

THE OPEN UNIVERSITY OF SRI LANKA
DEPARTMENT OF ELECTRICAL AND COMPUTER
ENGINEERING
BACHELOR OF SOFTWARE ENGINEERING HONOURS
EEX4366 Data Modeling and Database Systems
Mini Project

Student No: S92062052

Registration No: 621422052

Q1)

MySQL Workbench

Local instance wampmysqld5... x

File Edit View Query Database Server Tools Scripting Help

TMA2 MINI_project Queries SQL File 5*

Don't Limit

```
9      CONCAT(p1.Bed_Number, ', Room ', p1.Room_Number) AS "Location",
10      sn.Surgery_name AS "Surgery Name",
11      sn.Surgery_date AS "Surgery Date"
12  FROM
13      patient AS p
14      JOIN Patient_name AS pn ON p.ID_number = pn.ID_number
15      JOIN Patient_location AS pl ON p.ID_number = pl.ID_number
16      LEFT JOIN Surgery_need_patient AS sn ON p.ID_number = sn.ID_number;
17
18  • select * from PatientSurgeryView;
```

Result Grid

	Patient Identification Number	Patient Name	Location	Surgery Name	Surgery Date
P001		C. D. Fernando	B101, Room 101	Appendectomy	2023-08-15
P002		S. Perera	B202, Room 202	Hysterectomy	2023-08-20
P003		N. M. Rathnayake	A303, Room 303	Gallbladder Removal	2023-08-18
P004		A. K. Kumarasinghe	C404, Room 404	Knee Replacement	2023-08-17
P005		R. Sirwardena	D505, Room 505	Tonsillectomy	2023-08-16

PatientSurgeryView 31 x Read Only

Output

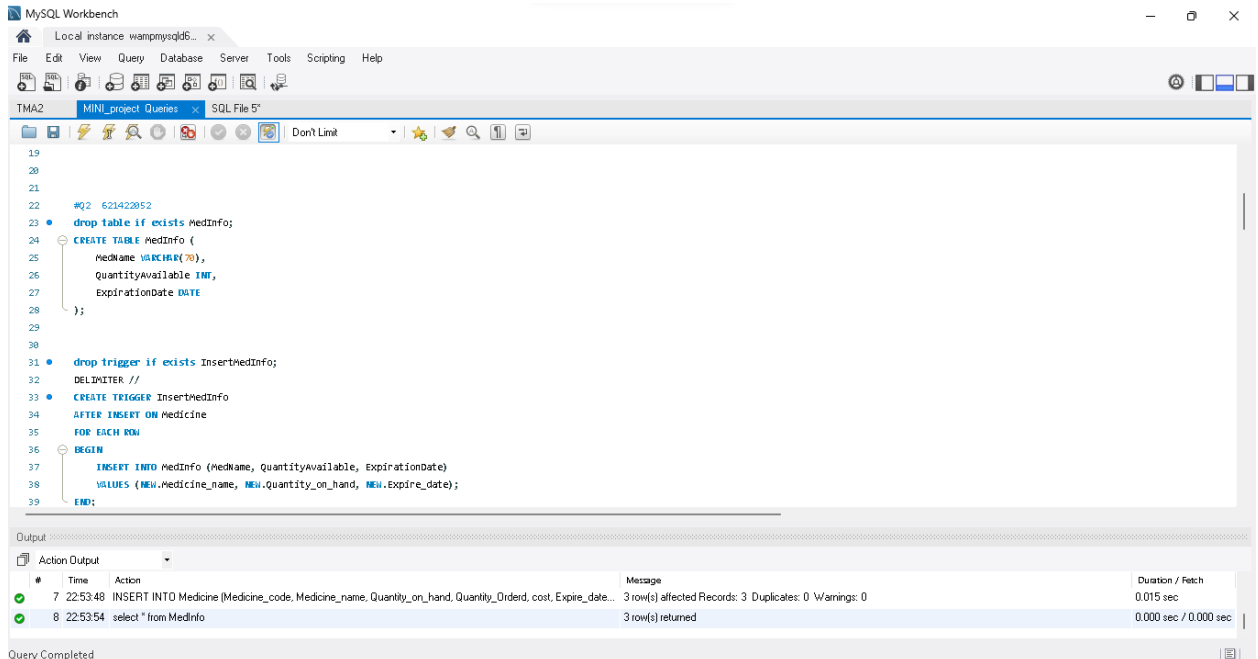
Action Output

#	Time	Action	Message	Duration / Fetch
2	22:52:26	CREATE VIEW PatientSurgeryView AS SELECT p.ID_number AS "Patient Identification Number", CONCAT(...	0 row(s) affected	0.016 sec
3	22:52:35	select * from PatientSurgeryView	5 row(s) returned	0.000 sec / 0.000 sec

