

Hexaware Technologies LTD Foundation Training Program(FTP)

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Assignment Day: 3 (MySQL)

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Note: Create a table named 'Employee' with columns 'id','ename','location','sal' and insert 30+ records.

The screenshot displays the MySQL Workbench interface. The left sidebar shows the 'SCHEMAS' panel with a tree view containing 'mycart', 'projects', 'sakila', 'shopmedb', 'Tables', 'Views', 'Stored Procedures', 'Functions', 'sys', and 'world'. The main editor window shows the following SQL script:

```
2 • create Database Hexaware;
3 • use Hexaware;
4 • create table employee(id int, ename varchar(50),location varchar(50),sal int);
5 • insert into employee values(1,'Suraj','Muzaffarpur',42000);
6 • insert into employee values(1,'Suraj','Muzaffarpur',42000),(2,'Palash','Bhopal',24000),(3,'Anoop','Indore',34000),
7 (4,'Pranay','Hyderabad',44000),(5,'Suraj','Gaya',19000),(6,'Kritik','Bangaore',51000),(7,'Anoop','Chhapra',31000),(8,'Palash','Bangalore',
8 (9,'Kedar','Hyderabad',19500),(10,'Sasidhar','Bangalore',57000),(11,'Sam','Pune',54000),
9 (12,'Viruthik','Mumbai',12000),(13,'Swarna','Nagpur',18000),(14,'Yash','Delhi',34000),(15,'Khalid','Hyderabad',10000),
10 (16,'Rahul','Chennai',33000),(17,'Prasanna','Mumbai',21000),(18,'Rahul','Jaipur',37500),(19,'Sheshank','Jaipur',34000),
11 (20,'Neha','Hyderabad',38000),(21,'Nafisa','Hyderabad',13000),(22,'Jayanth','Telangana',45000),(23,'Kritik','Bangalore',18000),
12 (24,'Gaurav','Hyderabad',2000),(25,'Abhishek','Mumbai',55000),(26,'Ratnesh','Indore',21000),(27,'Veera','Chennai',100000),
13 (28,'Pranay','Gurgaon',80000),(29,'Suraj','Bangalore',99999),(30,'Swarna','Punjab',31000),(31,'Khalid','Bhopal',37000);
```

The bottom output window shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	13:44:13	show databases	9 row(s) returned	0.016 sec / 0.000 sec
2	13:44:38	create Database Hexaware	1 row(s) affected	0.031 sec
3	13:44:49	show databases	10 row(s) returned	0.016 sec / 0.000 sec
4	13:45:05	use Hexaware	0 row(s) affected	0.000 sec
5	13:48:47	create table employee(id int, ename varchar(50),location varchar(50),sal int)	0 row(s) affected	0.125 sec
6	13:49:45	insert into employee values(1,'Suraj','Muzaffarpur',42000)	Error Code: 1054. Unknown column 'Suraj' in field list'	0.031 sec
7	13:50:02	insert into employee values(1,'Suraj','Muzaffarpur',42000)	1 row(s) affected	0.016 sec
8	14:06:45	insert into employee values(1,'Suraj','Muzaffarpur',42000),(2,'Palash','Bhopal',24000),...	31 row(s) affected Records: 31 Duplicates: 0 Warnings: 0	0.031 sec

Question 1:How many records are there? Show all records from the table.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
select * from employee;
```

The Result Grid displays the following data:

	id	ename	location	sal
1	1	Suraj	Muzaffarpur	42000
2	2	Palash	Bhopal	24000
3	3	Anoop	Indore	34000
4	4	Pranay	Hyderabad	44000
5	5	Suraj	Gaya	19000
6	6	Kritik	Bangalore	51000
7	7	Anoop	Chhapra	31000
8	8	Palash	Bangalore	39000
9	9	Kedar	Hyderabad	19500
10	10	Sasidhar	Bangalore	57000
11	11	Sam	Pune	54000
12	12	Viruthik	Mumbai	12000

The Output tab shows the following message:

```
14:09:39 select * from employee LIMIT 0, 1000
32 row(s) returned
```

Q.2: Display all the records location-wise;

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
select * from employee order by location;
```

The Result Grid displays the following data:

	id	ename	location	sal
8	8	Palash	Bangalore	39000
10	10	Sasidhar	Bangalore	57000
23	23	Kritik	Bangalore	18000
29	29	Suraj	Bangalore	99999
6	6	Kritik	Bangalore	51000
2	2	Palash	Bhopal	24000
31	31	Khalid	Bhopal	37000
16	16	Rahul	Chennai	33000
27	27	Veera	Chennai	100000
7	7	Anoop	Chhapra	31000
14	14	Yash	Delhi	34000
5	5	Suraj	Gaya	19000
28	28	Pranay	Gurgaon	80000

