-------to list all faculties and rooms which are not allocated as well as which are allocated

select f.fid, fname, cname, rname from faculty f left join course c on f.fid=c.fid left join room r on c.rid=r.rid union select f.fid, fname, cname, rname from faculty f right join course c on f.fid=c.fid right join room r on c.rid=r.rid

----list all faculties and rooms which are not allocated to any course

select fname, cname,'' rname”,cname -> from faculty f left join course c on c.fid=f.fid -> where cname is null -> union ->

-> select '' fname'', cname, rname, cname -> from room r left join course c on r.rid=c.rid -> where cname is null;

--------to list all the view in mysql

select Table\_name from information\_schema.Tables where table\_type like ‘view’ and table\_schema=’iacsdedacmay21’

create view myview

as

select deptno,max(sal),min(sal),avg(sal),count(\*)

from emp

where job=’analyst’

group by deptno

having count(\*) >=2;

select \* from myview

create view managerview as

select \*

from emp

where job=’Manager’

with read only;

---------materialized

budgeting purpose

data analytics decision

bournvita--- order

bournvita 9000

create materialized view myview

as

select \*

from product

where type=’consumable’

select \* from myview

--------- how to find first 12 record in mysql

uses limit clause

select \*

from emp

limit 12;

--------- how to find 12th record in mysql

select \*

from emp

limit 11,1;

--------to display employee which are highly paid

select \*

from emp

order by sal desc

limit 1;

--------to display employee which is 3rd highest

select \*

from emp

order by sal desc

limit 2,1

select \*

from emp

where sal=(select max(sal)

from emp)

select deptno,max(sal)

from emp

group by deptno

order by max(sal)

select max(sal)

from emp;

---------- to find nth highest in oracle

**Select sal**

**From emp e1**

**Where n-1=(select count(distinct(sal))**

**from emp e2**

**where e1.sal>e2.sal)**

**DCL---data control language**

**------to assign previleges**

**grant <previleges> on <tablename> to <username>@<server ip>**

**all------- all previleges**

**\* ------- all employee**

**grant all on noticetab to ‘\*’@’localhost’**

**---to remove previleges**

**revoke <previleges> on <tablename> from ‘user’@’localhost’**

|  |  |
| --- | --- |
| **Select** | **Delete** |
| **Insert** | **Update** |
| **Index** | **Create** |
| **Alter** | **Drop** |
| **All** | **Grant option** |

grant select,insert on category to 'u1'@'localhost' with grant option

DQL,DML,TCL,DCL,DDL,views,indexes,temporary table,limit---- top n analysis --- SQL

PL-SQL -----procedural language

if statement, loops, variable declaration,cursors, exception handling, procedures,functions,triggers

Normalization

1NF,2NF,3NF,BCNF (Boyce code NF)

to divide the data into multiple tables to reduce redundancy is called as nomaliztion

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Custid | Cname | address | Accno | Balance | Type | relmgr |
| 1 | Kishori | Aundh | 1 | 12345 | Saving | AA |
| 1 | Kishori | Baner | 2 | 123451 | Current | AA |
| 1 | Kishori | Baner | 3 | 12345 | demat | AA |
| 2 | Rajan | Aundh | 4 | 1111111 | Saving | BB |
| 3 | Revati | Aundh | 11 | 444444 | Saving | BB |
| 4 | Sachin | Deccan |  |  |  |  |

insertion anamoly ------

updation anamoly

deletion anamoly

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Custid | Accno | Balance | Type | relmgr |
| 1 | 1 | 12345 | Saving | AA |
| 1 | 2 | 123451 | Current | AA |
| 1 | 3 | 12345 | demat | AA |
| 2 | 4 | 1111111 | Saving | BB |
| 3 | 11 | 444444 | Saving | BB |
|  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Custid | Cname | address |
| 1 | Kishori | Baner |
| 2 | Rajan | Aundh |
| 3 | Revati | Aundh |
| 4 | Sachin | Deccan |
| 5 | Sonali | deccan |
|  |  |  |

insertion anamoly , updation anamoly,deletion anamoly these drawbacks will be removed

and redundancy will be also removed.

