NAMRATHA V
1BM17CS151
C3

LAB 9- Hive : Employee Table

Date: 21-12-2020

Write Queries in Hive to do the following

1. **Create an external table named with the following attributes -> Empl_ID ->Emp_Name -> Designation -> Salary**
2. **Load data into table from a given file**
3. **Create a view to Generate a query to retrieve the employee details who earn a salary of more than Rs 30000.**
4. **Alter the table to add a column Dept_Id and Generate a query to retrieve the employee details in order by using Dept_Id**
5. **Generate a query to retrieve the number of employees in each department whose salary is greater than 30000**
6. **Create another table Department with attributes -> Dept_Id ->Dept_name ->Emp_Id**
7. **Display the cumulative details of each employee along with department details**

1. Create an external table named with the following attributes -> Empl_ID ->Emp_Name -> Designation -> Salary

```
>CREATE DATABASE IF NOT EXISTS EMPLOYEES_151 COMMENT ‘EMPLOYEE Details’ WITH DBPROPERTIES(‘creator’=’Namratha’);
>SHOW DATABASES;
>DESCRIBE DATABASE EMPLOYEE_151;
>USE EMPLOYEES_151;
> CREATE EXTERNAL TABLE IF NOT EXISTS EMPLOYEE_151(EMP_ID INT,EMP_NAME STRING,DESIGNATION STRING,SALARY FLOAT) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\T' LOCATION '/EMPLOYEE_INFO';
>DESCRIBE FORMATTED EMPLOYEE_151;
```

```
1 CREATE DATABASE IF NOT EXISTS EMPLOYEES_151 COMMENT 'EMPLOYEE Details' WITH DBPROPERTIES('creator'='Namratha');
2 SHOW DATABASES;
3 DESCRIBE DATABASE EMPLOYEES_151;
```

	db_name	comment	location	owner_name	owner_type	paramete
1	employees_151	EMPLOYEE Details	hdfs://namenode:8020/user/hive/warehouse/employees_151.db	root	USER	

```
4 USE EMPLOYEES_151;
5 CREATE EXTERNAL TABLE IF NOT EXISTS EMPLOYEE_151 (Emp_ID INT,Emp_Name STRING,Designation STRING,Salary FLOAT)
6   ROW FORMAT DELIMITED FIELDS TERMINATED BY '\t' LOCATION '/EMPLOYEE_INFO';
7 DESCRIBE FORMATTED EMPLOYEE_151;
```

	col_name	data_type	comme
3	emp_id	int	
4	emp_name	string	
5	designation	string	
6	salary	float	
7		NULL	NULL
8	# Detailed Table Information	NULL	NULL
9	Database:	default	NULL
10	Owner:	root	NULL
11	CreateTime:	Sun Dec 20 04:38:18 UTC 2020	NULL
12	LastAccessTime:	UNKNOWN	NULL
13	Retention:	0	NULL
14	Location:	hdfs://namenode:8020/EMPLOYEE_INFO	NULL
15	Table Type:	EXTERNAL_TABLE	NULL
16	Table Parameters:	NULL	NULL
17		EXTERNAL	TRUE
18		transient_lastDdlTime	160843
19		NULL	NULL

2. Load data into table from a given file

```
>INSERT INTO TABLE EMPLOYEE_151
VALUES(1,’Nam’,’Manager’,1000000),(2,’Amy’,’Clerk’,50000),(3,’Pen
ny’,’Intern’,20000),(4,’Shelly’,’HR’,35000);
>SELECT * FROM EMPLOYEE_151;
```

```
7 LOAD DATA LOCAL INPATH '/home/lenovo/Desktop/Nam-BDA-LAB/LAB9/Employee.txt' OVERWRITE INTO TABLE EMPLOYEE_151;
8 INSERT INTO TABLE employee_151 VALUES(1,'Nam','Manager',1000000),(2,'Amy','Clerk',5000),(3,'Penny','Intern',20000),
9 (4,'Shelly','HR',35000);
10 SELECT * FROM employee_151;
```

▶ Execute 5000

Query History Saved Queries Query Builder Results

Grid Chart Columns Search Export Expand

	employee_151.emp_id	employee_151.emp_name	employee_151.designation	employee_151.salary
1	1	Nam	Manager	1000000
2	2	Amy	Clerk	5000
3	3	Penny	Intern	20000
4	4	Shelly	HR	35000

