

ModuleWebsite
Development**Module Code**

IT3040FP

Duration

5 hours

LABSHEET 2P

Title:

Perform Database Operations

Objective(s):

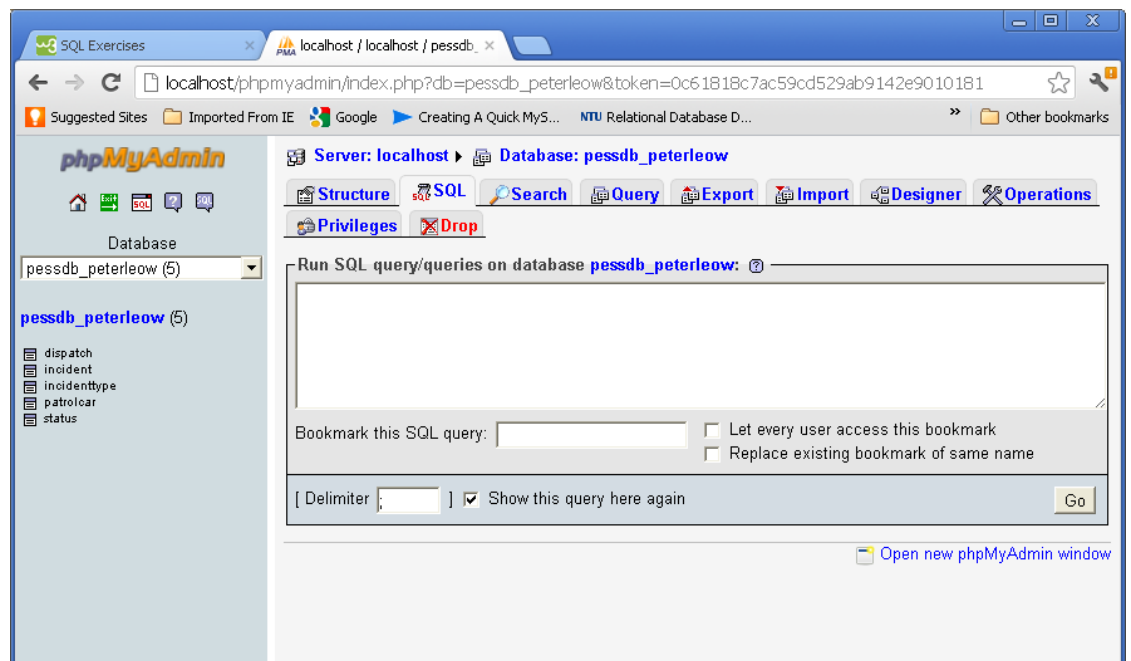
At the end of the lesson, students will be able to manipulate a database using SQL.

Tools, Equipment and Materials:

- 1 Development computer
- 2 Code editor

Instructions:

1. You will use to manipulate the database that you have created in Lab 2O on MySQL.
2. In phpmyadmin, navigate to the SQL query screen as shown:



