

## Lecture Notes – MySQL Installation

### Section 1: Lecture Summary

Installation of MySQL server on Mac OS involves downloading the community server stable version from the MySQL community downloads website, selecting the ARM64 DMG for M1/M2 chips, running the installer, agreeing to the license, installing for all users, entering Mac password for authentication, setting a simple memorable root password like admin1234, and completing the process. Verify installation via terminal with `mysql --version`, then log in using `mysql -u root -p` and entering the root password to access the MySQL prompt where `show databases;` displays default databases like `information_schema` and `mysql`. Installation of MySQL Workbench follows similar steps: download the DMG for the OS, drag to Applications, launch it, and connect to the local MySQL server instance using the same root password.

### Section 2: Key Concepts and Explanations

**MySQL server** is the core database engine installed first, accessible via terminal command line for executing commands like `show databases;`. **Root user** is the admin account created during installation with a custom password that must be remembered to avoid reinstallation. **MySQL prompt** (`mysql>`) indicates successful login, differing from the terminal dollar prompt (`$`), and supports SQL commands. **MySQL Workbench** is a GUI tool for interactive query execution, connecting to the server instance with the root password; it is recommended throughout for course practice over command line alone. Default databases (`information_schema`, `mysql`, `performance_schema`, `sys`) are system-provided and not for user practice; custom databases must be created separately. Steps are similar for Windows (installer or zip) but OS-specific files are selected during download.

### Section 3: Example Code and Use Cases

```
USE companyDB;
```

```
-- Log into MySQL server via terminal (after installation)
```

```
mysql -u root -p
```

```
-- Enter root password (e.g., admin1234)
```

```
-- At MySQL prompt, check databases
```

```
SHOW DATABASES;
```

```
-- Switch to companyDB (assuming created)
```

```
USE companyDB;
```

```
-- Example query in MySQL prompt or Workbench
```

```
SELECT * FROM Employees LIMIT 5;
```

```
-- In MySQL Workbench: Connect to local instance with root password, then run queries in SQL editor
```

#### Section 4: Key Takeaways

Download stable MySQL community server version for compatibility with Workbench, select OS-specific installer (DMG for Mac ARM64), set simple root password during setup. Verify with `mysql --version`, log in as root via terminal or Workbench GUI. Default databases are not for practice; create custom ones next. Use Workbench primarily for queries after server installation. Steps identical across Mac and Windows with OS selection.