The Output tab shows the following message:

```
14:12:17 select * from employee LIMIT 0, 1000
31 row(s) returned
14:13:25 select * from employee order by location LIMIT 0, 1000
31 row(s) returned
```

Q. 3. Group by salary: Employees having the common salary.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
21 • select max(sal) as sec_min_sal,ename,location from (select sal,ename,location from employee order by sal limit 2) as temp_table;  
22 • update employee set location='Hyderabad' where id=31;  
23 • select ename,location,sal from employee where location='Hyderabad' and sal<20000;  
24 • select sal,count(*) as com_sal from employee group by(sal) order by com_sal desc;  
25
```

The Result Grid shows the output of the last query:

sal	com_sal
34000	3
31000	2
18000	2
21000	2
24000	1
44000	1
19000	1
51000	1
39000	1
19500	1
57000	1
54000	1
12000	1

The Output pane shows the execution of the queries:

#	Time	Action	Message	Duration / Fetch
91	15:35:15	select sal,count(*) as com_sal from employee group by(sal) LIMIT 0, 1000	26 row(s) returned	0.000 sec / 0.000 sec
92	15:36:32	select sal,count(*) as com_sal from employee group by(sal) order by com_sal desc ...	26 row(s) returned	0.000 sec / 0.000 sec

Q.4: Group by location: No of employee belonging to Same location

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
14 • select * from employee;  
15 • delete from employee where id=1;  
16 • select * from employee order by location;  
17 • select ename , sal as salary , count(ename) as total from employee group by sal having count(ename)>1;  
18 • select location, count(*) as total_emp from employee group by location order by total_emp desc;
```

The Result Grid shows the output of the last query:

location	total_emp
Hyderabad	5
Bangalore	4
Mumbai	3
Bhopal	2
Indore	2
Chennai	2
Jaipur	2
Gaya	1
Bangaore	1
Chhapra	1
Pune	1
Nagpur	1
Delhi	1

The Output pane shows the execution of the queries:

#	Time	Action	Message	Duration / Fetch
23	14:22:26	select location, count(*) as total_emp from employee group by location order by tot...	18 row(s) returned	0.016 sec / 0.000 sec
24	14:22:37	select location, count(*) as total_emp from employee group by location order by tot...	18 row(s) returned	0.000 sec / 0.000 sec

Q.5: Group by location and name: How many employees are belonging to same location and having the same name:

MySQL Workbench interface showing the following SQL queries in the SQL File 17*:


```

15 • delete from employee where id=1;
16 • select * from employee order by location;
17 • select ename , sal as salary , count(ename) as total from employee group by sal having count(ename)>1;
18 • select location, ename ,count(*) as total_emp from employee group by location,ename order by location;
19 • select location, ename ,sal,count(*) as total_emp from employee group by location,ename,sal order by location;
    
```

 The Result Grid shows the output of the last query (Query 19):

location	ename	total_emp
Bangalore	Kritik	2
Bangalore	Palash	1
Bangalore	Sasidhar	1
Bangalore	Suraj	1
Bhopal	Palash	1
Chennai	Rahul	1
Chennai	Veera	1
Chhapra	Anoop	1
Delhi	Yash	1
Gaya	Suraj	1
Gurgaon	Pranay	1
Hyderabad	Gaurav	1
Hyderabad	Kedar	1

 The Output pane shows the execution of Query 19:

#	Time	Action	Message	Duration / Fetch
40	14:40:17	select location, ename ,sal,count(location) as total_emp from employee group by lo...	31 row(s) returned	0.000 sec / 0.000 sec
41	14:42:19	select location, ename ,count(*) as total_emp from employee group by location,en...	29 row(s) returned	0.000 sec / 0.000 sec

Q.6:Group by location,name and salary: How many employees belong to same location, have the same name and common salary:

MySQL Workbench interface showing the following SQL queries in the SQL File 17*:


```

16 • select * from employee order by location;
17 • select ename , sal as salary , count(ename) as total from employee group by sal having count(ename)>1;
18 • select location, ename ,count(*) as total_emp from employee group by location,ename order by location;
19 • select location, ename ,sal,count(*) as total_emp from employee group by location,ename,sal order by location;
20
    
```

