
```

**Query Result:**

SUPPLIER_NAME
SINGAPORE SHOPPEE
KAVARI STORE
GUPTA STORE
JIO MART

**Q3. Name of the book and their category whose edition is greater than 5 and are placed on some rack?**

```
SELECT book_title,
    category
FROM lms_book_details
WHERE book_edition > 5
    AND rack_num IS NOT NULL
```

**Query Result:**

BOOK_TITLE	CATEGORY
Java How To Do Program	JAVA
Java How To Do Program	JAVA
Java How To Do Program	JAVA
Let Us C	C
The Algorithm Design Manual	ALGORITHMS
Advanced Data Structures	DATA STRUCTURES

**Q4. Name of the book and their category , no\_of\_days this book is in the library whose edition is greater than 5 and are placed on some rack ?**

```
SELECT book_title AS book_name,
       category   AS book_category,
       Trunc(sysdate) - date_arrival no_of_days
FROM   lms_book_details
WHERE  rack_num IS NOT NULL
       AND book_edition > 5;
```

BOOK_NAME	BOOK_CATEGORY	NO_OF_DAYS
Java How To Do Program	JAVA	4306
Java How To Do Program	JAVA	3940
Java How To Do Program	JAVA	3939
Let Us C	C	4494
The Algorithm Design Manual	ALGORITHMMS	3369
Advanced Data Structures	DATA STRUCTURES	4914

**Q5. Name of the book , Year in which it was published , publication name , Category ,Type of Language (Java -> Object Oriented Language , C-> Procedural language ) for book that were published on or after Year 2005 or published by Tata Mcgraw Hill**

```
SELECT book_title      Name_of_the_book,
       To_char(publish_date, 'yyyy') Year_of_publication,
       publication     publication_name,
       category,
       CASE
         WHEN category = 'JAVA' THEN 'Object Oriented Language'
         WHEN category = 'C' THEN 'Procedural language'
         ELSE 'Not defined'
       END              AS "Type_of_language"
```

```

FROM Ims_book_details
WHERE To_number(To_char(publish_date, 'yyyy')) >= 2005
      OR Upper(Trim(publication)) = Upper('Tata Mcgraw Hill')

```

NAME_OF_THE_BOOK	YEAR_OF_PUBLICATION	PUBLICATION_NAME	CATEGORY	Type_of_language
Java: The Complete Reference	2011	Tata Mcgraw Hill	JAVA	Object Oriented Language
Java: The Complete Reference	2011	Tata Mcgraw Hill	JAVA	Object Oriented Language
Java: The Complete Reference	2011	Tata Mcgraw Hill	JAVA	Object Oriented Language
Let Us C	2010	BPB Publications	C	Procedural language
Python Cookbook: Recipes for Mastering Python 3	2013	O'Reilly Media	Python	Not defined
Learn Python in 1 Day	2016	Guru99	Python	Not defined
Python Programming: An Introduction to Computer Science	2016	Ingram short title	Python	Not defined
C# 8.0 and .NET Core 3.0 – Modern Cross-Platform Development	2019	Packt Publishing	C#	Not defined
C# 8.0 Pocket Reference: Instant Help for	2019	O'Reilly Media	C#	Not defined

C# 8.0 Programmers				
Agile Principles, Patterns, and Practices in C#	2006	Pearson	C#	Not defined
Clean Code: A Handbook of Agile Software Craftsmanship	2018	Prentice Hall	FUNDAMENTA LS	Not defined
Introduction to Algorithms	2019	The MIT Press	ALGORITHMS	Not defined
Structure and Interpretation of Computer Programs (SICP)	2011	The MIT Press	FUNDAMENTA LS	Not defined
The Clean Coder: A Code of Conduct for Professional Programmers	2015	Prentice Hall	FUNDAMENTA LS	Not defined
Code Complete: A Practical Handbook of Software Construction	2011	Microsoft Press	FUNDAMENTA LS	Not defined
The Pragmatic Programmer	2006	Addison-Wesley Professional	FUNDAMENTA LS	Not defined
Head First Design Patterns: A Brain- Friendly Guide	2005	O'Reilly Media	JAVA	Object Oriented Language
Algorithms Unlocked	2012	The MIT Press	ALGORITHMS	Not defined
The Algorithm Design Manual	2012	Addison-Wesley Professional	ALGORITHMS	Not defined
Algorithms	2011	The MIT Press	ALGORITHMS	Not defined
Advanced Data Structures	2008	The MIT Press	DATA STRUCTURES	Not defined

**Q6 Name of the supplier , contact , email , Address who resides in either Mumbai Or Delhi and email does not belong to gmail account**

