

**QUESTION 1**

Retrieve all customers who have placed at least one order

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** company\_db
- Tables:** course, customers, employees, orders, payments, team\_india
- Query Editor:** Assingment no 3\*

```
139 ('3','Carol Ray','1'),
140 ('4','David Kim','2'),
141 ('5','Eva Smith','2');

143 • select * from employees;

144

145 ## question 1 Retrieve all customers who have placed at least one order.
146 • SELECT DISTINCT c.*  
FROM customers c  
INNER JOIN orders o  
ON c.customer_id = o.customer_id;
```

- Result Grid:** Shows the results of the query.

customer_id	customer_name	city
1	John Smith	New York
2	Mary Johnson	Chicago
3	Peter Adams	Los Angeles

- Output:** Shows the execution history.

#	Time	Action	Message	Duration / Fetch
81	20:57:37	select * from employees	5 row(s) returned	0.000 sec / 0.000 sec
82	21:19:52	select *from orders	5 row(s) returned	0.000 sec / 0.000 sec
83	21:25:47	SELECT DISTINCT c.* FROM customers c INNER JOIN orders o ON c.customer_id = o.customer_id	3 row(s) returned	0.000 sec / 0.000 sec

**QUESTION 2**

Retrieve all customers and their orders, including customers who have not placed any orders

**ANSWER**

The screenshot shows the MySQL Workbench interface. The left sidebar displays the Navigator with the 'company\_db' schema selected, showing tables like course, customers, employees, orders, payments, and team\_india. The main area contains a SQL editor tab titled 'Assingment no 2 SQL' with the following query:

```
154
155 •  SELECT
156     c.customer_ID,
157     c.customer_Name,
158     o.order_ID,
159     o.order_dates,
160     o.amount
161 FROM customers c
162 LEFT JOIN orders o
163 ON c.customer_ID = o.customer_ID;
```

The Result Grid shows the following data:

customer_ID	customer_Name	order_ID	order_dates	amount
1	John Smith	103	2024-10-07	150
1	John Smith	101	2024-10-01	250
2	Mary Johnson	102	2024-10-05	300
3	Peter Adams	104	2024-10-10	450
4	Nancy Milar	NULL	NULL	NULL
5	Robert white	NULL	NULL	NULL

The Output pane shows the following log entries:

#	Time	Action	Message	Duration / Fetch
104	22:09:37	SELECT c.customer_ID, c.customer_Name, o.order_ID, order_date, o.amount FROM custom...	Error Code: 1054. Unknown column 'order_date' in field list'	0.000 sec
105	22:09:47	select * from orders	5 row(s) returned	0.000 sec / 0.000 sec
106	22:10:15	SELECT c.customer_ID, c.customer_Name, o.order_ID, o.order_dates, o.amount FROM cust...	6 row(s) returned	0.000 sec / 0.000 sec

**QUESTION 3**

Retrieve all orders and their corresponding customers, including orders placed by unknown customers.

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema `company_db` with tables: course, customers, employees, orders, payments, team\_india.
- Query Editor:** Displays the SQL query:

```
167
168 •  SELECT
169      o.order_id,
170      o.order_dates,
171      o.amount,
172      c.customer_id,
173      c.customer_name
174  FROM customers c
175  RIGHT JOIN orders o
176  ON c.customer_id = o.customer_id;
```
- Result Grid:** Shows the results of the query in a table:

order_id	order_dates	amount	customer_id	customer_name
101	2024-10-01	250	1	John Smith
102	2024-10-05	300	2	Mary Johnson
103	2024-10-07	150	1	John Smith
104	2024-10-10	450	3	Peter Adams
105	2024-10-12	400	NULL	NULL
- Output:** Shows the action output of the query execution:

#	Time	Action	Message	Duration / Fetch
105	22:09:47	select * from orders	5 row(s) returned	0.000 sec / 0.000 sec
106	22:10:15	SELECT c.customer_ID, c.customer_Name, o.order_ID, o.order_dates, o.amount FROM cust...	6 row(s) returned	0.000 sec / 0.000 sec
107	22:14:57	SELECT o.order_id, o.order_dates, o.amount, c.customer_id, c.customer_name FROM custom...	5 row(s) returned	0.000 sec / 0.000 sec

