

COMPSCI 280

Tutorial 1

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Schedule and Office Hours

- Schedule
 - Tuesday, 9am-10am, 303S-G75(Sandeep)
 - Thursday, 9am-10am, 303S-175(Adeel)
 - Thursday, 1pm-2pm, 303S-G75(Adeel)
 - Friday, 9am-10am, 303S-175(Sandeep)
 - Friday, 12noon-1pm, 303S-G75(Sandeep)
- Office Hours
 - Adeel – Thursday 10am – 11am, 303.491
 - Sandeep – Friday 1:30pm to 2:30pm
 - All other times, appointment via email,

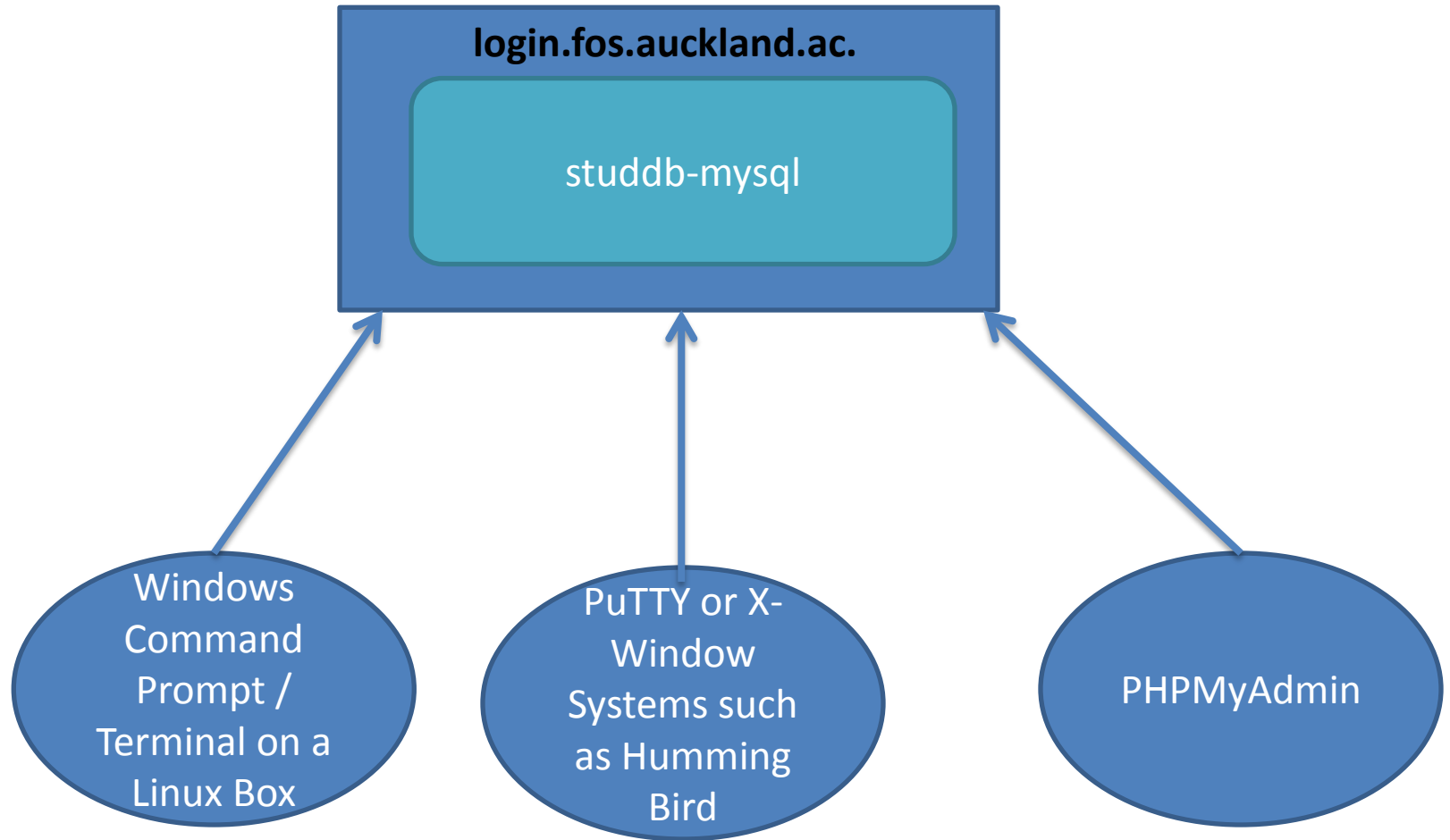
Today's Agenda

- Quick Review of the lab sheets
- Connecting Clients
 - PuTTY
 - PHPMyAdmin.
- Command line Tips
- Logical Operators
- Search Functions - Wildcards.
- Playing with Date and Time.

