

INF2611 Visual Programming II

Unit 4 Database Handling

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INF2611



Define tomorrow.

INF2611 - UNITS

- Unit 1 GUI Design – basic widgets
- Unit 2 Advanced Widgets, Menus and Toolbars
- Unit 3 Multiple documents and layouts
 - Chapter 11. Multiple Documents and Layouts
- Unit 4 Database handling
 - Chapter 12. Database Handling

Scope of this unit

- Installing and using a MySQLdb module
- Creating databases and tables
- Database maintenance through console-based programs
- Inserting, fetching, and searching rows in a database table
- Updating and deleting information in a database table
- Database maintenance through GUI programs
- Displaying rows in a database table
- Navigating rows of a table
- Maintaining information in a database table

Overview

- Database handling vs File handling
- Indexing, encryption, and joining or merging files
- Handling large volumes of data, auto backup, data sharing, security, and integrity
- Install the MySQLdb

MySQLdb Database

- Creating a Database: `create database db_name;`
- Data types – Table 12.1
- Create a table: `create table table_name (define_columns)`
- Methods: `connect(); cursor(); execute(); close()`
- `use database_name` – loads into memory

Console-based Programs

- Inserting roles
 - `execute()`
- Modifying the table
 - `commit()`
- Cancels modifications since last save
 - `rollback()`
- Fetching rows
 - `fetchone()`
 - `fetchall()`
- Database table
 - Searching – `SELECT`, Updating – `UPDATE`, Deleting - `DELETE`

GUI Programs

- Use QSqlDatabase class
 - Refer to Table 12.2 for class methods
- QSqlTableModel class – displaying rows
 - Refer to Table 12.3 for class methods
- Navigating through table rows
 - Use Dialog without Buttons to display – Figure 12.11 example
- Maintaining the table
 - Use Dialog without Buttons

Assessment for Unit 4

- **Assessment for Unit 4 - MCQ quiz** is available. Closes 23 September at 09h00. One attempt, 30 minutes.
- **Self-Assessment for Unit 4 -MCQ quiz** is available. Available until 24 September. Three attempts.



Thank you

Define tomorrow.

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