```
SELECT supplier_name,  
  
       contact,  
  
       email,  
  
       address  
  
FROM lms_suppliers_details  
  
       WHERE Initcap(address) IN ( 'Mumbai', 'Delhi' )  
--and instr(EMAIL,'@gmail.com',-1,1) = 0  
  
--and lower(substr(trim(EMAIL),-10)) != '@gmail.com'  
  
AND Lower(email) NOT LIKE '%@gmail.com'
```

SUPPLIER_NAME	CONTACT	EMAIL	ADDRESS
JK Stores	9940123450	jks@yahoo.com	MUMBAI
KAVARI STORE	8630001452	kavi@redif.com	DELHI
AKBAR STORE	7855623100	akbakst@aol.com	MUMBAI
JIO MART	8644001452	free@rediff.com	DELHI

**Q7. Name of the member , status of his membership who have issued a book**

```
SELECT DISTINCT mem.member_name,  
  
               mem.membership_status  
  
FROM lms_members mem  
  
     INNER JOIN lms_book_issue iss  
  
           ON ( mem.member_id = iss.member_id )
```

MEMBER_NAME	MEMBERSHIP_STATUS
Bhakti	Temporary
Gautam	Temporary
Amruta	Temporary
Ashish	Permanent
Akshay	Temporary

#### Q8 Name of the book and its supplier's email, contact number

- **case1: if it has no supplier don't display that book**

```

SELECT book_title,
       BD.supplier_id,
       email,
       contact
FROM   lms_book_details BD
       INNER JOIN lms_suppliers_details SD
       ON ( SD.supplier_id = BD.supplier_id )

```

BOOK_TITLE	SUPPLIER_ID	EMAIL	CONTACT
Java How To Do Program	S01	sing@gmail.com	9894123555
Java: The Complete Reference	S03	rose@gmail.com	9444411222
Java How To Do Program	S01	sing@gmail.com	9894123555
Java: The Complete Reference	S01	sing@gmail.com	9894123555
Java How To Do Program	S01	sing@gmail.com	9894123555
Java: The Complete Reference	S03	rose@gmail.com	9444411222
Let Us C	S03	rose@gmail.com	9444411222
Python Cookbook: Recipes for Mastering Python 3	S02	jks@yahoo.com	9940123450
Learn Python in 1 Day	S02	jks@yahoo.com	9940123450
Python Programming:An Introduction to Computer Science	S03	rose@gmail.com	9444411222

C# 8.0 Pocket Reference: Instant Help for C# 8.0 Programmers	S03	rose@gmail.com	9444411222
Clean Code: A Handbook of Agile Software Craftsmanship	S06	akbakst@aol.com	7855623100
Introduction to Algorithms	S01	sing@gmail.com	9894123555
Structure and Interpretation of Computer Programs (SICP)	S02	jks@yahoo.com	9940123450
The Clean Coder: A Code of Conduct for Professional Programmers	S06	akbakst@aol.com	7855623100
Code Complete: A Practical Handbook of Software Construction	S03	rose@gmail.com	9444411222
Design Patterns: Elements of Reusable Object-Oriented Software	S03	rose@gmail.com	9444411222
The Pragmatic Programmer	S03	rose@gmail.com	9444411222
Head First Design Patterns: A Brain-Friendly Guide	S01	sing@gmail.com	9894123555
Algorithms Unlocked	S01	sing@gmail.com	9894123555
Algorithms	S02	jks@yahoo.com	9940123450
Advanced Data Structures	S05	eingal@aol.com	954200000

- **case2: if it has no suppliers DO display that book.**