 The Result Grid shows the output of the last query (Query 19):

location	ename	sal	total_emp
Bangalore	Kritik	18000	1
Bangalore	Kritik	51000	1
Bangalore	Palash	39000	1
Bangalore	Sasidhar	57000	1
Bangalore	Suraj	99999	1
Bhopal	Palash	24000	1
Chennai	Rahul	33000	1
Chennai	Veera	100000	1
Chhapra	Anoop	31000	1
Delhi	Yash	34000	1
Gaya	Suraj	19000	1
Gurgaon	Pranay	80000	1
Hyderabad	Gaurav	2000	1

 The Output pane shows the execution of Query 19:

#	Time	Action	Message	Duration / Fetch
41	14:42:19	select location, ename ,count(*) as total_emp from employee group by location,en...	29 row(s) returned	0.000 sec / 0.000 sec
42	14:42:45	select location, ename ,sal,count(*) as total_emp from employee group by location...	31 row(s) returned	0.000 sec / 0.000 sec

Q.7: Find the Second least salary

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
18 • select location, ename ,count(*) as total_emp from employee group by location,ename order by location;
19 • select location, ename ,sal,count(*) as total_emp from employee group by location,ename,sal order by location;
20 • select min(sal) from employee;
21 • select max(sal) as sec_min_sal,ename,location from (select sal,ename,location from employee order by sal limit 2) as temp_tabel;
22 • update employee set location='Hyderabad' where id=31;
```

The Result Grid shows the following data:

sec_min_sal	ename	location
10000	Gaurav	Hyderabad

The Output pane shows the following messages:

#	Time	Action	Message	Duration / Fetch
47	14:49:56	select max(sal) as sec_min_sal from (select sal from employee order by sal limit 2) a...	1 row(s) returned	0.000 sec / 0.000 sec
48	14:51:03	select max(sal) as sec_min_sal,ename,location from (select sal,ename,location from ...	1 row(s) returned	0.000 sec / 0.000 sec

Q.8: List of Employee from location Hyderabad having salary < 20,000.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
14 • select * from employee;
15 • delete from employee where id=1;
16 • select * from employee order by location;
17 • select ename , sal as salary , count(ename) as total from employee group by sal having count(ename)>1;
18 • select location, ename ,count(*) as total_emp from employee group by location,ename order by location;
19 • select location, ename ,sal,count(*) as total_emp from employee group by location,ename,sal order by location;
20 • select min(sal) from employee;
21 • select max(sal) as sec_min_sal,ename,location from (select sal,ename,location from employee order by sal limit 2) as temp_tabel;
22 • update employee set location='Hyderabad' where id=31;
23 • select ename,location,sal from employee where location='Hyderabad' and sal<20000;
24 •
```

The Result Grid shows the following data:

ename	location	sal
Kedar	Hyderabad	19500
Khalid	Hyderabad	10000
Nafisa	Hyderabad	13000
Gaurav	Hyderabad	2000

The Output pane shows the following messages:

#	Time	Action	Message	Duration / Fetch
74	15:15:34	use Hexaware	0 row(s) affected	0.000 sec
75	15:15:43	select ename,location,sal from employee where location='Hyderabad' and sal<200...	4 row(s) returned	0.016 sec / 0.000 sec

Qn.9. Find location wise highest salary.

The screenshot shows MySQL Workbench with the following SQL queries in the editor:

```
28 # 9.Location-wise highest salary
29 • select location as Location,ename, max(sal) as highest_sal from employee group by location order by highest_sal desc;
30 # 10.Overall salary given to employees from each location
31 • select location , sum(sal) as total_sal from employee group by location order by total_sal desc;
32
```

The result grid for query 29 is displayed:

Location	ename	highest_sal
Chennai	Rahul	100000
Bangalore	Kritik	99999
Gurgaon	Pranay	80000
Mumbai	Viruthik	55000
Pune	Sam	54000
Telangana	Jayanth	45000
Hyderabad	Pranay	44000
Muzaffarpur	Suraj	42000
Hyderabad	Neha	38000
Jaipur	Rahul	37500
Indore	Anoop	34000
Delhi	Yash	34000

The output pane shows the execution of query 31:

#	Time	Action	Message	Duration / Fetch
38	11:16:46	select location as Location,ename, max(sal) as highest_sal from employee group b...	17 row(s) returned	0.000 sec / 0.000 sec
39	11:23:40	select location as Location,ename, max(sal) as highest_sal from employee group b...	17 row(s) returned	0.000 sec / 0.000 sec

Qn.10. What salary is given to employees of each particular location.

