

Note : Create the following dummy table in MySQL Workbench using CREATE FUNCTION-

Sample Table: **Employees**

EmpID	EmpName	Department	City	Salary	HireDate
101	Rahul Mehta	Sales	Delhi	55000	2020-04-12
102	Priya Sharma	HR	Mumbai	62000	2019-09-25
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
104	Neha Patel	Sales	Delhi	48000	2022-01-14
105	Karan Joshi	Marketing	Pune	45000	2018-07-22
106	Divya Nair	IT	Chennai	81000	2019-12-11
107	Raj Kumar	HR	Delhi	60000	2020-05-28
108	Simran Kaur	Finance	Mumbai	58000	2021-08-03
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18
110	Anjali Das	Sales	Kolkata	51000	2023-01-15

Question 1 : Show employees working in either the 'IT' or 'HR' departments.

Ans:-

The screenshot displays the MySQL Workbench interface. On the left, the 'SCHEMAS' pane shows a tree view with 'company_db' expanded, containing 'employees_data'. The main editor shows a SQL query:
36 **##-----employees working in either the IT or HR departments**
37 **• select ***
38 **from Employees_data**
39 **where Department = 'IT' OR Department = 'HR';**
40
41
Below the query, the 'Result Grid' shows the following data:

EmpID	EmpName	Department	City	Salary	HireDate
102	Priya Sharma	HR	Mumbai	62000	2019-09-25
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
106	Divya Nair	IT	Chennai	81000	2019-12-11
107	Raj Kumar	HR	Delhi	60000	2020-05-28
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18

The 'Output' pane at the bottom shows the execution log with two entries:
1. Time: 12:25:36, Action: select * from Employees where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000, Message: Error Code: 1146. Table 'employees.employees' doesn't exist, Duration / Fetch: 0.000 sec.
2. Time: 12:25:51, Action: select * from Employees_data where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000, Message: 5 row(s) returned, Duration / Fetch: 0.000 sec / 0.000 sec.

Question 2 : Retrieve employees whose department is in 'Sales', 'IT', or 'Finance'.

Ans:-

The screenshot shows the MySQL Workbench interface. The left sidebar displays the database schema, including the 'employees_data' table with columns: EmpID, EmpName, Department, City, Salary, and HireDate. The main editor contains the following SQL query:

```
41 ##-----whose department is in 'Sales', 'IT', or 'Finance'.
42 • select *
43 from Employees_data
44 where Department in ('Sales', 'IT', 'Finance');
45
```

The 'Result Grid' shows the following data:

EmpID	EmpName	Department	City	Salary	HireDate
101	Rahul Mehta	Sales	Delhi	55000	2020-04-12
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
104	Neha Patel	Sales	Delhi	48000	2022-01-14
106	Divya Nair	IT	Chennai	81000	2019-12-11
108	Simran Kaur	Finance	Mumbai	58000	2021-08-03
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18
110	Anjali Das	Sales	Kolkata	51000	2023-01-15

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
8	12:20:44	select * from Employees_data LIMIT 0, 2000	10 row(s) returned	0.000 sec / 0.000 sec
9	12:25:36	select * from Employees where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000	Error Code: 1146. Table 'employees.employees' doesn't exist	0.000 sec
10	12:25:51	select * from Employees_data where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
11	12:42:17	select * from Employees_data where Department in ('Sales', 'IT', 'Finance') LIMIT 0, 2000	7 row(s) returned	0.000 sec / 0.000 sec

Question 3 : Display employees whose salary is between ₹50,000 and ₹70,000.

Ans:-

The screenshot shows the MySQL Workbench interface. The left sidebar displays the database schema, including the 'employees_data' table with columns: EmpID, EmpName, Department, City, Salary, and HireDate. The main editor contains the following SQL query:

```
46
47 ##-----salary between ₹50,000 and ₹70,000
48 • select *
49 from Employees_data
50 where Salary between 50000 and 70000;
51
```

The 'Result Grid' shows the following data:

EmpID	EmpName	Department	City	Salary	HireDate
101	Rahul Mehta	Sales	Delhi	55000	2020-04-12
102	Priya Sharma	HR	Mumbai	62000	2019-09-25
107	Raj Kumar	HR	Delhi	60000	2020-05-28
108	Simran Kaur	Finance	Mumbai	58000	2021-08-03
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18
110	Anjali Das	Sales	Kolkata	51000	2023-01-15

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
9	12:25:36	select * from Employees where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000	Error Code: 1146. Table 'employees.employees' doesn't exist	0.000 sec
10	12:25:51	select * from Employees_data where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
11	12:42:17	select * from Employees_data where Department in ('Sales', 'IT', 'Finance') LIMIT 0, 2000	7 row(s) returned	0.000 sec / 0.000 sec
12	12:46:21	select * from Employees_data where Salary between 50000 and 70000 LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec

Question 4 : List employees whose names start with the letter 'A'.

