

Data Warehousing & ETL Concepts

1	Database Design
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	Normalization
	De-Normalization
	Examples

2	Data-warehouse Introduction
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	Define Data-warehouse
	Data Warehouse Architecture
	The Top-Down Approach
	The Bottom-up Approach
	Differences between OLAP & OLTP
	OLAP
	OLAP Architecture
	OLAP Servers
	- R OLAP Server
	- M OLAP Server
	- H OLAP Server
	OLAP Operations
	- Roll up Operation
	- Drill down Operation
	- Slice Operation
	- Dice Operation
	- Pivot Operation
	Types of Data Warehouse
	- Enterprise Data Warehouse
	- Data Marts
	- Dependent Data Mart
	- In-dependent Data Mart
	- ODS (Operational Data Store)

3	Data Models
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	Conceptual Data Model
	Logical Data Model
	Physical Data Model
	Comparisons of CDM, LDM & PDM
	Pictorial Representation of these models

4	Dimensional Modeling
	Dimension & Facts
	Attributes, Hierarchy
	Star Schema Architecture
	Snow-Flake Schema
	Pictorial Representation of Star & Snow Flake schemas
	Types of Dimensions
	Types of Facts
	Types of Fact Tables
	Slowly Changing Dimensions [SCD] & their types

5	Data Acquisition
	Define Data Acquisition [ETL]
	Steps in ETL
	ETL Architecture
	ETL tools
	Sources v/s Targets

Linux(UNIX) Fundamentals

Chapter	Table of Contents
Linux Commands	
	What is file?
	File Operations (Listing, View, Copy, Rename, Delete, Move, Create)
	File Operation Commands
	o ls
	o cat
	o cp
	o rm
	o mv
	o touch
	Directory Operations (Listing, Rename, Delete, Move, Create)
	Directory Operation Commands
	o cd
	o pwd
	o mkdir
	o rmdir
	Permissions Using "chmod" command [rwx]
	Search Commands
	o find
	o locate
	o grep
	Pipers and Filters
	o wc
	o more
	o sort
	o tail
	o head
	vi editor
	o Modes
	o Insert, append (character, line)
	o Delete (letter, word, line)
	o Copy (word, line)
	o Paste
	o Search
	o Save and Quit

ETL Testing

1	ETL Tool [Informatica] Practical
	Introduction to Informatica
	Client Tools - Power Center Designer, Work Flow Designer, WF Monitor
	Creating a Mapping, Workflow & Task
	Running a WorkFlow & tasks
	Creating all the transformations mentioned in Chapter 6
	Monitoring the Tasks
	Loading the data from Flat File to a Database
	Transformations
	Sorter, Aggregator, Joiner, Sequence Generator
	Router, Rank, Expression, Filter etc.
	De-bugging
	Error Logs
	DB Testing
	Define Database Testing
	Process in DB Testing
	Introduction to Sand-beds
	Testing the CRUD operation in DB testing
	Types of DB Testing
	Different Scenarios like Count Checks, Type, Formats etc..
	Writing Database Testing Test Cases
3	ETL Testing
	Need of ETL Testing
	Difference between DB Testing & ETL Testing
	Sand Beds
	Staging Areas
	ETL Testing Processes & Methodology
	Writing ETL Testing Test Cases
	Test Execution Reports in ETL Testing
	Transformation Testing
	Mapping Testing
	COUNT Tests
	Record Difference Checks and Testing
	Integrity Checks
	Finding the changed records using TIMESTAMP method, FLAG method
	Finding the changed records using Triggers, Materialized Views
4	Business Intelligence (Report) Testing
	Process of BI Testing
	BI Testing Tools
	Writing BI Test Cases
	Execution of BI Test Cases

5	Placement Assistance
	Preparation of Resume as per student's requirements.
	Discussion of Interview Questions
	Tips for cracking the certification if student is taking any certification
	Project Explanation
	Assistance to get interviews