Note:

There is Database as employees.

Views

A view is a virtual table based on a SELECT query. The query can contain columns, computed

columns, aliases, and aggregate functions from one or more tables. The tables on which the

view is based are called base tables. You can create a view by using the **CREATE VIEW** command:

Advantages of Views:

I. Simplify complex Query:

Views help simplify complex queries. If you have any frequently used complex query,

you can create a view based on it so that you can reference to the view by using a

simple SELECT statement instead of typing the query all over again.

B- Add extra security layers:

A table may expose a lot of data including sensitive data such as personal and banking

information. By using views and privileges, you can limit which data users can access by

exposing only the necessary data to them.

Creating Views:

to create a view to display the employees first and last name

(EMP_FNAME and EMP_LNAME), the attraction number (ATTRACT_NO) and the date

worked, you would do so as follows:

CREATE VIEW EMP_WORKED AS

SELECT E.EMP_LNAME, E.EMP_FNAME, H. ATTRACT_NO,H.DATE_WORKED

FROM employee E JOIN hours H

ON E.EMP_NUM = H.EMP_NUM;

```
mysql> CREATE VIEW EMP_WORKED AS
    -> SELECT E.EMP_LNAME, E.EMP_FNAME, H.ATTRACT_NO,H.DATE_WORKED
    -> FROM employee E JOIN hours H
    -> ON E.EMP_NUM = H.EMP_NUM;
Query OK, 0 rows affected (0.32 sec)

mysql> SELECT * FROM EMP_WORKED;
+------------+------------+------------+------------+
| EMP_LNAME  | EMP_FNAME  | ATTRACT_NO | DATE_WORKED |
+------------+------------+------------+------------+
| Calderdale | Emma       |      10034 | 2007-05-18 |
| Calderdale | Emma       |      10034 | 2007-05-20 |
| Ricardo    | Marshel    |      10034 | 2007-05-18 |
| Arshad     | Arif       |      30012 | 2007-05-23 |
| Arshad     | Arif       |      30044 | 2007-05-21 |
| Arshad     | Arif       |      30044 | 2007-05-22 |
| Denver     | Enrica     |      30011 | 2007-05-21 |
| Denver     | Enrica     |      30012 | 2007-05-22 |
| Namowa     | Mirrelle   |      10078 | 2007-05-18 |
| Namowa     | Mirrelle   |      10098 | 2007-05-18 |
| Namowa     | Mirrelle   |      10098 | 2007-05-19 |
+------------+------------+------------+------------+
11 rows in set (0.10 sec)
```

Views – using the WITH CHECK OPTION

The following view DISPLAYS employees who work in Theme Park

FR1001 using the WITH CHECK OPTION clause. This clause ensures that INSERTs and

UPDATEs cannot be performed on any rows that the view has not selected.

CREATE VIEW EMPFR AS

SELECT *

FROM EMPLOYEE

WHERE PARK_CODE = "FR1001"

WITH CHECK OPTION;

```
mysql> CREATE VIEW EMPFR AS
    -> SELECT *
    -> FROM EMPLOYEE
    -> WHERE PARK_CODE = "FR1001"
    -> WITH CHECK OPTION;
ERROR 1050 (42S01): Table 'EMPFR' already exists
mysql> select * from empfr;
+---------+-----------+-----------+-----------+------------+---------------+---------------+-----------+-----------+
| EMP_NUM | EMP_TITLE | EMP_LNAME | EMP_FNAME | EMP_DOB    | EMP_HIRE_DATE | EMP_AREA_CODE | EMP_PHONE | PARK_CODE |
+---------+-----------+-----------+-----------+------------+---------------+---------------+-----------+-----------+
|     100 | Ms        | Calderdale| Emma      | 1972-06-15 | 1992-03-15    | 0181          | 324-9134  | FR1001    |
|     102 | Mr        | Arshad    | Arif      | 1969-11-14 | 1990-12-20    | 7253          | 675-8993  | FR1001    |
|     105 | Ms        | Namowa    | Mirrelle  | 1990-03-14 | 2006-11-08    | 0181          | 890-3243  | FR1001    |
+---------+-----------+-----------+-----------+------------+---------------+---------------+-----------+-----------+
3 rows in set (0.09 sec)
```

<u>UPDATING VIEW "EMPFR":</u>

UPDATE EMPFR

SET PARK_CODE = "UK3452"

WHERE EMP_NUM = 100;

```
mysql> UPDATE EMPFR
    -> SET PARK_CODE = "UK3452"
    -> WHERE EMP_NUM = 100;
ERROR 1369 (HY000): CHECK OPTION failed 'themepark.empfr'
```

This is because if the update was to occur, the view would no longer be able to see this employee.