INFOSOFT IT SOLUTIONS

Training | Projects | Placements

Revathi Apartments, Ameerpet, 1st Floor, Opposite Annapurna Block, Infosoft It solutions, Software Training & Development Institute, **+91 - 9059683947 | +91 - 9182540872**

DATA MANAGEMENT & ADMINISTRATION

COURS CONTENT

Introduction to Data Management

- Overview of data management concepts and importance

- Evolution of data management technologies and practices

- Role of data management in organizational success

- Introduction to database management systems (DBMS)

Relational Database Management Systems (RDBMS)

- Introduction to relational database concepts

- Overview of popular RDBMS (e.g., MySQL, PostgreSQL, SQL Server, Oracle)

- SQL fundamentals: querying, data manipulation, and data definition

- Data modeling and database design principles

Database Administration Fundamentals

- Introduction to database administration (DBA) roles and responsibilities

- Database installation, configuration, and upgrades

- User management and access control

- Monitoring and troubleshooting database performance

Backup and Recovery

- Importance of data backup and recovery strategies

- Types of database backups: full, incremental, and differential

- Recovery models and strategies for different scenarios

- Disaster recovery planning and testing

Data Security and Privacy

- Importance of data security in data management

- Authentication and authorization mechanisms

- Encryption techniques for data protection

- Compliance regulations (e.g., GDPR, HIPAA) and data privacy considerations

Data Governance and Quality

- Introduction to data governance frameworks and best practices

- Establishing data governance policies and procedures

- Data quality management: profiling, cleansing, and enrichment

- Metadata management and data lineage

Data Integration and ETL (Extract, Transform, Load)

- Overview of data integration concepts and technologies

- ETL processes and tools for data movement and transformation

- Real-time data integration and streaming data architectures

- Case studies and practical exercises

Master Data Management (MDM)

- Introduction to master data management (MDM) concepts

- Benefits and challenges of MDM implementation

- MDM architecture and data stewardship

- Data synchronization and consolidation techniques

Cloud Data Management

- Overview of cloud-based data management solutions (e.g., AWS RDS, Azure SQL Database, Google Cloud Spanner)

- Benefits and challenges of cloud data management

- Migrating on-premises databases to the cloud

- Hands-on experience with a selected cloud data management platform

Performance Tuning and Optimization

- Performance monitoring and analysis

- Identifying and resolving performance bottlenecks

- Indexing strategies for performance optimization

- Query optimization techniques

Big Data Management

- Introduction to big data technologies (e.g., Hadoop, Spark, Kafka)

- Managing and processing large volumes of data

- Data storage and processing architectures (e.g., data lakes, data warehouses)

- Hands-on exercises with big data tools

Capstone Project

- Final project where students apply their knowledge and skills to solve a real-world data management and administration problem

- Project planning, implementation, and documentation

- Presentation of projects and peer feedback