Ans:-

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'employees_data' selected. The main editor contains the following SQL query:

```
52
53 ##-----names start with letter 'A'
54 • select *
55 from Employees_data
56 where EmpName like 'A%';
57
```

The 'Result Grid' shows the following data:

EmpID	EmpName	Department	City	Salary	HireDate
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18
110	Arjali Das	Sales	Kolkata	51000	2023-01-15

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
10	12:25:51	select * from Employees_data where Department = 'IT' OR Department = 'HR' LIMIT 0, 2000	5 row(s) returned	0.000 sec / 0.000 sec
11	12:42:17	select * from Employees_data where Department in ('Sales', 'IT', 'Finance') LIMIT 0, 2000	7 row(s) returned	0.000 sec / 0.000 sec
12	12:46:21	select * from Employees_data where Salary between 50000 and 70000 LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec
13	12:49:14	select * from Employees_data where EmpName like 'A%' LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec

Question 5 : Find employees whose names contain the substring 'an'.

Ans:-

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'employees_data' selected. The main editor contains the following SQL query:

```
57
58 ##-----names contain substring 'an'
59 • select *
60 from Employees_data
61 where EmpName like '%an%';
62
```

The 'Result Grid' shows the following data:

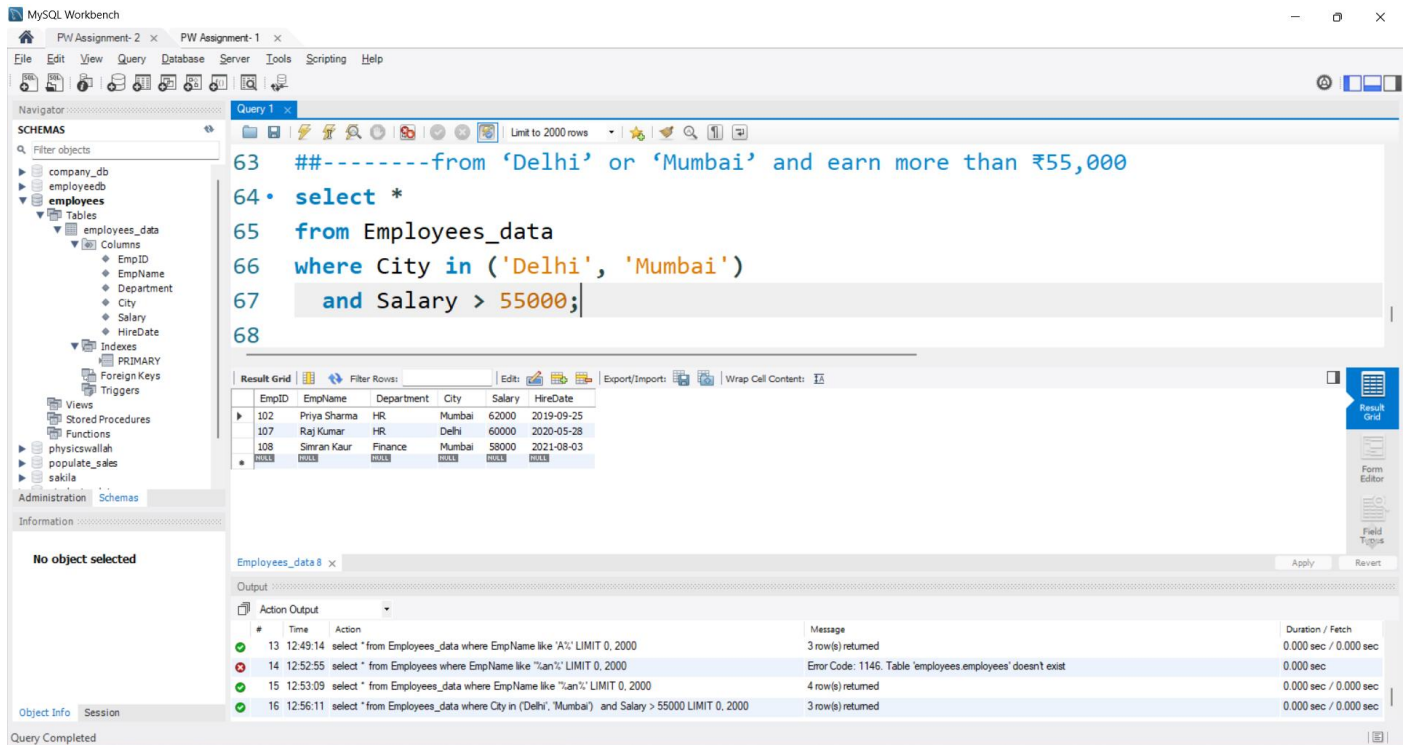
EmpID	EmpName	Department	City	Salary	HireDate
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
105	Karan Joshi	Marketing	Pune	45000	2018-07-22
108	Simran Kaur	Finance	Mumbai	58000	2021-08-03
110	Arjali Das	Sales	Kolkata	51000	2023-01-15