**QUESTION 4**

Display all customers and orders, whether matched or not

**ANSWER**

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator : Assigment no 2 SQL Assigment no 3\*

SCHEMAS : Filter objects

company\_db : Tables, Views, Stored Procedures, Functions

company\_md, employee, mitesh, orders, pw\_skills, pwskills, sakila, sys, world

No object selected

191 UNION  
192  
193 SELECT  
194 c.customer\_id,  
195 c.customer\_name,  
196 o.order\_id,  
197 o.order\_dates,  
198 o.amount  
199 FROM customers c  
200 RIGHT JOIN orders o  
201 ON c.customer\_id = o.customer\_id;

Result Grid : Filter Rows! Export: Wrap Cell Content: Result Grid

customer_id	customer_name	order_id	order_dates	amount
1	John Smith	103	2024-10-07	150
1	John Smith	101	2024-10-01	250
2	Mary Johnson	102	2024-10-05	300
3	Peter Adams	104	2024-10-10	450
4	Nancy Milar	NULL	NULL	NULL
5	Robert white	NULL	NULL	NULL
HULL	HULL	105	2024-10-12	400

Output : Action Output

#	Time	Action	Message	Duration / Fetch
107	22:14:57	SELECT o.order_id, o.order_dates, o.amount, c.customer_id, c.customer_name FROM custom...	5 row(s) returned	0.000 sec / 0.000 sec
108	22:19:58	SELECT c.customer_id, c.customer_name, o.order_id, o.order_dates, o.amount FROM custom...	Error Code: 1146. Table 'company_dbfullouter' doesn't exist	0.000 sec
109	22:21:08	SELECT c.customer_id, c.customer_name, o.order_id, o.order_dates, o.amount FROM custom...	7 row(s) returned	0.015 sec / 0.000 sec

Object Info Session

Query Completed

**QUESTION 5**

Find customers who have not placed any orders.

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- File Bar:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** Schemas (company\_db), Tables (course, customers, employees, orders, payments, team\_india), Views, Stored Procedures, Functions, company\_md, employee, mitesh, orders, pw\_skills, pwskills, sakila, sys, world.
- SQL Editor:** Assigment no 2 SQL tab (Assignment no 3\* is also visible). The query is:

```
199    FROM customers c
200    RIGHT JOIN orders o
201    ON c.customer_id = o.customer_id;
202
203    ## question 5
204 •   SELECT c.*
205    FROM customers c
206    LEFT JOIN orders o
207    ON c.customer_id = o.customer_id
208    WHERE o.customer_id IS NULL;
```
- Result Grid:** Displays the results of the query:

customer_id	customer_name	city
4	Nancy Milar	Houston
5	Robert white	Miami
- Output Tab:** Action Output table showing the execution log:

#	Time	Action	Message	Duration / Fetch
108	22:19:58	SELECT c.customer_id, c.customer_name, o.order_id, o.order_dates, o.amount FROM custom...	Error Code: 1146. Table 'company_db.fullouter' doesn't exist	0.000 sec
109	22:21:08	SELECT c.customer_id, c.customer_name, o.order_id, o.order_dates, o.amount FROM custom...	7 row(s) returned	0.015 sec / 0.000 sec
110	22:25:18	SELECT c.* FROM customers c LEFT JOIN orders o ON c.customer_id = o.customer_id WHERE o.customer_id IS NULL;	2 row(s) returned	0.015 sec / 0.000 sec
- Status Bar:** No object selected, Read Only.

**QUESTION 6**

Retrieve customers who made payments but did not place any orders

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema `company_db` with tables: course, customers, employees, orders, payments, team\_india.
- SQL Editor:** Displays the following SQL query:

```
213 WHERE EXISTS (
214     SELECT 1
215     FROM payments p
216     WHERE p.customer_id = c.customer_id
217 )
218 AND NOT EXISTS (
219     SELECT 1
220     FROM orders o
221     WHERE o.customer_id = c.customer_id
222 );
223
```
- Result Grid:** Shows the result of the query:

customer_id	customer_name	city
4	Nancy Milar	Houston
- Output:** Shows the execution log:

#	Time	Action	Message	Duration / Fetch
109	22:21:08	SELECT c.customer_id, c.customer_name, o.order_id, o.order_dates, o.amount FROM custom...	7 row(s) returned	0.015 sec / 0.000 sec
110	22:25:18	SELECT c.* FROM customers c LEFT JOIN orders o ON c.customer_id = o.customer_id WHERE o.custom...	2 row(s) returned	0.015 sec / 0.000 sec
111	22:28:36	SELECT c.* FROM customers c WHERE EXISTS ( SELECT 1 FROM payments p WHERE p.custo...	1 row(s) returned	0.000 sec / 0.000 sec

**QUESTION 7**

Generate a list of all possible combinations between Customers and Orders.