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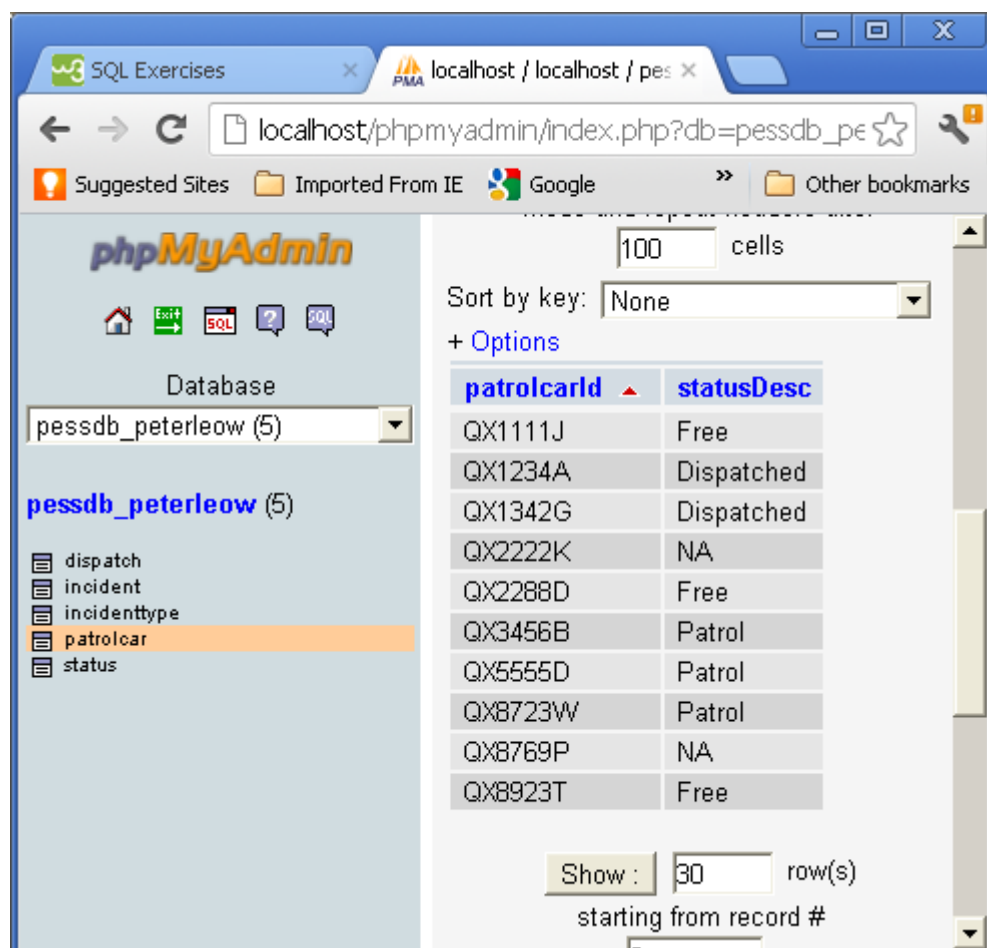
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Part (A): SQL SELECT

1. In the SQL screen, type the following SQL statement and click the “Go” button to retrieve all records from the patrolcar table:

SELECT * FROM patrolcar

2. Write a SQL statement to retrieve all records from the status table.
3. Write a SQL statement to retrieve all incident types.
4. Write a SQL statement to retrieve all patrol cars whose statuses are “Free”.
5. Write a SQL statement to retrieve those patrol cars whose statuses are either “Dispatched” or “Patrol”.
6. Write a SQL statement to retrieve the following records:



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Part (B): SQL UPDATE

1. Write a SQL statement to change the status of all patrol cars whose statuses are "NA" to "Free".

Part (C): SQL INSERT

1. As an operator of the Police Radio Division, you receive a call on the following incident:

callerName	phoneNumber	incidentlocation	incidentDesc
Peter Leow	81234567	Junction of North Bridge Road and Middle Road	A bus collided with a taxi, 2 injuries

Write a SQL statement to insert this incident into the database. (Do you need to enter an incidentId and timeCalled yourself?)

2. You will dispatch one patrol car that is free to attend to this incident. How do you do it?
3. Write a SQL statement to select one patrol car that is free and insert the dispatch details into the dispatch table. Your solution should take care of the following situations:
 - a. What data should you enter for timeDispatched, timeArrived, and timeCompleted?
 - b. How to enforce referential integrity between incident and dispatch tables? (dispatch table should not accept an incident that does not exist in incident table.)
4. If you think you have finished your job after step 3, think again. You have forgotten to update one table. The hint is to prevent the patrol car that is on dispatched mission from being dispatched again.
5. When the dispatched team reports to you that they have completed their mission, write a SQL to update their status in the database.
6. Up till now, you have been executing SQL statements to manipulate the database on the MySQL screen. In the real web application, these SQL statements will be constructed in a programming language and being forwarded to the RDBMS for execution.

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