```

SELECT  book_title,
        bd.supplier_id,
        email,
        contact
FROM    lms_book_details BD
LEFT JOIN lms_suppliers_details SD
ON (sd.supplier_id=bd.supplier_id)(sd.supplier_id=bd.supplier_id)

```

BOOK_TITLE	SUPPLIER_ID	EMAIL	CONTACT
Java How To Do Program	S01	sing@gmail.com	9894123555
Java How To Do Program	S01	sing@gmail.com	9894123555
Java: The Complete Reference	S01	sing@gmail.com	9894123555
Java How To Do Program	S01	sing@gmail.com	9894123555



Introduction to Algorithms	S01	sing@gmail.com	9894123555
Head First Design Patterns: A Brain-Friendly Guide	S01	sing@gmail.com	9894123555
Algorithms Unlocked	S01	sing@gmail.com	9894123555
Python Cookbook: Recipes for Mastering Python 3	S02	jks@yahoo.com	9940123450
Learn Python in 1 Day	S02	jks@yahoo.com	9940123450
Structure and Interpretation of Computer Programs (SICP)	S02	jks@yahoo.com	9940123450
Algorithms	S02	jks@yahoo.com	9940123450
Java: The Complete Reference	S03	rose@gmail.com	9444411222
Java: The Complete Reference	S03	rose@gmail.com	9444411222
Let Us C	S03	rose@gmail.com	9444411222
Python Programming:An Introduction to Computer Science	S03	rose@gmail.com	9444411222
C# 8.0 Pocket Reference: Instant Help for C# 8.0 Programmers	S03	rose@gmail.com	9444411222
Code Complete: A Practical Handbook of Software Construction	S03	rose@gmail.com	9444411222
Design Patterns: Elements of Reusable Object-Oriented Software	S03	rose@gmail.com	9444411222
The Pragmatic Programmer	S03	rose@gmail.com	9444411222
Advanced Data Structures	S05	eingal@aol.com	9542000001
Clean Code: A Handbook of Agile Software Craftsmanship	S06	akbakst@aol.com	7855623100
The Clean Coder: A Code of Conduct for Professional Programmers	S06	akbakst@aol.com	7855623100
C# 8.0 and .NET Core 3.0 – Modern Cross-Platform Development	-	-	-
Agile Principles, Patterns, and Practices in C#	-	-	-
The Algorithm Design Manual	-	-	-

### Q 8 Display suppliers who did not supply any book (B-A)

```
SELECT supplier_name
FROM lms_book_details bd
    RIGHT OUTER JOIN lms_suppliers_details sd
        ON( sd.supplier_id = bd.supplier_id )
WHERE bd.book_code IS NULL
```

SUPPLIER_NAME
GODREJ FARM
BIG BAZAAR
D MART
JIO MART
KAVARI STORE
ZOMATO
GUPTA STOR

### Q9. Name of the member , status of his membership who have issued a book and paid at least fine more than 74 rs and the supplier does not have Gmail account

```
SELECT DISTINCT member_name,
    sd.email,
    fine_amount,
    membership_status
FROM lms_book_issue
    INNER JOIN lms_fine_details
        ON ( lms_book_issue.fine_range = lms_fine_details.fine_range )
    INNER JOIN lms_members
        ON ( lms_members.member_id = lms_book_issue.member_id )
    INNER JOIN lms_book_details
        ON ( lms_book_issue.book_code = lms_book_details.book_code )
    INNER JOIN lms_suppliers_details sd
        ON ( lms_book_details.supplier_id = sd.supplier_id )
```

WHERE lms\_fine\_details.fine\_amount > 74  
 AND Lower(SD.email) LIKE '%@gmail.com';

MEMBER_NAME	EMAIL	FINE_AMOUNT	MEMBERSHIP_STATUS
Ashish	rose@gmail.com	100	Permanent
Ashish	sing@gmail.com	100	Permanent

**Q10. Name of the member , status of his membership who have NEVER issued a book**

SELECT DISTINCT member\_name,  
 membership\_status,  
 book\_issue\_no  
 FROM lms\_members m  
 LEFT JOIN lms\_book\_issue bi  
 ON ( m.member\_id = bi.member\_id )  
 WHERE book\_issue\_no IS NULL;

MEMBER_NAME	MEMBERSHIP_STATUS
Mayur	Permanent
Ritesh	Permanent
Gaurav	Temporary
Nikhil	Permanent
Supriya	Temporary
Renuka	Temporary
Sandeep	Permanent
Preity	Permanent
Rasika	Temporary
Smita	Permanent
Saurabh	Temporary
Hetvi	Permanent
Sayali	Temporary
Snehal	Permanent
Writankar	Permanent
Shruti	Permanent
Nikita	Temporary

Amit	Permanent
Priti	Permanent
Sagar	Temporary

### Q11. Status and no\_of members in each status

```
SELECT membership_status,
       Count(*) cnt
FROM   lms_members
GROUP BY membership_status
```

MEMBERSHIP_STATUS	CNT
Temporary	12
Permanent	13

### Q12. Supplier id, Supplier name and no of books supplied by the supplier

```
SELECT sd.supplier_id,
       sd.supplier_name,
       Count(book_code) no_of_books_supplied
FROM   lms_suppliers_details sd
       LEFT JOIN lms_book_details bd
           ON ( sd.supplier_id = bd.supplier_id )
GROUP BY sd.supplier_id,
         sd.supplier_name
```

SUPPLIER_ID	SUPPLIER_NAME	NO_OF_BOOKS_SUPPLIED
S01	SINGAPORE SHOPPEE	7
S02	JK Stores	4
S06	AKBAR STORE	2
S03	ROSE BOOK STORE	8
S05	EINSTEIN BOOK GALLERY	1
S11	GODREJ FARM	0
S09	BIG BAZAAR	0
S08	D MART	0
S10	JIO MART	0

S04	KAVARI STORE	0
S12	ZOMATO	0
S07	GUPTA STORE	0

**Q13. Name of the book which has been issued more than 4 times and has more than 0 suppliers**