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
12	12:46:21	select * from Employees_data where Salary between 50000 and 70000 LIMIT 0, 2000	6 row(s) returned	0.000 sec / 0.000 sec
13	12:49:14	select * from Employees_data where EmpName like 'A%' LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
14	12:52:55	select * from Employees where EmpName like '%an%' LIMIT 0, 2000	Error Code: 1146. Table 'employees.employees' doesn't exist	0.000 sec
15	12:53:09	select * from Employees_data where EmpName like '%an%' LIMIT 0, 2000	4 row(s) returned	0.000 sec / 0.000 sec

Question 6 : Show employees who are from 'Delhi' or 'Mumbai' and earn more than ₹55,000.

Ans:-



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

```
63 ##-----from 'Delhi' or 'Mumbai' and earn more than ₹55,000
64 • select *
65 from Employees_data
66 where City in ('Delhi', 'Mumbai')
67 and Salary > 55000;
68
```

The Results Grid shows the following data:

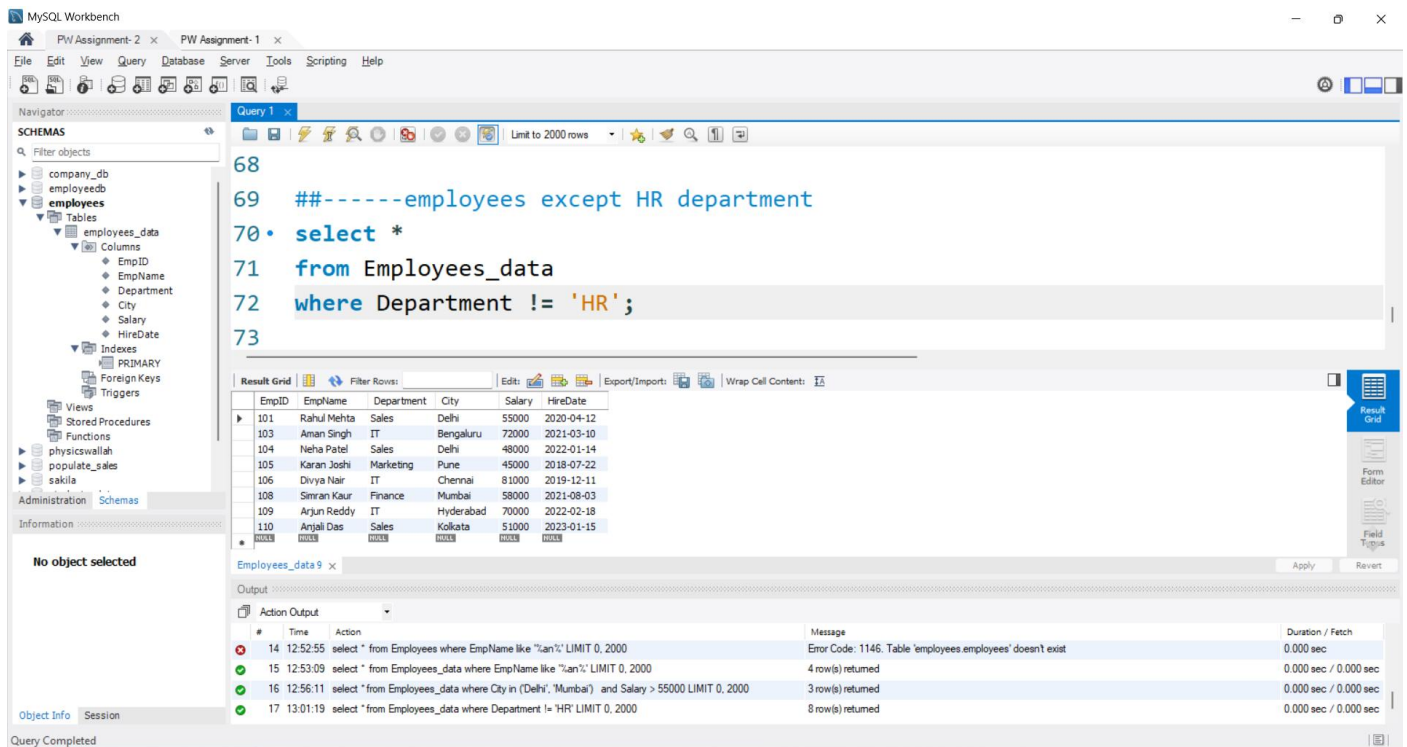
EmpID	EmpName	Department	City	Salary	HireDate
102	Priya Sharma	HR	Mumbai	62000	2019-09-25
107	Raj Kumar	HR	Delhi	60000	2020-05-28
108	Sirran Kaur	Finance	Mumbai	59000	2021-08-03