Normalization------Data modelling, E-R diagram

1. 1NF --- if every row and column in the table contains atomic value

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Studentid | Sname | subid | Subject name | marks | Phone number |
| 1 | Aditya | 15 | Java | 99 | 1234,345,678 |
| 1 | Aditya | 12 | Dbms | 98 | 1234,345,678 |
| 1 | Aditya | 13 | Web | 97 | 1234,345,678 |
| 2 | Akash | 15 | Java | 95 | 111,222 |
| 2 | Akash | 12 | dbms | 94 | 111,222 |
| 2 | Akash | 13 | web | 91 | 111,222 |
| 3 | Ajit | 14 | Java | 99 | 1234,345,678 |
|  |  |  |  |  |  |

in the table column phone number contains more than one value, so the table is not in 1 NF.

phone number

|  |  |  |
| --- | --- | --- |
| Studentid | Phone number | |
| 1 | 1234 | |
| 1 | 345 | |
| 1 | 678 | |
| 2 | 111 | |
| 2 | 222 | |
| 3 | 1234 | |
| 3 | 345 | |
| 3 | 678 | |
| Studentid | Sname | subid | | Subject name | marks |
| 1 | Aditya | 15 | | Java | 99 |
| 1 | Aditya | 12 | | Dbms | 98 |
| 1 | Aditya | 13 | | Web | 97 |
| 2 | Akash | 15 | | Java | 95 |
| 2 | Akash | 12 | | dbms | 94 |
| 2 | Akash | 13 | | web | 91 |
| 3 | Ajit | 14 | | Java | 99 |

To check the table is in 2 NF or Not

1. The tables should be in 1 NF
2. The table should not have any partial dependency.

What is partial dependency

if any non prime attribute(the attribute which is not part of candidate key) is dependent on portion of the candidate key

candicate key---minimal set of attributes that identify the row uniquely and which may become a primary key

non prime attribute --🡪 subject name, marks, student name

prime attributes--🡪 studenid,subjectid

studenid+subjectid---🡪marks

studentid--🡪sname

subjectid-🡪 subject name

|  |  |  |
| --- | --- | --- |
| Studentid | subid | marks |
| 1 | 15 | 99 |
| 1 | 12 | 98 |
| 1 | 13 | 97 |
| 2 | 15 | 95 |
| 2 | 12 | 94 |
| 2 | 13 | 91 |
| 3 | 14 | 99 |

|  |  |
| --- | --- |
| subid | Subject name |
| 15 | Java |
| 12 | Dbms |
| 13 | Web |
| 14 | Java |

|  |  |
| --- | --- |
| Studentid | Sname |
| 1 | Aditya |
| 2 | Akash |
| 3 | Ajit |

is it in 1 NF, is it in 2NF if not then convert it into 2 NF

Proj Proj Proj Empno Ename Grade Sal Proj Alloc

Code Type Desc scale Join Date Time

001 APP LNG 46 JONES A1 5 12/1/1998 24

001 APP LNG 92 SMITH A2 4 2/1/1999 24

001 APP LNG 96 BLACK B1 9 2/1/1999 18

004 MAI SHO 72 JACK A2 4 2/4/1999 6

004 MAI SHO 92 SMITH A2 4 5/5/1999 6

002 APP LNG 72 JACK A2 4 12/1/1998 12

example 2 --- is the given table in 2 NF if not convert it

* **Orderno**
* **Orderdate**
* **Itemno**
* **Qty**
* **Price**
* **Cname**
* **Custno**
* **Email**
* **Orderamt**
* **Salespersonno**
* **Salespersonname**
* **Locationid ----------location from where item dispatched**
* **Location name**

**One customer can place many order**

**One order contains many items**

**One order will be managed by many salesperson**

**One order belong to one customer**

**One order can be dispatched from different location**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Order no** | **orderdate** | **Item no** | **qty** | **price** | **cname** | **custno** | **email** | **amt** | **Salesperson no** | **sname** | **locid** | **lname** |
| **1** | **8 jun** | **1** | **1** | **1000** | **gayatri** | **1** | **g.cv** | **2050** | **100** | **x** | **11** | **delhi** |
| **1** | **8 jun** | **2** | **2** | **500** | **gayatri** | **1** | **g.cv** | **2050** | **101** | **y** | **11** | **delhi** |
| **1** | **8 jun** | **3** | **1** | **50** | **gayatri** | **1** | **g.cv** | **2050** | **100** | **y** | **12** | **mumbai** |
| **2** | **9 jun** | **1** | **2** | **900** | **yogesh** | **2** | **y.v** | **1060** | **102** | **z** | **14** | **Gujarath** |
| **2** | **9 jun** | **5** | **1** | **60** | **yogesh** | **2** | **y.v** | **1060** | **102** | **z** | **14** | **Gujarath** |
| **3** | **9jun** | **5** | **1** | **60** | **sagar** | **3** | **s.v** | **4200** | **100** | **x** | **100** | **x** |
| **3** | **9jun** | **10** | **2** | **70** | **sagar** | **3** | **s.v** | **4200** | **102** | **z** | **14** | **Gujarath** |
| **3** | **9jun** | **2** | **4** | **1000** | **sagar** | **3** | **s.v** | **4200** | **100** | **x** | **100** | **x** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |