

## Lab 4 – Databases and MySQL

### How to login to your MySQL account:

1. Login to the `cmslamp14.aut.ac.nz` server using 'HeidiSQL\_8.3\_Portable' client, or 'MySQL Monitor Cmdline -x64 (only work for X64 Windows PC)' (Both tools are available in the 'Lab04 – Week 5' folder on AUTOnline).
2. To access your mysql account use the following parameters in HeidiSQL

```
host: cmslamp14.aut.ac.nz
user: <your AUTOnline username>
password: <your AUTOnline password>
```

or type `"mysql -h cmslamp14.aut.ac.nz -u <username> -p"`  
in a windows command line environment.

3. You will arrive at the 'MySQL Monitor' or mysql command line client (or similar tab in HeidiSQL):  
`mysql> ...`
4. Each student has been allocated a database to work on, named as `your AUTOnline username`, e.g., `'jiju'`.
5. `mysql> SHOW DATABASES;`  
you will see a list of databases and your database is also in the list
6. `mysql> USE <username>;`  
You will receive a confirmation message "Database changed".
7. Now you are ready to create tables into your database.  
`CREATE TABLE cars .....;`
8. The MySQL manual can be found here: (Section 10 and 12 are what you need)  
<http://dev.mysql.com/doc/refman/5.0/en/index.html> ... or see week 4 lecture slides

### Task 1: Creating a table and entering data (5 marks)

Using your existing database, create a new table `cars` for a used car dealership.

Include the following fields in the `cars` table:

`car_id` (AUTO\_INCREMENT PRIMARY KEY),  
`make`,  
`model`,  
`price`, and  
`yom` (year of manufacture).

Enter at least 10 records into the table.

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Make	Model	Price	Year of Manufacture
Holden	Astra	\$14,000	2005
BMW	X3	\$35,000	2004
Ford	Falcon	\$39,000	2010
Toyota	Corolla	\$20,000	2010
Holden	Commodore	\$13,500	2005
Holden	Astra	\$8,000	2001
Holden	Commodore	\$28,000	2009
Ford	Falcon	\$14,000	2006
Ford	Falcon	\$7,000	2003
Ford	Laser	\$10,000	2001
Mazda	RX-7	\$26,000	2000
Toyota	Corolla	\$12,000	2001
Mazda	3	\$14,500	2007

## Task 2: Querying the table (5 marks)

Write queries that return the following:

1. All records
2. Make, model, and price, sorted by make and model
3. The make and model of the cars which cost \$20,000 or more.
4. The make and model of the cars which cost below \$15,000.
5. The average price of cars for a similar model. *Hint: Use in-built SQL function AVG*