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
13	12:49:14	select * from Employees_data where EmpName like 'A%'; LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
14	12:52:55	select * from Employees where EmpName like "%an%"; LIMIT 0, 2000	Error Code: 1146. Table 'employees.employees' doesn't exist	0.000 sec
15	12:53:09	select * from Employees_data where EmpName like "%an%"; LIMIT 0, 2000	4 row(s) returned	0.000 sec / 0.000 sec
16	12:56:11	select * from Employees_data where City in ('Delhi', 'Mumbai') and Salary > 55000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec

Question 7 : Display all employees except those from the 'HR' department.

Ans:-



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

```
68
69 ##-----employees except HR department
70 • select *
71 from Employees_data
72 where Department != 'HR';
73
```

The Results Grid shows the following data:

EmpID	EmpName	Department	City	Salary	HireDate
101	Rahul Mehta	Sales	Delhi	55000	2020-04-12
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
104	Neha Patel	Sales	Delhi	48000	2022-01-14
105	Karan Joshi	Marketing	Pune	45000	2018-07-22
106	Divya Nair	IT	Chennai	81000	2019-12-11
108	Sirran Kaur	Finance	Mumbai	58000	2021-08-03
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18
110	Anjali Das	Sales	Kolkata	51000	2023-01-15

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
14	12:52:55	select * from Employees where EmpName like "%an%"; LIMIT 0, 2000	Error Code: 1146. Table 'employees.employees' doesn't exist	0.000 sec
15	12:53:09	select * from Employees_data where EmpName like "%an%"; LIMIT 0, 2000	4 row(s) returned	0.000 sec / 0.000 sec
16	12:56:11	select * from Employees_data where City in ('Delhi', 'Mumbai') and Salary > 55000 LIMIT 0, 2000	3 row(s) returned	0.000 sec / 0.000 sec
17	13:01:19	select * from Employees_data where Department != 'HR' LIMIT 0, 2000	8 row(s) returned	0.000 sec / 0.000 sec

Question 8 : Get all employees hired between 2019 and 2022, ordered by HireDate (oldest first).

Ans:-

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane displays the database structure, including the 'employees_data' table. The main editor window contains the following SQL query:

```
79 ##-----hired between 2019 and 2022
80 • select *
81 from Employees_data
82 where HireDate between '2019-01-01' and '2022-12-31'
83 order by HireDate asc;
84
```

The 'Result Grid' displays the query results for the 'Employees_data' table. The columns are EmpID, EmpName, Department, City, Salary, and HireDate. The results are ordered by HireDate in ascending order.

EmpID	EmpName	Department	City	Salary	HireDate
102	Priya Sharma	HR	Mumbai	62000	2019-09-25
106	Divya Nair	IT	Chennai	81000	2019-12-11
101	Rahul Mehta	Sales	Delhi	55000	2020-04-12
107	Raj Kumar	HR	Delhi	60000	2020-05-28
103	Aman Singh	IT	Bengaluru	72000	2021-03-10
108	Simran Kaur	Finance	Mumbai	58000	2021-08-03
104	Neha Patel	Sales	Delhi	48000	2022-01-14
109	Arjun Reddy	IT	Hyderabad	70000	2022-02-18

The 'Output' pane at the bottom shows the execution log, including the time taken for each query and the number of rows returned.

#	Time	Action	Message	Duration / Fetch
17	13:01:19	select * from Employees_data where Department != 'HR' LIMIT 0, 2000	8 row(s) returned	0.000 sec / 0.000 sec
18	13:01:50	select * from Employees_data where Department <> 'HR' LIMIT 0, 2000	8 row(s) returned	0.000 sec / 0.000 sec
19	13:02:11	select * from Employees_data where Department != 'HR' LIMIT 0, 2000	8 row(s) returned	0.000 sec / 0.000 sec
20	13:05:06	select * from Employees_data where HireDate between '2019-01-01' and '2022-12-31' order by HireDate as...	8 row(s) returned	0.000 sec / 0.000 sec