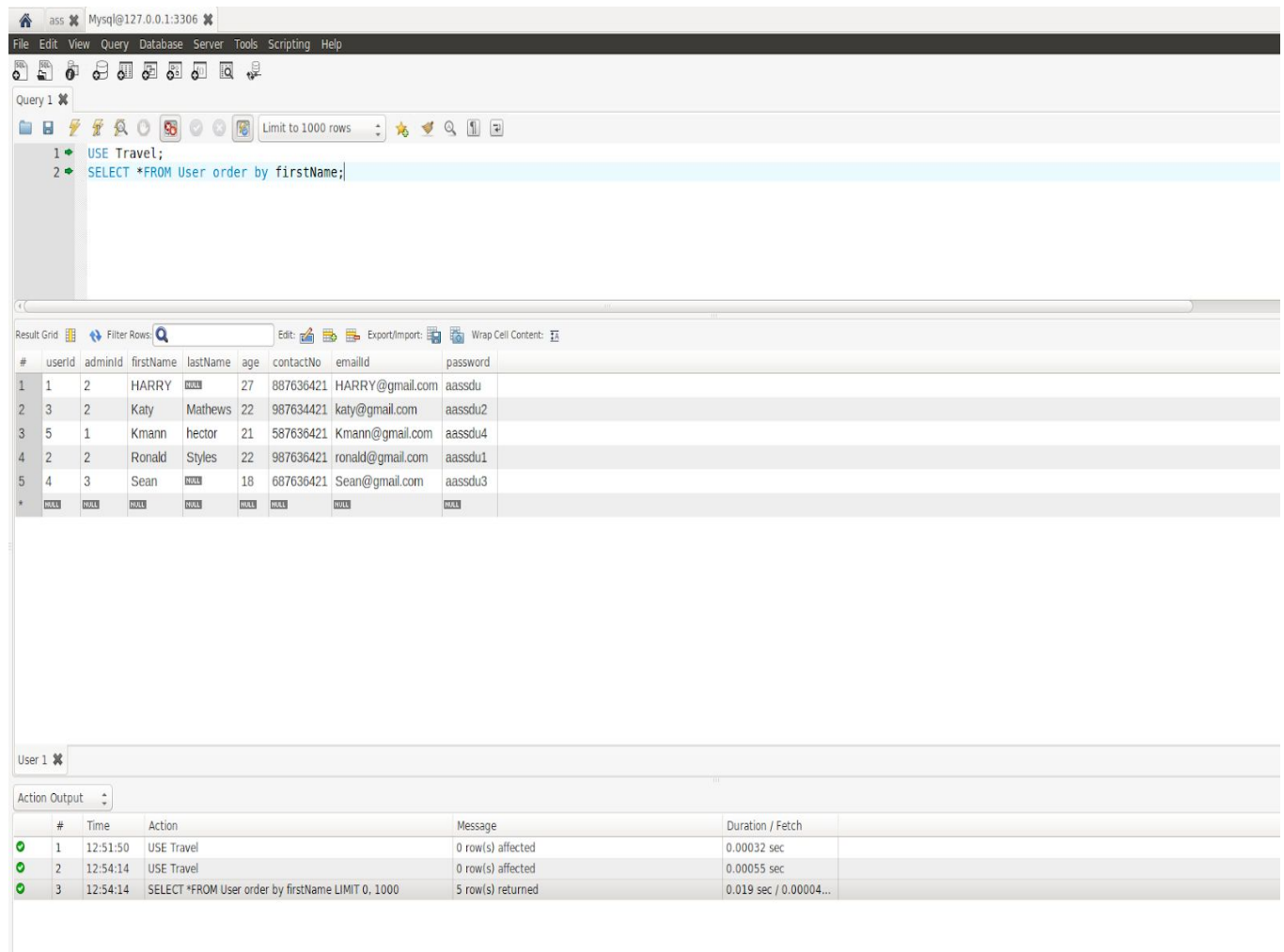


ASSIGNMENT - 04

1. ORDER BY clause

QUERY : **SELECT** * from User **ORDER BY** firstName ;

OUTPUT : Details of users with firstName;



