SNOWFLAKE COURSE CONTENT

1. DATA WAREHOUSING

* What is data warehousing?
* Why data warehousing?
* Data Warehouse architecture
* OLTP vs OLAP
* ETL/ELT overview

2. INTRODUCTION TO CLOUD

* Introduction to cloud
* Different cloud vendors
* Advantages/Differences of cloud over on premises

3. SNOWFLAKE

* Introduction to Snowflake
* Architecture of Snowflake (Services Layer, Compute Layer, Storage Layer)
* Snowflake Registration
* How to use the Snowflake UI & ecosystem
* Snow SQL
* Setting up the Config file

4.SNOWFLAKE WEB UI

* Creating warehouse, DB, Schema, and tables
* Accessing different roles and using it
* Working with worksheets
* Understanding different type of accounts

5. STAGING IN SNOWFLAKE

* Types of Staging (Internal, External)
* Internal Stage (User Stage, Table Stage, Named Stage)
* Loading the data into Different Stages
* Loading multiple files into User Stage by creating a folder using

regular expressions

* Listing the stages (User, Table, Named)
* Creating a Snowflake Managed Internal Stage
* Loading the data into the internal stage

6. EXTERNAL STAGES

* Introduction to the external stage
* Explanation on AWS Console.
* Examples on S3 Service in AWS
* Create a Bucket, User, Folder, Role, Policy in AWS
* Upload the files and list all the files in Snowflake

7. COPY COMMAND

* File formats (csv, xml, json …)
* Options available in Copy Into command
* Introduction of loading the data in the snowflake
* loading a single file into a table
* loading the selected files into a table
* Data unloading

8. TABLES IN SNOWFLAKE

* Introduction of Tables
* Different type of the tables and differences
* Design Considerations based on the environment.
* Introduction to Data Retention Policy
* Usage of Sequences, Auto increment and Default

9. TABLES IN DYNAMIC TABLE

* Introduction of Dynamic Tables
* Compare Dynamic Table Vs Stream & Tasks and Materialized Views
* Cost of Dynamic Table
* Usage of Dynamic Table

10. SNOWPIPE

* Creating a Role for Snowpipe
* Creating the Storage Account, Container, Queue, Event, Notification,

Pipe in Azure

* PUT and GET commands.
* Bulk loading from cloud storage
* Continuous loading

11. TIME TRAVEL AND FAILSAFE

* Introduction of Time Travel
* Data Life Cycle and Time Travel operations
* Time Travel SQL Extensions, Parameters, Offset
* Timestamp, Statement, Un Drop
* Cloning Using Time Travel
* Discussing Fail Safe
* Querying the Space for Table, Time Travel and Fail Safe
* Retrieving the Historical Data

12. CLONING

* Introduction of Cloning
* Access Control Privileges for Cloned Objects
* Cloning and Snowflake Objects
* Impact of DDL on Cloning
* Impact of DML and Data Retention on Cloning

13. STREAMS

* Introduction to the streams
* Creating and identifying the key Aspects of Stream
* METADATA$ACTION, METADATA$UPDATE, METADATA$ROW\_ID
* Load the Data into the Targe Table
* Insert, Update, Delete - Related to stage Table data

14.MERGE

* DML operations(insert,Delete,Update).
* Adv. Merge

15.SCD (Slowly changing dimensions)

* Type 0
* Type 1
* Type 2
* Type 3

16. TASKS

* Introduction to the Tasks
* Introduction to the Schedules in Tasks
* Create a Task (Stand Alone Task, Daily and Weekly)
* Create a dependent, Parent, Child tasks.
* Order of resuming and suspending the tasks.
* Scheduling the Tasks
* Accessing procedures with tasks

17. QUERY CACHING AND PERFORMANCE TECHNIQUES

* Introduction to caching
* Clustering in Snowflake
* Creating multi-users on large tables
* Performance techniques
* Result set cache
* Metadata cache
* Query data cache
* Best practices of using caching for performance and cost optimization

18. DATA SHARING

* Introduction to Data Sharing, Reader Account
* Inbound and Outbound Shares
* Data Market Place (Inbound, Outbound)
* Privileges in data sharing
* Challenges with cross-region sharing and understanding replication.
* Limitations with Data sharing

19. ROLES IN SNOWFLAKE

* Introduction to Pre-Defined Roles
* Introduction to Custom Roles
* Creating Users, Custom Roles
* Understanding about Privileges

20. MATERIALIZED VIEWS

* Views
* Introduction of Materialized Views
* Refreshing the MVIEWS
* Secured and unsecured views

21. FUNCTIONS AND STORED PROCEDURES

* Introduction to the Functions
* Introduction to Stored Procedures

22. ADVANCED TOPICS

* Error Handling and Validations
* Snowflake Pricing model
* Selecting best Edition and Calculation of Credits usage
* Resource Monitoring
* Data Masking
* Partitioning and Clustering in snowflake
* Integration with AWS, Azure and Google Cloud

23. SNOWFLAKE PYTHON CONNECTOR

* Introduction
* Frame work
* How to interact with Snowflake
* How to interact with Oracle/MS SQL Server

24. SNOWPARK

* Introduction
* How to interact with Snowflake using SNOWPARK
* Python Libraries

25. SNOWLIT

* Introduction
* Frame work
* Components
* How to interact with Snowflake
* UI

**PRACTICE TEST AND INTERVIEW QUESTIONS**

**PRACTICE MOCK INTERVIEW SESSIONS AND AMAZING JOB SUPPORT**