Lab Sheet 04 – Working with SQL

0. Prior to the Laboratory

- Review the laboratory handout.
- Review the following materials:

Topic		Link
Information About Databases and Tables		http://dev.mysql.com/doc/refman/5.6/en/gettinginformation.html
Connecting to MySQL from the command line		http://dev.mysql.com/doc/refman/5.6/en/connectingdisconnecting.html
Creating database		http://www.w3schools.com/sql/sql_create_db.asp
Creating table		http://www.w3schools.com/sql/sql_create_table.asp
Inserting data		http://www.w3schools.com/sql/sql_insert.asp
Retrieving data		http://www.w3schools.com/sql/sql_select.asp
Conditional clause		http://www.w3schools.com/sql/sql_where.asp
Deleting data		http://www.w3schools.com/sql/sql_delete.asp
Updating data		http://www.w3schools.com/sql/sql_update.asp
Sorting data		http://www.w3schools.com/sql/sql_orderby.asp
Some functions	count()	http://www.w3schools.com/sql/sql_func_count.asp
	max()	http://www.w3schools.com/sql/sql_func_max.asp
	min()	http://www.w3schools.com/sql/sql_func_min.asp
	count()	http://www.w3schools.com/sql/sql_func_count.asp
	Group By()	http://www.w3schools.com/sql/sql_groupby.asp
Joining tables	inner join	http://www.w3schools.com/sql/sql_join_inner.asp
	left join	http://www.w3schools.com/sql/sql_join_left.asp
	right join	http://www.w3schools.com/sql/sql_join_right.asp

1. Lab Objectives & Topics

Upon completion of this lab you should be able to:

- Connect to a database and execute queries
- Perform basic Create, retrieve, update, and delete (CRUD) operations
- Understand more complex queries using Joins and Aggregate functions

2. Instructions

You are supposed to get screen shots per each and every task and save those with task number.

Then create a zip file with those and upload it to UGVLE.

Make sure you have saved the file using your index number.

3. Lab Exercise

An organization has recorded a list of vendors, items and customers and the number of items delivered by the vendors to respective customers.

Vendor(vno, vname, city)

Item(ino, description, type)

Customer(cno, cname, city)

Delivery(vno, ino, cno, qty)

Vendor

vno	Vname	city
V1	E-W Information Systems	Kandy
V2	Softlogic	Colombo
V3	IBM Computers	Colombo

Item

ino	description	type
I1	IBM	P3
I2	Dell	P4
I3	Toshiba	P3
I4	ICM	P4
I5	IBM	P4
I6	Toshiba	P4

Customer

cno	cname	city
C1	Bank of Ceylon	Kandy
C2	Peoples Bank	Colombo
C3	Bank of Ceylon	Galle
C4	Hatton National Bank	Colombo
C5	Peoples Bank	Kandy

Delivery

vno	ino	cno	quantity
V1	I1	C1	150
V1	I5	C1	100
V1	I5	C4	150
V2	I2	C1	50
V2	I2	C4	500
V2	I2	C5	500
V2	I3	C4	300
V2	I6	C4	300
V3	I1	C1	10

Open WAMP server and then open MySql console

1) Write SQL statements to create a database called ABC to hold these data.
2) Write SQL statements to change the database to ABC
3) Write SQL statements to create the above tables. Choose suitable data types for the attributes.
4) Write SQL statements to insert data to the relevant tables in the database.
5) Write SQL statements to get the following information from the database:
    (a) All information about all Customers.
    (b) All the vendor names.
    (c) All information about all Customers in Colombo.
    (d) All deliveries where the quantity is between 100 and 250, inclusive.
6) Write SQL statements to get the following information from the database:
    (a) Item numbers bought by Customer C1, ordered by Item number.
    (b) Number of Vendors who delivers to Customer C1.
    (c) Customer number who had bought maximum number of items.
7) Write SQL statements to get the following information from the database:
    (a) Item numbers for Items delivered by a Vendor in Colombo.
    (b) Vender numbers who delivers to customers in Kandy.
    (c) Item numbers bought by "Bank of Ceylon"
8) Write SQL statements to change the following information in the database:
    (a) Change the type of all P3 Items to P4.
    (b) Remove all Customers that have no deliveries.