Query 1

```
1 USE Travel;  
2 SELECT *FROM User order by firstName;
```

Result Grid

#	userid	adminId	firstName	lastName	age	contactNo	emailId	password
1	1	2	HARRY	Mathews	27	887636421	HARRY@gmail.com	aassdu
2	3	2	Katy	Mathews	22	987634421	katy@gmail.com	aassdu2
3	5	1	Kmann	hector	21	587636421	Kmann@gmail.com	aassdu4
4	2	2	Ronald	Styles	22	987636421	ronald@gmail.com	aassdu1
5	4	3	Sean	Mathews	18	687636421	Sean@gmail.com	aassdu3
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

User 1

Action Output

#	Time	Action	Message	Duration / Fetch
1	12:51:50	USE Travel	0 row(s) affected	0.00032 sec
2	12:54:14	USE Travel	0 row(s) affected	0.00055 sec
3	12:54:14	SELECT *FROM User order by firstName LIMIT 0, 1000	5 row(s) returned	0.019 sec / 0.00004...

2. GROUP BY & HAVING

QUERY : `SELECT * FROM Transport GROUP BY TransportType, charges HAVING charges > 2500 ;`

The screenshot displays the MySQL Workbench interface. The left sidebar contains the 'MANAGEMENT' section with options like Server Status, Client Connections, and Users and Privileges. The 'INSTANCE' section includes Startup / Shutdown, Server Logs, and Options File. The 'PERFORMANCE' section has Dashboard, Administration, and Schemas. The 'Information' section shows 'No object selected'.

The main window shows a query editor with the following SQL code:

```
1 • USE Travel;
2 • SELECT * from Transport;
3 • SELECT * from Transport Group By transportType,charges Having charges > 2500;
4
```

The query results are displayed in a table with the following columns: transportId, bookingAgencyId, transportType, and charges. The results show two rows:

transportId	bookingAgencyId	transportType	charges
1	1	Flight	5000
2	1	Flight	10000

The bottom of the interface shows the 'Output' tab with 'Action Output' selected. It displays the execution of the query, showing the message 'SELECT * from Transport LIMIT 0, 1000' and 'SELECT * from Transport Group By transportType,charges Having charges > 2500 LIMIT 0, ...'. The duration for each query is 0.000 sec / 0.000 sec.

3. AGGREGATE FUNCTIONS

a. COUNT

QUERY : `SELECT COUNT(UserID) FROM User WHERE age < 22;`

The screenshot displays the MySQL Workbench interface. The left sidebar contains the 'MANAGEMENT' section with options like Server Status, Client Connections, and Users and Privileges. The 'INSTANCE' section includes Startup / Shutdown, Server Logs, and Options File. The 'PERFORMANCE' section has a Dashboard and Administration tabs. The main editor window shows a query with four lines: 1. `USE Travel;`, 2. (blank), 3. `-- SELECT * from Transport WHERE count(transportType) = (SELECT max(COUNT(transportType)) FROM Transport);`, and 4. `SELECT COUNT(UserID) FROM User WHERE age < 22;`. Below the query editor, the 'Result Grid' shows a single column 'COUNT(UserID)' with a value of '2'. The 'Output' pane at the bottom shows a log of actions: '142 14:57:50 USE Travel' with '0 row(s) affected' and '0.000 sec', and '143 14:57:50 SELECT COUNT(UserID) FROM User WHERE age < 22 LIMIT 0, 1000' with '1 row(s) returned' and '0.000 sec / 0.000 sec'. The Windows taskbar at the bottom shows the time as 2:58 PM on 10/2/2020.

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Navigator: Query 1 x

1 • `USE Travel;`

2

3 `-- SELECT * from Transport WHERE count(transportType) = (SELECT max(COUNT(transportType)) FROM Transport);`

4 • `SELECT COUNT(UserID) FROM User WHERE age < 22;`

Result Grid

COUNT(UserID)
2

Output

#	Time	Action	Message	Duration / Fetch
142	14:57:50	USE Travel	0 row(s) affected	0.000 sec
143	14:57:50	SELECT COUNT(UserID) FROM User WHERE age < 22 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Query Completed

b. AVERAGE

QUERY : `SELECT AVG(price) AS averagePrice FROM Advertisements;`

The screenshot displays the MySQL Workbench interface. The 'Query 1' tab is active, showing the following SQL query:

```
1 • USE Travel;
2
3 • SELECT AVG(price) AS averagePrice FROM Advertisement;
```

The 'Result Grid' shows the output of the query:

averagePrice
2200.0000

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
✓ 146	14:59:44	USE Travel	0 row(s) affected	0.000 sec
✓ 147	14:59:44	SELECT AVG(price) AS averagePrice FROM Advertisement LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

The interface also includes a left sidebar with 'MANAGEMENT' and 'INSTANCE' sections, and a bottom status bar indicating 'Query Completed'.

c. SUM

QUERY : `SELECT Sum(age) AS totalAge FROM User;`

The screenshot displays the MySQL Workbench interface. On the left, the 'MANAGEMENT' sidebar lists options like Server Status, Client Connections, and Users and Privileges. The 'INSTANCE' section shows Startup / Shutdown, Server Logs, and Options File. The 'PERFORMANCE' section includes a Dashboard and Administration Schemas. The main area shows a query editor with the following SQL code:

```
1 • USE Travel;  
2  
3 • SELECT Sum(age) AS totalAge FROM User;
```

Below the query editor, the 'Result Grid' shows the execution results:

totalAge
110

The 'Output' pane at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
148	15:00:28	USE Travel	0 row(s) affected	0.000 sec
149	15:00:28	SELECT Sum(age) AS totalAge FROM User LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

The status bar at the bottom indicates 'Query Completed' and shows system information like 'ENG IN 3:00 PM 10/2/2020'.

4. LOGICAL OPERATORS ESPECIALLY WITH LIKE

a. AND operator with LIKE

QUERY : SELECT * FROM User WHERE contactNo Like '9%' AND age>20;

MySQL Workbench

Navigator

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Administration
- Schemas

Information

No object selected

Query 1

```
1 • USE Travel;
2
3 • SELECT * FROM User WHERE contactNo Like '9%' AND age>20;
```

Result Grid

userId	adminId	firstName	lastName	age	contactNo	emailId	password
2	2	Ronald	Styles	22	987636421	ronald@gmail.com	aassdu1
3	2	Katy	Mathews	22	987634421	katy@gmail.com	aassdu2
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

User 62

Output

Action Output

#	Time	Action	Message	Duration / Fetch
154	15:06:13	USE Travel	0 row(s) affected	0.000 sec
155	15:06:13	SELECT * FROM User WHERE contactNo Like '9%' AND age>20 LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Query Completed

Object Info Session

Windows taskbar: Type here to search, 3:06 PM, 10/2/2020

b. OR operator with LIKE

QUERY: SELECT * FROM User WHERE contactNo Like '9%' OR age>20;

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

```
1 • USE Travel;
2
3 • SELECT * FROM User WHERE contactNo Like '9%' OR age>20;
```

The query has been executed, and the results are displayed in the Result Grid. The results show 4 rows returned. The columns are: userId, adminId, firstName, lastName, age, contactNo, emailId, and password.

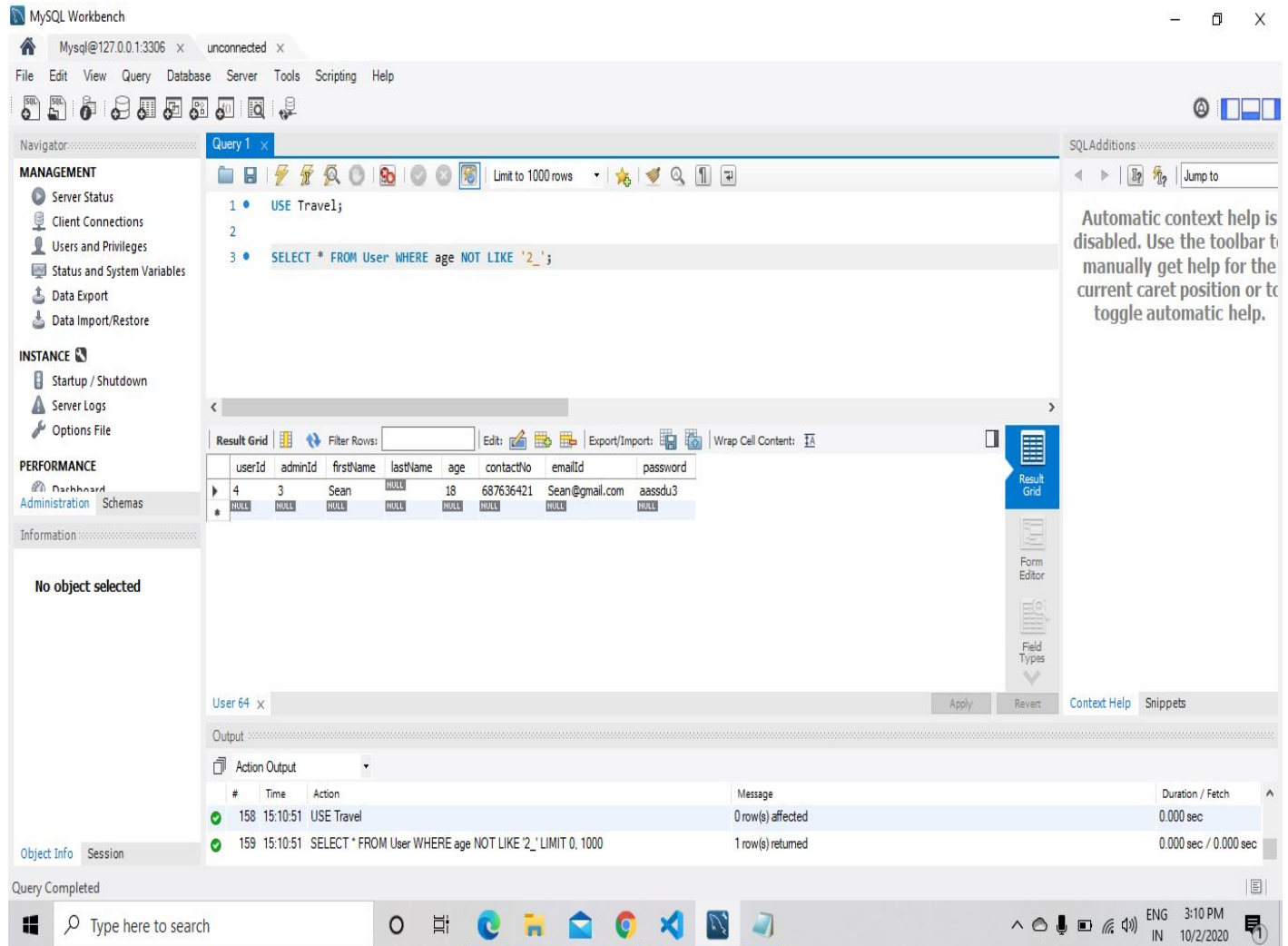
userId	adminId	firstName	lastName	age	contactNo	emailId	password
1	2	HARRY	NULL	27	887636421	HARRY@gmail.com	aassdu
2	2	Ronald	Styles	22	987636421	ronald@gmail.com	aassdu1
3	2	Katy	Mathews	22	987634421	katy@gmail.com	aassdu2
5	1	Kmann	hector	21	587636421	Kmann@gmail.com	aassdu4

The Output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
156	15:08:33	USE Travel	0 row(s) affected	0.000 sec
157	15:08:33	SELECT * FROM User WHERE contactNo Like '9%' OR age>20 LIMIT 0, 1000	4 row(s) returned	0.016 sec / 0.000 sec

c.NOT operator with LIKE

QUERY: SELECT * FROM User WHERE age NOT LIKE '2_';



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

```
1 • USE Travel;
2
3 • SELECT * FROM User WHERE age NOT LIKE '2_';
```

The result grid displays the following data:

userId	adminId	firstName	lastName	age	contactNo	emailId	password
4	3	Sean		18	687636421	Sean@gmail.com	aassdu3

The output pane shows the following execution details:

#	Time	Action	Message	Duration / Fetch
✓ 158	15:10:51	USE Travel	0 row(s) affected	0.000 sec
✓ 159	15:10:51	SELECT * FROM User WHERE age NOT LIKE '2_' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

5. Nested Queries

- a. QUERY: SELECT * FROM User Where age > (SELECT AVG(age) FROM User);

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing the following SQL query:

```
1 USE Travel;
2
3 SELECT * FROM User Where age > (SELECT AVG(age) FROM User);
```

The 'Result Grid' shows the results of the query execution:

userId	adminId	firstName	lastName	age	contactNo	emailId	password
1	2	HARRY	NULL	27	887636421	HARRY@gmail.com	aassdu
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

The 'Output' tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
✓ 160	15:14:49	USE Travel	0 row(s) affected	0.000 sec
✓ 161	15:14:49	SELECT * FROM User Where age > (SELECT AVG(age) FROM User) LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

The bottom status bar indicates 'Query Completed'.

b. QUERY: `SELECT * FROM Advertisement WHERE price > (SELECT MIN(price) FROM Advertisement);`

The screenshot shows the MySQL Workbench interface. The left sidebar contains a 'MANAGEMENT' section with options like Server Status, Client Connections, Users and Privileges, Status and System Variables, Data Export, and Data Import/Restore. Below this is an 'INSTANCE' section with Startup / Shutdown, Server Logs, and Options File. The 'PERFORMANCE' section includes a Dashboard and Administration (selected) and Schemas. The main area displays 'Query 1' with the following SQL code:

```
1 • USE Travel;
2
3 • SELECT * FROM Advertisement WHERE price > (SELECT MIN(price) FROM Advertisement);
```

Below the query editor, the 'Result Grid' shows the following data:

advertisementId	bookingAgencyId	price
1	1	5000
2	1	2000
4	2	3000
*	NULL	NULL

The bottom panel shows the 'Output' tab with 'Action Output' selected. It displays the following messages:

#	Time	Action	Message	Duration / Fetch
✓ 162	15:17:09	USE Travel	0 row(s) affected	0.000 sec
✓ 163	15:17:09	SELECT * FROM Advertisement WHERE price > (SELECT MIN(price) FROM Advertisement)...	3 row(s) returned	0.000 sec / 0.000 sec

The bottom status bar indicates 'Query Completed'.

- c. QUERY: SELECT firstName, lastName, transportType FROM User as u, Transport as t WHERE transportType IN (SELECT transportType FROM Transport where transportType =(SELECT MAX(transportType) FROM Transport));

The screenshot displays the MySQL Workbench interface. The 'Query 1' editor contains the following SQL code:

```
1 • USE Travel;
2
3 • SELECT firstName, lastName, transportType FROM User as u, Transport as t WHERE transportType IN (SELECT transportType FROM Transport where transportType =(SELECT MAX(transportType) FROM Transport));
```

The 'Result Grid' shows the following data:

firstName	lastName	transportType
HARRY	NULL	Train
Ronald	Styles	Train
Katy	Mathews	Train
Sean	NULL	Train
Kmann	hector	Train

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
✓ 176	15:27:13	USE Travel	0 row(s) affected	0.015 sec
✓ 177	15:27:13	SELECT firstName, lastName, transportType FROM User as u, Transport as t WHERE trans...	5 row(s) returned	0.000 sec / 0.000 sec

The bottom status bar indicates 'Query Completed'.

d. QUERY: `SELECT * FROM Advertisement WHERE price IN (SELECT price FROM Advertisement where price <(SELECT MAX(price) FROM Advertisement));`

The screenshot shows the MySQL Workbench interface. The left sidebar contains the 'MANAGEMENT' section with options like Server Status, Client Connections, Users and Privileges, Status and System Variables, Data Export, and Data Import/Restore. Below this is the 'INSTANCE' section with Startup / Shutdown, Server Logs, and Options File. The 'PERFORMANCE' section includes Dashboard, Administration, and Schemas. The main editor area displays a query in the 'Query 1' tab:

```
1 • USE Travel;
2
3 • SELECT * FROM Advertisement WHERE price IN (SELECT price FROM Advertisement where price <(SELECT MAX(price) FROM Advertisement));
```

The query results are shown in a table with columns: advertisementId, bookingAgencyId, and price. The results are as follows:

advertisementId	bookingAgencyId	price
2	1	2000
3	2	500
4	2	3000
5	2	500
*	NULL	NULL

The bottom of the interface shows the 'Output' tab with 'Action Output' selected. It displays the execution of the query, showing that 4 rows were returned. The status bar at the bottom indicates 'Query Completed'.