

- COURSE CODE:** DWUFUN
- COURSE TITLE:** DB2 for LUW Fundamentals
- CURRENCY:** V9 – V9.7
- LEVEL:** Beginner to intermediate
- AUDIENCE:** Aspiring System Administrators, Database Administrators, Application Developers, Security Analysts and Capacity Planners.
- PREREQUISITES:** Completion of our course 'DB2 for LUW Concepts & Facilities' (DWUCF) or equivalent knowledge.
- DURATION:** 3 days
- SUMMARY:** After discussing general relational database terms and concepts, this hands-on course develops, for the delegates, a working knowledge of DB2 for Linux/UNIX/Windows in terms of:
- Planning
 - Implementation
 - Performance
- OBJECTIVES:** Upon completion of this course, the participant should be understand the entailments of planning, implementing and tuning the DB2 Database Manager and the DB2 database; additionally, the participant should have a working knowledge of access rights, authentication and authorisation.

1. REVIEW OF DB2 DATABASE TERMS & CONCEPTS

2. DB2 ARCHITECTURE & USE

- Directories
- Client
- Server
- Memory
- Agents
- Sub-agents
- I/O services
- Buffer pools
- I/O devices (including RAID devices)
- Logs

3. DBA/DEVELOPER INTERFACES

- Command Line Processor (CLP)
- CLP Plus
- Control Center
- Command Editor

4. CONFIGURATION PARAMETERS

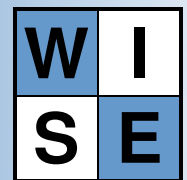
- Database managers
- Database
- Registry and environmental variables
- DB2 instance design

5. DATA INTEGRITY & TABLES

- Referential integrity
- Check constraints
- Unique rules
- Primary keys
- Foreign keys
- Triggers

6. TABLESPACES

- User
- Temporary
- SMS vs. DMS
- Creating
- Altering
- Online vs. offline
- Balancing
- Maintenance



7. INDEXES

- Types
- Creating
- Altering
- Maintenance

8. AUTONOMIC COMPUTING

- Maintenance
- Self-tuning memory
- Automatic storage
- Automatic statistics
- Configuration Advisor

9. BACKUP & RECOVERY

- Unit-of-work concepts
- System failures
- Database failures
- Table spaces

10. SECURITY

- Authentication
- Authorities
- Privileges

11. LOCKING & CONCURRENCY

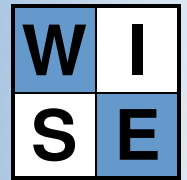
- Issues
- Isolation levels
- Lock attributes
- Deadlocks

12. DB2 TOOLS

- Wizards
- Advisors
- Configuration Assistant
- Command Editor
- Task Center
- Journal
- Health Center
- Other tools

13. SQL COMPILER & OPTIMISATION

- How it works
- Query optimisation
- Optimisation classes



14. SQL EXPLAIN FACILITIES

- Purpose
- Invocation
- Examples of use

15. STORED PROCEDURES

- What are they?
- Advantages
- Result sets
- Stored procedures vs. SQL procedures

16. APPLICATION DEVELOPMENT

- Precompiling through BIND
- Packages/collections
- Embedded & static SQL
- Cursor concepts

17. PARTITIONING

- Database
- MDCs
- Tables

18. PERFORMANCE

- Control Center and its scope
- Monitoring concepts
- When to tune
- Performance areas
- Primary performance factor (e.g., memory, processor, storage, etc.)