Query Completed

Q2)

i)



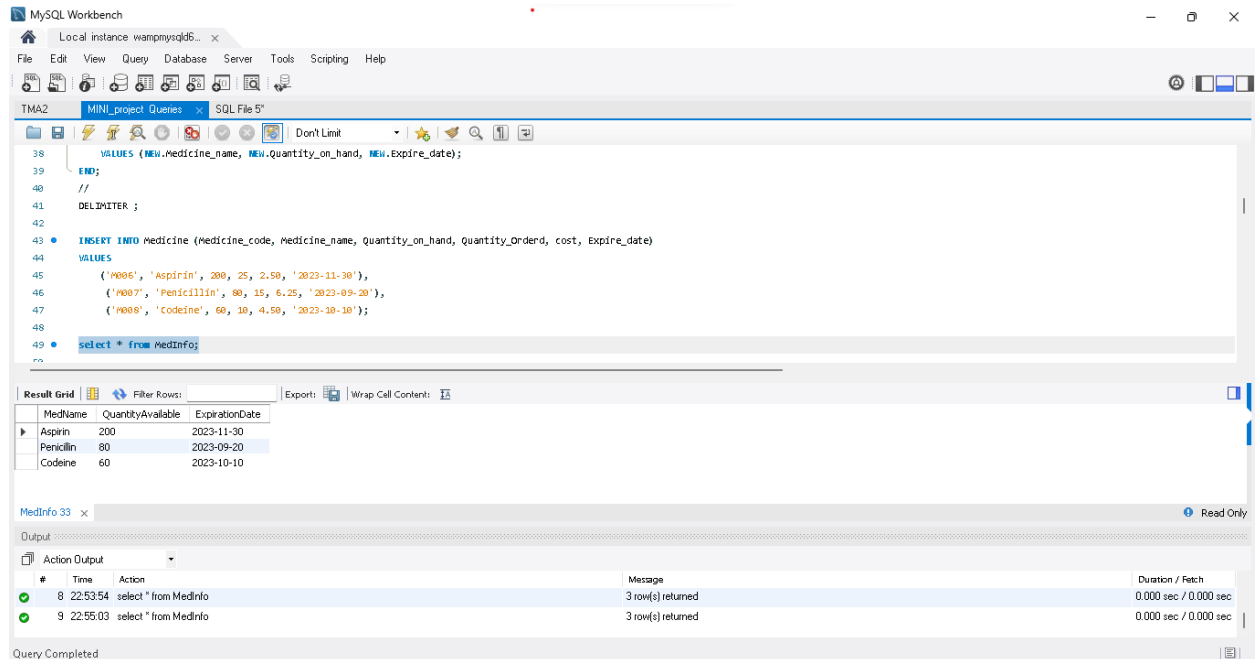
MySQL Workbench interface showing a SQL script for Q2 i). The script includes a table creation statement for MedInfo, a trigger creation statement for InsertMedInfo, and an insert statement. The output window shows the execution results.

```
19
20
21
22 #Q2 621422052
23 • drop table if exists MedInfo;
24 • CREATE TABLE MedInfo (
25     Medicine VARCHAR(70),
26     QuantityAvailable INT,
27     ExpirationDate DATE
28 );
29
30
31 • drop trigger if exists InsertMedInfo;
32 DELIMITER //
33 • CREATE TRIGGER InsertMedInfo
34 AFTER INSERT ON Medicine
35 FOR EACH ROW
36 BEGIN
37     INSERT INTO MedInfo (Medicine_name, QuantityAvailable, ExpirationDate)
38     VALUES (NEW.Medicine_name, NEW.Quantity_on_hand, NEW.Expire_date);
39 END;
```

Output:

#	Time	Action	Message	Duration / Fetch
7	22:53:48	INSERT INTO Medicine (Medicine_code, Medicine_name, Quantity_on_hand, Quantity_Ordered, cost, Expire_date)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.015 sec
8	22:53:54	select * from MedInfo	3 row(s) returned	0.000 sec / 0.000 sec

Query Completed



MySQL Workbench interface showing a SQL script for Q2 i). The script includes a table creation statement for MedInfo, a trigger creation statement for InsertMedInfo, and an insert statement. The output window shows the execution results.

```
38     VALUES (NEW.Medicine_name, NEW.Quantity_on_hand, NEW.Expire_date);
39 END;
40 //
41 DELIMITER ;
42
43 • INSERT INTO Medicine (Medicine_code, Medicine_name, Quantity_on_hand, Quantity_Ordered, cost, Expire_date)
44 VALUES
45     ('P006', 'Aspirin', 200, 25, 2.50, '2023-11-30'),
46     ('P007', 'Penicillin', 80, 15, 6.25, '2023-09-20'),
47     ('P008', 'Codeine', 60, 10, 4.50, '2023-10-10');
48
49 • select * from MedInfo;
```

Result Grid:

MedName	QuantityAvailable	ExpirationDate
Aspirin	200	2023-11-30
Penicillin	80	2023-09-20
Codeine	60	2023-10-10

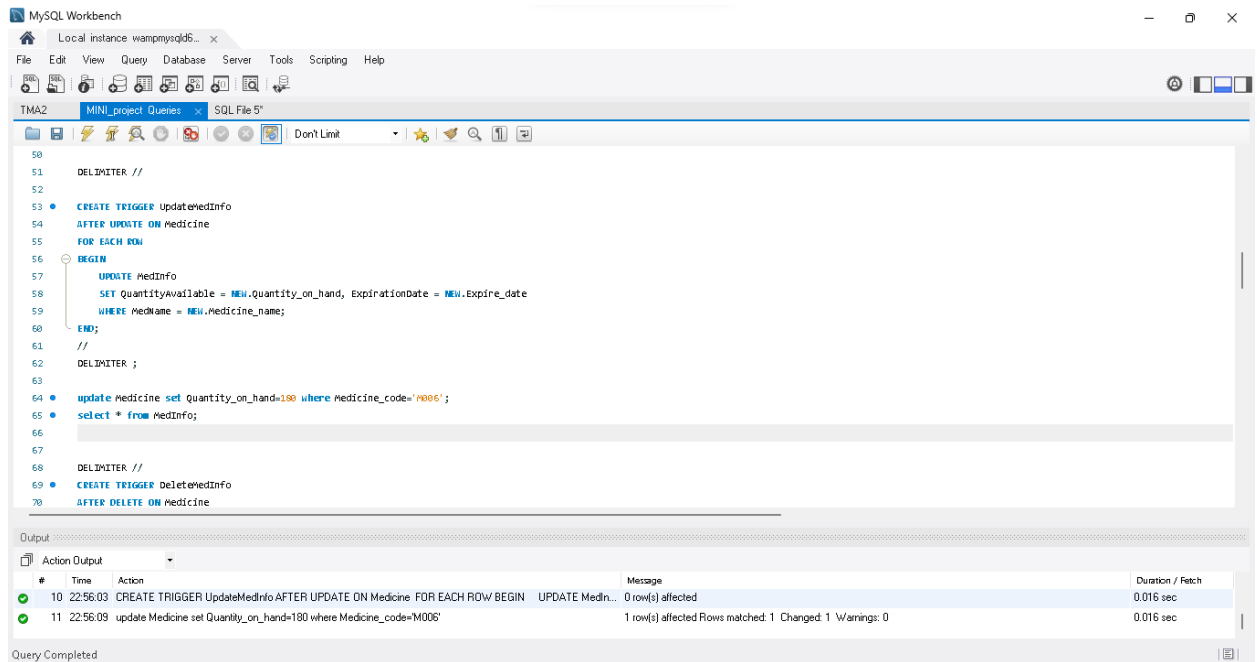
MedInfo 33

Output:

#	Time	Action	Message	Duration / Fetch
8	22:53:54	select * from MedInfo	3 row(s) returned	0.000 sec / 0.000 sec
9	22:55:03	select * from MedInfo	3 row(s) returned	0.000 sec / 0.000 sec

Query Completed

ii)



