Database Management Techniques

Workshop Objectives

Upon completion of this workshop, participants should be able to:

- Design and set up a traditional database system
- Understand techniques and advances in data management
- Know how data management techniques are branching out from traditional database systems
- Read and understand many papers in data management conferences
- Critique current approaches to data management problems
- Propose the application of existing techniques to new data sources
- Design and evaluate new data management techniques
- Set up and management the database for the institution

Target Groups

- Records management officers
- Information officers
- Records managers
- Data clerks
- Registry officers
- Administration officers
- Systems administrators
- Departmental Heads

Workshop Outline

- General management techniques and principles
- Introduction to Databases
- History of DBMS. Database Models.
- Systems Development (SDLC) and Database Development
- Entity Relationship Modeling (ER Modeling)
  ER model constructs. Lab Session - Using MS Access
- Relationships, super and subtype entities
- The Relational Model - Converting E-R to Relations Normalization
- Relational Algebra
- SQL Server
- Structured Query Language (SQL) - Data Definition Lang.
- SQL Continued - Data Manipulation Lang.
• Using MS Access (Creating and running SQL queries)
• Implementation: Data Structures (ordered, unordered and indexed files)
• Database Security and System Administration
• Transaction Processing, Concurrency Control, Recovery
• DB Architectures: Client/Server
• DB Architectures: Distributed Databases
• ER Model and Normalization
• Security, Backup and Recovery
• Popular Databases and differences
• Web Access to Databases
• Object Oriented Databases
• Data Management Applications (Data Integration, Peer-to-Peer, OLAP, Data Warehousing, Data Mining, Metadata management )
• Alternate data models (XML, object Oriented/Object Relational, Temporal/Time , series data, Spatial data, Image data, Text data)
• Action planning.

Dates: 07th – 18th October 2019

Cost: US$3450/delegate

Duration: 2 weeks

Venue: Pretoria, RSA