3. Create a view to Generate a query to retrieve the employee details who earn a salary of more than Rs 30000.

```
>CREATE VIEW EMPLOYEE_VIEW AS SELECT * FROM EMPLOYEE_151 WHERE
SALARY>30000;
>SELECT * FROM EMPLOYEE_VIEW;
```

```
10 CREATE VIEW EMPLOYEE_VIEW AS SELECT * FROM employee_151 WHERE Salary>30000;
11 SELECT * FROM EMPLOYEE_VIEW;
```

	employee_view.emp_id	employee_view.emp_name	employee_view.designation	employee_view.salary
1	1	Nam	Manager	1000000
2	4	Shelly	HR	35000

4. Alter the table to add a column Dept_Id and Generate a query to retrieve the employee details in order by using Dept_Id

```
>ALTER TABLE EMPLOYEE_151 ADD COLUMNS (DEPT_ID INT);
>DESCRIBE FROMATTED EMPLOYEE_151;
```

```
12 ALTER TABLE EMPLOYEE_151 ADD COLUMNS (Dept_ID INT);
13 DESCRIBE FORMATTED EMPLOYEE_151;
```

	col_name	data_type	comme
1	# col_name	data_type	comme
2		NULL	NULL
3	emp_id	int	
4	emp_name	string	
5	designation	string	
6	salary	float	
7	dept_id	int	
8		NULL	NULL
9	# Detailed Table Information	NULL	NULL
10	Database:	default	NULL
11	Owner:	root	NULL
12	CreateTime:	Sun Dec 20 04:38:18 UTC 2020	NULL
13	LastAccessTime:	UNKNOWN	NULL
14	Retention:	0	NULL
15	Location:	hdfs://namenode:8020/EMPLOYEE_INFO	NULL
16	Table Type:	EXTERNAL_TABLE	NULL

```
INSERT INTO TABLE EMPLOYEE_151 VALUES(1,'Nam','Manager',10000000,1),(2,'Amy','Clerk',50000,2),(3,'Penny','Intern',20000,3),(4,'Shelly','HR',35000,3);
SELECT * FROM EMPLOYEE_151;
```

1	Nam	Manager	10000000	1
2	Amy	Clerk	50000	2
3	Penny	Intern	20000	3
4	Shelly	HR	35000	3

5. Generate a query to retrieve the number of employees in each department whose salary is greater than 30000

```
SELECT DEPT_ID, COUNT(DEPT_ID) FROM EMPLOYEE_151 WHERE SALARY > 30000 GROUP BY DEPT_ID;
```

```
SELECT DEPT_ID, COUNT(DEPT_ID) FROM EMPLOYEE_151 WHERE SALARY > 30000 GROUP BY DEPT_ID;
```

dept_id	_c1
NULL	0
1	1
2	1
3	1

6. Create another table Department with attributes -> Dept_Id ->Dept_name ->Emp_Id

```
CREATE EXTERNAL TABLE IF NOT EXISTS DEPARTMENT_151(DEPT_ID INT, DEPT_NAME STRING, EMP_ID INT) ROW FORMAT DELIMITED FIELDS TERMINATED BY '\T' LOCATION '/DEPARTMENT';
```

```
CREATE EXTERNAL TABLE IF NOT EXISTS DEPARTMENT_151(DEPT_ID INT, DEPT_NAME STRING, EMP_ID INT)
    ROW FORMAT DELIMITED FIELDS TERMINATED BY '\T' LOCATION '/DEPARTMENT';
DESCRIBE FORMATTED DEPARTMENT_151;
```

col_name	data_type	comment
# col_name	data_type	comment
	NULL	NULL
dept_id	int	
dept_name	string	
emp_id	int	

```
INSERT INTO TABLE DEPARTMENT_151 VALUES(1,'Management',1),(2,'Finance',2),(3,'HR',3),(3,'HR',4);
SELECT * FROM DEPARTMENT_151;
```

	department_151.dept_id	department_151.dept_name	department_151.emp_id
1	1	Management	1
2	2	Finance	2
3	3	HR	3
4	3	HR	4

7. Display the cumulative details of each employee along with department details

```
SELECT * FROM EMPLOYEE_151 JOIN DEPARTMENT_151 ON
EMPLOYEE_151.DEPT_ID = DEPARTMENT_151.DEPT_ID;
```

```
SELECT * FROM EMPLOYEE_151 JOIN DEPARTMENT_151 ON EMPLOYEE_151.DEPT_ID = DEPARTMENT_151.DEPT_ID;
```

employee_151.emp_id	employee_151.emp_name	employee_151.designation	employee_151.salary	employee_151.dept_id	department_151.dept_id	department_151.dept_name	department_151.emp_id
1	Nam	Manager	10000000	1	1	Management	1
2	Amy	Clerk	50000	2	2	Finance	2
3	Penny	Intern	20000	3	3	HR	3
4	Shelly	HR	35000	3	3	HR	4