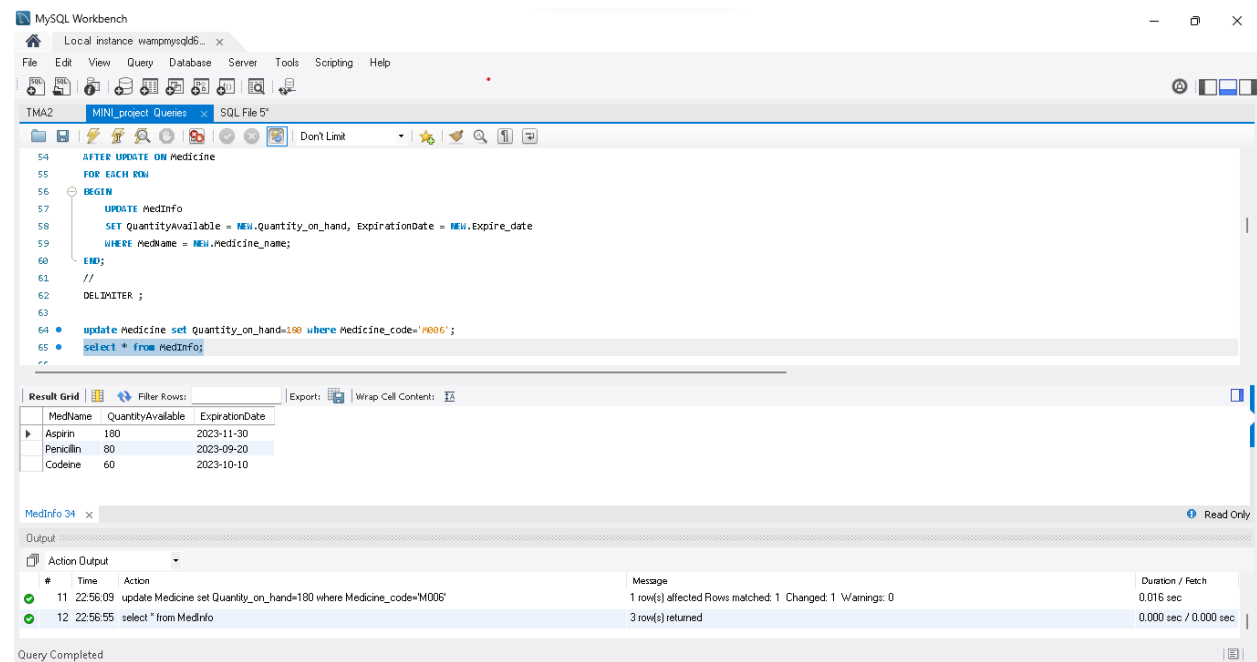
MySQL Workbench interface showing a SQL script with two queries. The first query creates a trigger named 'UpdateMedInfo' that updates the 'QuantityAvailable' and 'ExpirationDate' of a medicine in the 'MedInfo' table after an update on the 'Medicine' table. The second query updates the 'QuantityOnHand' of medicine 'M006' to 180 and then selects all records from the 'MedInfo' table.

```
50
51 DELIMITER //
52
53 • CREATE TRIGGER UpdateMedInfo
54 AFTER UPDATE ON Medicine
55 FOR EACH ROW
56 BEGIN
57     UPDATE MedInfo
58     SET QuantityAvailable = NEW.Quantity_on_hand, ExpirationDate = NEW.Expire_date
59     WHERE MedName = NEW.Medicine_name;
60 END;
61 //
62 DELIMITER ;
63
64 • update Medicine set Quantity_on_hand=180 where Medicine_code='M006';
65 • select * from MedInfo;
66
67
68 DELIMITER //
69 • CREATE TRIGGER DeleteMedInfo
70 AFTER DELETE ON Medicine
```

Output:

#	Time	Action	Message	Duration / Fetch
10	22:56:03	CREATE TRIGGER UpdateMedInfo AFTER UPDATE ON Medicine FOR EACH ROW BEGIN UPDATE MedInfo	0 row(s) affected	0.016 sec
11	22:56:09	update Medicine set Quantity_on_hand=180 where Medicine_code='M006'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec

Query Completed



MySQL Workbench interface showing the same SQL script as the first screenshot. Below the script, the 'Result Grid' displays the data from the 'MedInfo' table. The output section shows the execution of the update and select queries.

```
54 AFTER UPDATE ON Medicine
55 FOR EACH ROW
56 BEGIN
57     UPDATE MedInfo
58     SET QuantityAvailable = NEW.Quantity_on_hand, ExpirationDate = NEW.Expire_date
59     WHERE MedName = NEW.Medicine_name;
60 END;
61 //
62 DELIMITER ;
63
64 • update medicine set Quantity_on_hand=180 where Medicine_code='M006';
65 • select * from MedInfo;
66
67
```

Result Grid:

MedName	QuantityAvailable	ExpirationDate
Aspirin	180	2023-11-30
Penicillin	80	2023-09-20
Codeine	60	2023-10-10

MedInfo 34

Output:

#	Time	Action	Message	Duration / Fetch
11	22:56:09	update Medicine set Quantity_on_hand=180 where Medicine_code='M006'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.016 sec
12	22:56:55	select * from MedInfo	3 row(s) returned	0.000 sec / 0.000 sec

Query Completed

iii)

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MIN_project Queries: SQL File 5

```
66
67
68 DELIMITER //
69 CREATE TRIGGER DeleteMedInfo
70 AFTER DELETE ON Medicine
71 FOR EACH ROW
72 BEGIN
73     DELETE FROM MedInfo
74     WHERE Medicine = OLD.Medicine_name;
75 END;
76 //
77 DELIMITER ;
78
79
80 DELETE FROM Medicine WHERE Medicine_code = 'M006';
81 select * from MedInfo;
82
83
84 #Q3 621422852
85 DELIMITER //
86 CREATE PROCEDURE GetMedicationCount
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	22:57:34	CREATE TRIGGER DeleteMedInfo AFTER DELETE ON Medicine FOR EACH ROW BEGIN DELETE FROM ...	0 row(s) affected	0.000 sec
14	22:57:42	DELETE FROM Medicine WHERE Medicine_code = 'M006'	1 row(s) affected	0.015 sec

Query Completed

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MIN_project Queries: SQL File 5

```
70 AFTER DELETE ON Medicine
71 FOR EACH ROW
72 BEGIN
73     DELETE FROM MedInfo
74     WHERE Medicine = OLD.Medicine_name;
75 END;
76 //
77 DELIMITER ;
78
79
80 DELETE FROM Medicine WHERE Medicine_code = 'M006';
81 select * from MedInfo;
82
```

Result Grid

MedName	QuantityAvailable	ExpirationDate
Penicillin	80	2023-09-20
Codeine	60	2023-10-10

MedInfo 35

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	22:57:42	DELETE FROM Medicine WHERE Medicine_code = 'M006'	1 row(s) affected	0.015 sec
15	22:58:15	select * from MedInfo	2 row(s) returned	0.000 sec / 0.000 sec

Query Completed

Q3)

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MIN_project Queries SQL File 5

```
91 SELECT COUNT(*) INTO MedicationCount
92 FROM Patient_take_medicine
93 WHERE ID_number = PatientIDnumber;
94 END;
95 //
96 DELIMITER ;
97
98
99 SET @PatientID = 'P001';
100 SET @MedicationCountResult = 0;
101 CALL GetMedicationCount(@PatientID, @MedicationCountResult);
102 SELECT @MedicationCountResult AS MedicationCountForPatient;
```

Result Grid

MedicationCountForPatient
1

Result 36

Output

#	Time	Action	Message	Duration / Fetch
15	22:58:15	select * from MedInfo	2 row(s) returned	0.000 sec / 0.000 sec
16	22:59:31	SELECT @MedicationCountResult AS MedicationCountForPatient	1 row(s) returned	0.015 sec / 0.000 sec

Query Completed

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MIN_project Queries SQL File 5

```
82
83
84 #Q3 621422052
85 DELIMITER //
86 CREATE PROCEDURE GetMedicationCount(
87     IN PatientIDnumber VARCHAR(10),
88     INOUT MedicationCount INT
89 )
90 BEGIN
91     SELECT COUNT(*) INTO MedicationCount
92     FROM Patient_take_medicine
93     WHERE ID_number = PatientIDnumber;
94 END;
95 //
96 DELIMITER ;
97
98
99 SET @PatientID = 'P001';
100 SET @MedicationCountResult = 0;
101 CALL GetMedicationCount(@PatientID, @MedicationCountResult);
102 SELECT @MedicationCountResult AS MedicationCountForPatient;
```

Output

#	Time	Action	Message	Duration / Fetch
14	22:57:42	DELETE FROM Medicine WHERE Medicine_code = 'M006'	1 row(s) affected	0.015 sec
15	22:58:15	select * from MedInfo	2 row(s) returned	0.000 sec / 0.000 sec

Query Completed

Q4)

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MINI_project Queries SQL File 5'

