1)Convert bookstore.xml into json

<bookstore>

<book>

<title>Harry Potter</title>

<author>J.K. Rowling</author>

<price>29.99</price>

<available>true</available>

</book>

<book>

<title>The Hobbit</title>

<author>J.R.R. Tolkien</author>

<price>19.99</price>

<available>false</available>

</book>

</bookstore>

**here is the conversion of the given XML into JSON format**

{

"bookstore": {

"book": [

{

"title": "Harry Potter",

"author": "J.K. Rowling",

"price": 29.99,

"available": true

},

{

"title": "The Hobbit",

"author": "J.R.R. Tolkien",

"price": 19.99,

"available": false

}

]

}

}

**2)Write a query to give inner join,left outer join,right outer join and full outer join**

create table dep(D\_ID varchar(30) PRIMARY

KEY,D\_NAME varchar(30));

Query OK, 0 rows affected (0.04 sec)

create table emp(E\_ID varchar(30) PRIMARY KEY,E\_FName varchar(30),E\_Lname varchar(30),D\_ID varchar(30),FOREIGN KEY (D\_ID) REFERENCES dep(D\_ID));

Query OK, 0 rows affected (0.07 sec)

**1) INNER JOIN**

select e.E\_ID,e.E\_FName,e.E\_Lname,d.D\_NAME from emp e INNER JOIN dep

d ON e.D\_ID=d.D\_ID;

+------+---------+---------+--------+

| E\_ID | E\_FName | E\_Lname | D\_NAME |

+------+---------+---------+--------+

| 1 | john | doe | HR |

| 2 | jane | smith | sales |

| 3 | mike | johnson | IT |

| 4 | emily | davis | HR |

+------+---------+---------+--------+

4 rows in set (0.00 sec)

**2) LEFT OUTER JOIN**

select e.E\_ID,e.E\_FName,e.E\_Lname,d.D\_NAME from emp e LEFT OUTER JOIN

dep d ON e.D\_ID=d.D\_ID;

+------+---------+---------+--------+

| E\_ID | E\_FName | E\_Lname | D\_NAME |

+------+---------+---------+--------+

| 1 | john | doe | HR |

| 2 | jane | smith | sales |

| 3 | mike | johnson | IT |

| 4 | emily | davis | HR |

4 rows in set (0.00 sec)

**3) RIGHT OUTER JOIN**

mysql> select e.E\_ID,e.E\_FName,e.E\_Lname,d.D\_NAME from emp e RIGHT OUTER JOI

N dep d ON e.D\_ID=d.D\_ID;

+------+---------+---------+-----------+

| E\_ID | E\_FName | E\_Lname | D\_NAME |

+------+---------+---------+-----------+

| 1 | john | doe | HR |

| 4 | emily | davis | HR |

| 2 | jane | smith | sales |

| 3 | mike | johnson | IT |

| NULL | NULL | NULL | marketing |

+------+---------+---------+-----------+

5 rows in set (0.00 sec)

**4) FULL OUTER JOIN**

select e.E\_ID,e.E\_FName,e.E\_Lname,d.D\_NAME from emp e LEFT OUTER JOIN dep d ON e.D\_ID=d.D\_ID UNION select e.E\_ID,e.E\_FName,e.E\_Lname,d.D\_NAME from emp e RIGHT OUTER JOIN dep d ON e.D\_ID=d.D\_ID;

+------+---------+---------+-----------+

| E\_ID | E\_FName | E\_Lname | D\_NAME |

+------+---------+---------+-----------+

| 1 | john | doe | HR |

| 2 | jane | smith | sales |

| 3 | mike | johnson | IT |

| 4 | emily | davis | HR |

| NULL | NULL | NULL | marketing |

+------+---------+---------+-----------+

5 rows in set (0.01 sec)

**Find Duplicate records**

**1) Based on firstName**

select E\_FNAME,count(\*) from emp GROUP BY E\_FNAME HAVING COUNT(\*)>1;

+---------+----------+

| E\_FNAME | count(\*) |

+---------+----------+

| john | 2 |

+---------+----------+

1 row in set (0.00 sec)

**2) based on email**

select EMAIL,count(\*) from emp GROUP BY EMAIL HAVING COUNT(\*)>1;

+-----------------+----------+

| EMAIL | count(\*) |

+-----------------+----------+

| kapil@gmail.com | 2 |

| NULL | 3 |

+-----------------+----------+

2 rows in set (0.00 sec)

**3) Based on firstname and Last Name**

select E\_FNAME,E\_Lname,count(\*) from emp GROUP BY E\_FNAME,E\_lname HAV

ING COUNT(\*)>1;

+---------+---------+----------+

| E\_FNAME | E\_Lname | count(\*) |

+---------+---------+----------+

| john | davis | 2 |

+---------+---------+----------+

1 row in set (0.00 sec)

**4) Based on firstname and email**

select E\_FNAME,EMAIL,count(\*) from emp GROUP BY E\_FNAME,EMAIL HAVING

COUNT(\*)>1;

Empty set (0.00 sec)

mysql> select \* from emp;

+------+---------+---------+------+-----------------+

| E\_ID | E\_FName | E\_Lname | D\_ID | EMAIL |

+------+---------+---------+------+-----------------+

| 1 | john | doe | 10 | kapil@gmail.com |

| 2 | jane | smith | 20 | kapil@gmail.com |

| 3 | mike | johnson | 30 | NULL |

| 4 | emily | davis | 10 | NULL |

| 5 | john | davis | 10 | NULL |

| 6 | john | davis | 10 | dev@gmail |

+------+---------+---------+------+-----------------+

6 rows in set (0.00 sec)