```

SELECT lms_book_issue.book_code,
       lms_book_details.book_title,
       Count(*)
FROM   lms_book_details
       INNER JOIN lms_book_issue
               ON ( lms_book_issue.book_code = lms_book_details.book_code )
WHERE  lms_book_details.supplier_id IS NOT NULL
GROUP BY lms_book_issue.book_code,
         lms_book_details.book_title
HAVING Count(book_issue_no) > 4

```

BOOK_CODE	BOOK_TITLE	COUNT(*)
BL000001	Java How To Do Program	6
BL000005	Java How To Do Program	6
BL000007	Let Us C	6
BL000002	Java: The Complete Reference	6

**Q14. Name of the supplier along with his contact number with an flag 'Y' or 'N' or 'NA'**

**-- 'y' -> he had supplied a book which has been issued to two or more times**

**-- 'n' --> he had supplied a book which has been issued to less than two times**

**-- 'NA' --> if he hasn't supplied any book**

```
SELECT sd_outer.supplier_name,  
       sd_outer.contact,  
       Decode(temp.flag, NULL, 'NA',  
              temp.flag) flag  
FROM   lms_suppliers_details sd_outer  
       LEFT JOIN (SELECT sd.supplier_id,  
                        CASE  
                          WHEN Count(bi.book_issue_no) >= 2 THEN 'Y'  
                          WHEN Count(bi.book_issue_no) < 2 THEN 'N'  
                        END flag  
FROM     lms_suppliers_details sd  
          INNER JOIN lms_book_details bd  
                   ON ( sd.supplier_id = bd.supplier_id)  
          LEFT JOIN lms_book_issue bi  
                   ON ( bd.book_code = bi.book_code )  
GROUP BY sd.supplier_id) temp  
ON ( temp.supplier_id = sd_outer.supplier_id );
```

SUPPLIER_NAME	CONTACT	FLAG
SINGAPORE SHOPPEE	9894123555	Y
JK Stores	9940123450	N
AKBAR STORE	7855623100	N
ROSE BOOK STORE	9444411222	Y
EINSTEN BOOK GALLARY	9542000001	N
GODREJ FARM	9542440001	NA
BIG BAZAAR	9445511222	NA
D MART	9940123450	NA
JIO MART	8644001452	NA

KAVARI STORE	8630001452	NA
ZOMATO	7855623440	NA
GUPTA STORE	9899023555	NA

**Q15. Total number of books placed on given rack number such that edition of the book is at least 3 and it is supplied by a supplier who has a rediff.com / gmail.com account and the book is issued to the students who are permanent in status**

```
- SELECT det.rack_num,
      Count(DISTINCT iss.book_code) count total
FROM   lms_book_details det
      INNER JOIN lms_suppliers_details sdet
            ON ( det.supplier_id = sdet.supplier_id )
      INNER JOIN lms_book_issue iss
            ON ( det.book_code = iss.book_code )
      INNER JOIN lms_members mem
            ON( mem.member_id = iss.member_id )
WHERE  det.book_edition >= 3
      AND ( Lower(sdet.email) LIKE '%gmail.com'
            OR Lower(sdet.email) LIKE '%redif.com' )
      AND Lower(mem.membership_status) = 'permanent'
GROUP BY det.rack_num;
```

RACK_NUM	TOTAL
A1	2
A3	1

**Q16. Total of number of all the books that have been issued to a member who stays in Delhi / Mumbai / Pune and book that was issued has arrived later than 1st July 2000 and supplied by a supplier who belongs to Delhi / Mumbai / Pune / Chennai**

```
SELECT DISTINCT member_name,  
               city,  
               Count(bd.book_code)  
FROM   lms_members m  
       INNER JOIN lms_book_issue bi  
         ON ( m.member_id = bi.member_id )  
       INNER JOIN lms_book_details bd  
         ON ( bd.book_code = bi.book_code )  
       INNER JOIN lms_suppliers_details sd  
         ON ( sd.supplier_id = bd.supplier_id )  
WHERE  Lower(city) IN ( 'delhi', 'mumbai', 'pune' )  
       AND date_arrival > To_date('01-jul-2000', 'dd-mm-yyyy')  
       AND Lower(address) IN ( 'delhi', 'mumbai', 'pune', 'chennai' )  
GROUP BY member_name, city
```

MEMBER_NAME	CITY	TOTAL
Amruta	PUNE	2