```
103
104
105
106 #Q4 621422052
107 DELIMITER //
108
109 CREATE FUNCTION calculateDaysRemaining(ExpireDate DATE) RETURNS INT
110 BEGIN
111     DECLARE currentDate DATE;
112     DECLARE DaysRemaining INT;
113
114     SET currentDate = CURDATE();
115
116
117     SET DaysRemaining = DATEDIFF(ExpireDate, currentDate);
118
119     RETURN DaysRemaining;
120 END;
121 //
122 DELIMITER ;
123
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	16 22:59:31	SELECT @MedicationCountResult AS MedicationCountForPatient	1 row(s) returned	0.015 sec / 0.000 sec
✓	17 23:00:23	CREATE FUNCTION CalculateDaysRemaining(ExpireDate DATE) RETURNS INT BEGIN DECLARE CurrentD...	0 row(s) affected	0.000 sec

Query Completed

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MINI_project Queries SQL File 5'

```
119 RETURN DaysRemaining;
120 END;
121 //
122 DELIMITER ;
123
124 SELECT
125     Medicine_code,
126     Medicine_name,
127     Quantity_on_hand,
128     Quantity_Orderd,
129     cost,
130     Expire_date,
131     calculateDaysRemaining(ExpireDate DATE) AS Days_Remaining
132 FROM MedicationCountResult AS MedicationCountForPatient
```

Result Grid

Medicine_code	Medicine_name	Quantity_on_hand	Quantity_Orderd	cost	Expire_date	Days_Remaining
M002	Amoxicillin	75	30	10.75	2023-09-15	12
M004	Ibuprofen	120	60	3.75	2023-09-30	27
M007	Penicillin	80	15	6.25	2023-09-20	17

Result 37

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	17 23:00:23	CREATE FUNCTION CalculateDaysRemaining(ExpireDate DATE) RETURNS INT BEGIN DECLARE CurrentD...	0 row(s) affected	0.000 sec
✓	18 23:01:02	SELECT Medicine_code, Medicine_name, Quantity_on_hand, Quantity_Orderd, cost, Expire_date, ...	3 row(s) returned	0.000 sec / 0.000 sec

Query Completed

Q6)

MySQL Workbench

Local instance wampmysqld6...

File Edit View Query Database Server Tools Scripting Help

TMA2 MIN_project Queries SQL File 5

Don't Limit

```
127 quantity_on_hand,
128 quantity_orderd,
129 cost,
130 expire_date,
131 calculateDaysRemaining(expire_date) AS Days_Remaining
132 FROM
133 Medicine
134 WHERE
135 calculateDaysRemaining(expire_date) <= 30;
136
137
138
139 #Q6 621422052
140
141 • LOAD XML LOCAL INFILE 'D:\ACA\2nd year\2nd sem\EEI4366-Data modelling and Database Systems\MINI project\Employee.xml' INTO TABLE staff ROWS IDENTIFIED BY '<employee>';
142 • LOAD XML LOCAL INFILE 'D:\ACA\2nd year\2nd sem\EEI4366-Data modelling and Database Systems\MINI project\Patient.xml' INTO TABLE patient ROWS IDENTIFIED BY '<patient>';
143
144
145
146 #Other Queries
147
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
22	23:45:45	LOAD XML LOCAL INFILE 'D:\ACA\2nd year\2nd sem\EEI4366-Data modelling and Database Systems\MINI proj...	Error Code: 2068. LOAD DATA LOCAL INFILE file request rejected due to restrictions on access.	0.000 sec
23	23:47:06	LOAD XML LOCAL INFILE 'D:\ACA\2nd year\2nd sem\EEI4366-Data modelling and Database Systems\MINI proj...	Error Code: 2068. LOAD DATA LOCAL INFILE file request rejected due to restrictions on access.	0.000 sec

Query interrupted