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- File Bar:** File, Edit, View, Query, Database, Server, Tools, Scripting, Help.
- Navigator:** Schemas (company\_db, company\_md, employee, mitesh, orders, pw\_skills, pwskills, sakila, sys, world), Tables (course, customers, employees, orders, payments, team\_india), Views, Stored Procedures, Functions.
- SQL Editor:** Assigment no 2 SQL, Assigment no 3\*. The query is:

```
224    ## question 7
225
226 •   SELECT
227     c.customer_id,
228     c.customer_name,
229     o.order_id,
230     o.order_dates,
231     o.amount
232   FROM customers c
233   CROSS JOIN orders o;
```

- Result Grid:** Shows the results of the query. The columns are customer\_id, customer\_name, order\_id, order\_dates, and amount. The data is as follows:

customer_id	customer_name	order_id	order_dates	amount
5	Robert white	101	2024-10-01	250
4	Nancy Milar	101	2024-10-01	250
3	Peter Adams	101	2024-10-01	250
2	Mary Johnson	101	2024-10-01	250
1	John Smith	101	2024-10-01	250
5	Robert white	102	2024-10-05	300
4	Nancy Milar	102	2024-10-05	300

- Output:** Action Output shows the execution log with three entries:

  - 110 22:25:18 SELECT c.\* FROM customers c LEFT JOIN orders o ON c.customer\_id = o.customer\_id WHERE o.custom... 2 row(s) returned Duration / Fetch: 0.015 sec / 0.000 sec
  - 111 22:28:36 SELECT c.\* FROM customers c WHERE EXISTS ( SELECT 1 FROM payments p WHERE p.custo... 1 row(s) returned Duration / Fetch: 0.000 sec / 0.000 sec
  - 112 22:30:59 SELECT c.customer\_id, c.customer\_name, o.order\_id, o.order\_dates, o.amount FROM custom... 25 row(s) returned Duration / Fetch: 0.016 sec / 0.000 sec

- Status:** Object Info, Session, Query Completed.

<b>QUESTION 8</b>	Show all customers along with order and payment amounts in one table
<b>ANSWER</b>	

**QUESTION 9**

Retrieve all customers who have both placed orders and made payments

**ANSWER**

The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema `company_db` with tables: course, customers, employees, orders, payments, team\_india.
- SQL Editor:** Displays the SQL query:

```
235 ## question 8
236 • SELECT c.*
237   FROM customers c
238   WHERE EXISTS (
239     SELECT 1
240     FROM orders o
241     WHERE o.customer_id = c.customer_id
242   )
243   AND EXISTS (
244     SELECT 1
245     FROM payments p
246     WHERE p.customer_id = c.customer_id
247 );
```
- Result Grid:** Shows the results of the query:

customer_id	customer_name	city
1	John Smith	New York
2	Mary Johnson	Chicago
3	Peter Adams	Los Angeles
- Output:** Shows the action output log:

#	Time	Action	Message	Duration / Fetch
132	23:00:40	SELECT c.customer_id, c.customer_name, SUM(order_amount) AS total_order_amount, SUM(p.payment_amount) AS total_payment_amount FROM customers c WHERE EXISTS ( SELECT 1 FROM orders o WHERE o.customer_id = c.customer_id )	Error Code: 1054. Unknown column 'order_amount' in field list'	0.000 sec
133	23:02:11	SELECT c.customer_id, c.customer_name, o.order_amount, p.payment_amount FROM customers c WHERE EXISTS ( SELECT 1 FROM orders o WHERE o.customer_id = c.customer_id )	Error Code: 1054. Unknown column 'o.order_amount' in field list'	0.000 sec
134	23:04:22	SELECT c.* FROM customers c WHERE EXISTS ( SELECT 1 FROM orders o WHERE o.customer_id = c.customer_id )	3 row(s) returned	0.016 sec / 0.000 sec