Quick Review of the lab sheets

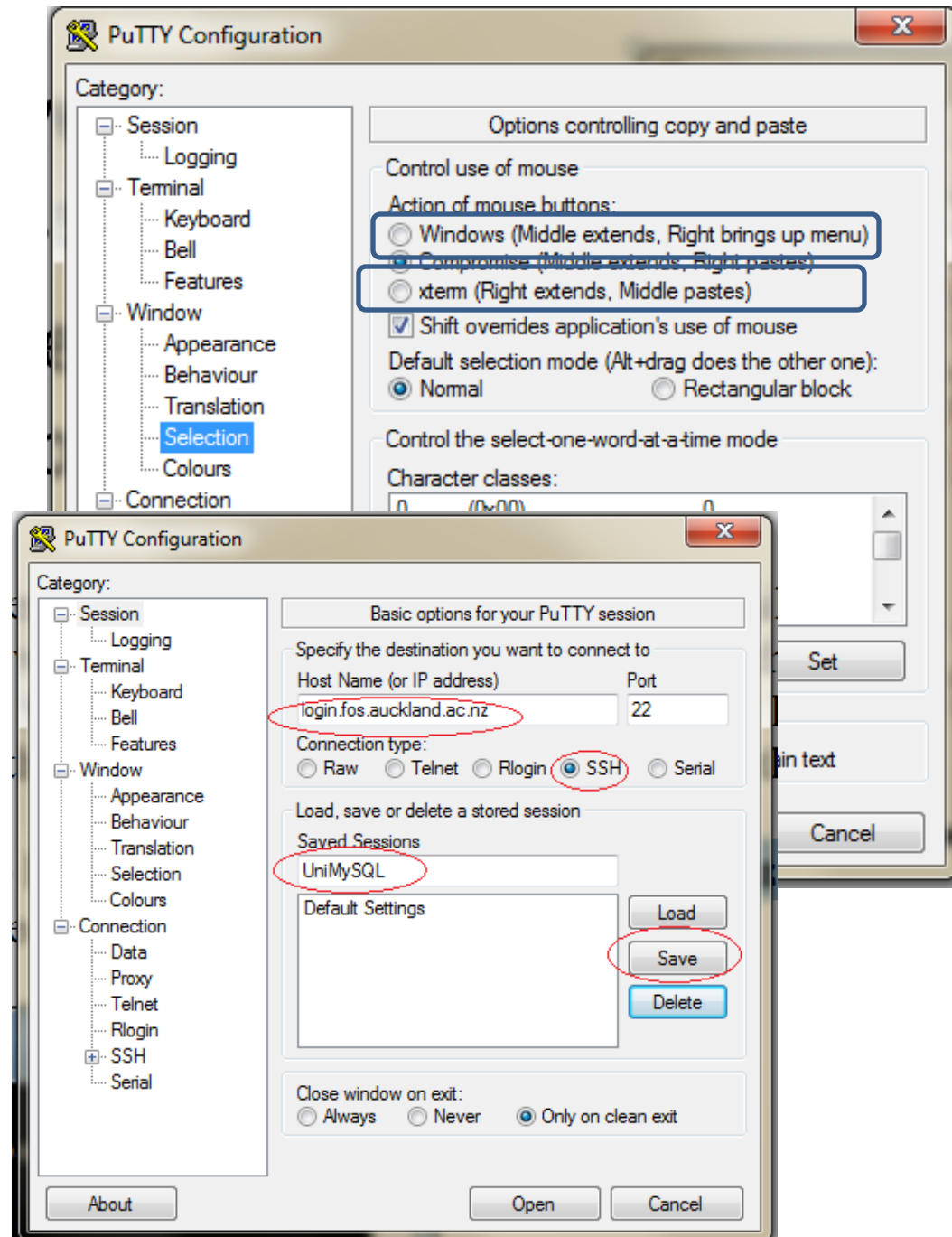
- After going through the first 3 lab exercises, you should have practiced:
 - CREATE TABLE statements.
 - INSERT statements.
 - SELECT statements.
 - ALTER TABLE statements.
 - UPDATE TABLE statements
 - DROP TABLE statements.
 - Creating and Using primary keys
- For this Tutorial, you should have the city table created with some data in your database.

Client Vs Server



PuTTY

- Save your Session.
- Selecting a text also copies the selection to Clipboard.
- Use these settings for paste options.
 - First bullet if you are a Windows user.
 - Third bullet if you are a Linux user.



PuTTY command line Tips

- **Recalling previously typed queries or commands**

If you need to re-type a query or a command then instead of typing the query all over again, you can save time by pressing the arrow up key on your keyboard to show the commands you previously typed.