The screenshot shows MySQL Workbench with the same SQL queries as in the previous image. The result grid for query 31 is displayed:

location	total_sal
Bangalore	264999
Chennai	133000
Hyderabad	125500
Mumbai	88000
Gurgaon	80000
Jaipur	71500
Indore	55000
Pune	54000
Telangana	45000
Muzaffarpur	42000
Hyderabad	38000
Delhi	34000

The output pane shows the execution of query 40:

#	Time	Action	Message	Duration / Fetch
39	11:23:40	select location as Location,ename, max(sal) as highest_sal from employee group b...	17 row(s) returned	0.000 sec / 0.000 sec
40	11:25:30	select location , sum(sal) as total_sal from employee group by location order by tot...	17 row(s) returned	0.015 sec / 0.000 sec

NOTE: I have added 'department_name' columns. Departments: HR,IT,Sales

The screenshot shows the MySQL Workbench interface with the following SQL queries and results:

```
33 • Alter table employee add (dep_name varchar(50));
34 • desc employee;
35 • update employee set dep_name='Sales' where sal>0 and sal<20000;
36 • update employee set dep_name='Hr' where sal>= 20000 and sal<45000;
37 • update employee set dep_name='IT' where sal>=45000;
38
39 # 11. Department-wise salary
40 • select dep_name as Department, sum(sal) as highest_sal from employee group by dep_name;
```

Result Grid:

location	total_sal
Bangalore	264999
Chennai	133000
Hyderabad	125500
Mumbai	88000
Gurgaon	80000
Jaipur	71500
Indore	55000

Output:

#	Time	Action	Message	Duration / Fetch
39	11:23:40	select location as Location,ename, max(sal) as highest_sal from employee group b...	17 row(s) returned	0.000 sec / 0.000 sec
40	11:25:30	select location , sum(sal) as total_sal from employee group by location order by tot...	17 row(s) returned	0.015 sec / 0.000 sec

Qn.11.Find Department-wise salary.

The screenshot shows the MySQL Workbench interface with the following SQL queries and results:

```
33 • Alter table employee add (dep_name varchar(50));
34 • desc employee;
35 • update employee set dep_name='Sales' where sal>0 and sal<20000;
36 • update employee set dep_name='Hr' where sal>= 20000 and sal<45000;
37 • update employee set dep_name='IT' where sal>=45000;
38
39 # 11. Department-wise salary
40 • select dep_name as Department, sum(sal) as highest_sal from employee group by dep_name;
```

Result Grid:

Department	highest_sal
Hr	500500
Sales	111500
IT	541999

Output:

#	Time	Action	Message	Duration / Fetch
40	11:25:30	select location , sum(sal) as total_sal from employee group by location order by tot...	17 row(s) returned	0.015 sec / 0.000 sec
41	11:28:15	select dep_name as Department, sum(sal) as highest_sal from employee group by ...	3 row(s) returned	0.000 sec / 0.000 sec

Qn.12. Find Location and department-wise Highest salary.

The screenshot shows MySQL Workbench with a SQL query in the editor and its results in the Result Grid. The query is:

```
# 12. Location and department-wise highest salary
select location,dep_name,max(sal) as highest_sal from employee group by location,dep_name;
```

The Result Grid displays the following data:

location	dep_name	highest_sal
Bhopal	Hr	24000
Indore	Hr	34000
Hyderabad	Hr	44000
Gaya	Sales	19000
Bangalore	IT	99999
Chhapra	Hr	31000
Bangalore	Hr	39000
Hyderabad	Sales	19500
Pune	IT	54000
Mumbai	Sales	12000
Nagpur	Sales	18000
Delhi	Hr	34000

The Output pane shows the execution of the query, indicating that 23 row(s) were returned.

Qn.13. Find Name and salary of employee and sort them in ascending order by their salary.

The screenshot shows MySQL Workbench with a SQL query in the editor and its results in the Result Grid. The query is:

```
# 13. Show salary of each employee
select ename as Name ,sal as salary from employee order by salary;
```

The Result Grid displays the following data:

Name	salary
Gaurav	2000
Khalid	10000
Viruthik	12000
Nafisa	13000
Swarna	18000
Kritik	18000
Suraj	19000
Kedar	19500
Prasanna	21000
Ratnesh	21000
Palash	24000
Anoop	31000

The Output pane shows the execution of the query, indicating that 31 row(s) were returned.

Thank You