- **Show results in vertical format**

Sometimes SELECT query results may get distorted in the command line because of the many columns to be shown. You can show the results vertically using the command below :

```
mysql> select * from city\G
```

- **More Commands**

Execute the help command to see a list of MySQL commands

```
mysql> \help
```

PHPMyAdmin

- Go to

<http://www.cs.auckland.ac.nz/courses/compsci280s1c/tutorials/>

- Download the file Employee.sql

- Go to

<https://www.cs.auckland.ac.nz/courses/compsci280s1c/phpmyadmin/>

- Export the File Employee.sql. See Lab3 Hand out for details on how to export the file.

Logical Operators

- **NOT (or) !**

- A query that returns all details of all Employees who have Shift Type other than 2,3 or 4.

```
mysql> SELECT * FROM `Employee` WHERE (`Shift  
Number` != '1');
```

or

```
mysql> SELECT * FROM `Employee` WHERE (`Shift  
Number` NOT IN (1));
```

- **AND (or) &&**

- A query that returns all details of all Employee(s) who have Shift Type 3 AND First Name is "Bob.

```
mysql> SELECT * FROM `Employee` WHERE (`First  
Name` = 'Bob') AND (`Shift Number` = '3');
```

or

```
mysql> SELECT * FROM `Employee` WHERE (`First  
Name` = 'Bob') && (`Shift Number` = '3');
```

Logical Operators

- **OR (or) ||**

- A query that returns all details of all Employees who have Shift Type is either 2 or 4.

```
mysql> SELECT * FROM `Employee` WHERE  
(`Shift Number` = '1') OR ; (`Shift Number` =  
'3')
```

or

```
mysql> SELECT * FROM `Employee` WHERE  
(`Shift Number` = '1') || ; (`Shift Number` =  
'3')
```

- For more information about operators:

<http://dev.mysql.com/doc/refman/5.0/en/non-typed-operators.html>

Search Functions – Wild Cards

- The % character

“%” in MySQL is the wildcard character that represents “anything”.

```
mysql> SELECT * FROM `Employee` WHERE (`First Name` LIKE '%o%');
```

This will result in finding Details of Employee’s whose First Name has a letter 'o' in them. Notice the two %'s used. This checks for anything before or after that letter.

- You can place that % sign anywhere within the query though, as the search is based upon the placement of this character.
- Another wildcard character is the _ character. It will match exactly one character. (Try It)

Some observations with Inserts

- INSERT INTO `Employee` (`EmpID`, `First Name`, `Last Name`, `DOB`, `Salary`, `Shift Number`) VALUES (NULL, 'Chris', 'Junior', '1974-10-31', '29.00', '5');
 - Something Strange happened? Why?
 - To Limit the Values for a Field, we Use ENUM Data Type.
- INSERT INTO `Employee` (`EmpID`, `First Name`, `Last Name`, `DOB`, `Salary`, `Shift Number`) VALUES ('7', 'William', 'Patten', '1977-12-12', '35.00', '2');
- INSERT INTO `Employee` (`EmpID`, `First Name`, `Last Name`, `DOB`, `Salary`, `Shift Number`) VALUES (NULL, 'Jack', 'Rose', '1987-08-10', '35.00', '2');

ORDER BY, GROUP BY, MIN, MAX

- **mysql>** SELECT * FROM Employee ORDER BY `Salary` DESC;
 - This will return all the records in Descending order based on the Salary Field.
- **mysql>** SELECT MIN(`Salary`) as Minimum_Salary, MAX(`Salary`) as Maximum_Salary FROM Employee;
 - Will Display Minimum salary and Maximum Salary.
- **mysql>** SELECT `First Name`, `DOB` FROM Employee GROUP by `First NAME`;
 - Will Display Only First Name and DOB in Alphabetical order of First Name.

Playing with DATE and TIME Types

- Alter the DOB Data type from *VARCHAR* to *DATE*.
 - ALTER TABLE `Employee` MODIFY DOB DATE;
 - SELECT * FROM `Employee` WHERE `Shift Number`='2' AND `DOB`>'1970-07-01';
- Alter Table to add two more fields Shift From and Shift To. Data Type will be TIME.

UPDATE TABLE – Use PHPMyAdmin

- Update Everyone Salary by 15%
 - UPDATE `Employee` SET
`Salary`=`Salary`+((15/100)*`Salary`);
- Update the TWO New Fields added before as

below

Shift Type	Shift From	Shift To
1	06:00:00	12:00:00
2	12:00:00	18:00:00
3	18:00:00	00:00:00
4	00:00:00	06:00:00

- ALTER Table to remove the Shift Type Field.

Questions?