Course Details on Data Analyst from Basic to Advance Level

WHY SQL AND MS BI STACK

- Simple (Especially for beginners) Accessible
- Powerful
- Valuable
- Universal
- High in Demand (Over 9000+ jobs)

WHY NOT PYTHON?

- Difficult for beginners
- Complicated syntax
- Requires Programming Language(OOPs, algorithm)
- High In demand but mostly considered as an add-on with SQL and BI Stack.
- Even those who know Python are studying MS SQL and BI stack.
- SQL and Python complement each other. Still, MS BI Stack is a great starting point.

1. INTRODUCTION

`1. What is a Data Analyst?
2. Top Reasons You Should Become a Business Analyst

2. WORKING WITH SQL DATABASE

1. Creation of Database.
2. Data Types
3. Tables and its different fields - Primary Key and Foreign Key.
4. Table Joins
5. SQL inbuilt Functions
6. Normalization.
7. SQL Queries and Data Structures.
8. SQL Statements, Clauses, Operators, and Functions (DISTINCT, INSERT, UPDATE, DELETE, WHERE, AND, OR, NOT, NULL, MIN, MAX, AVG, COUNT, WILDCARD, etc.....)
9. Creation of Table Constraints.
10. Stored Procedures:
a) Creating/ Modifying stored procedures (With and without parameters)
b) Creating Procedures for Multitasking.
11. User Defined Functions.
a) Creating/ Modifying customized Functions (with parameters)
b) Using multiple functions within store Procedures.
12. Views
a) Creating / Modifying Views
13. Triggers
a) Creation of triggers, creation of triggers to rollback inserts if conditions don't apply.
b) Creating triggers to monitor the changes happening within the tables and an important Audit Mechanism used within industries.
14. Transactions
15. Indexes – Clustered, Non-Clustered.
16. CTE, Loops, Pivot.
17. Sql Profile, Database tuning advisor.

3. SSIS (SQL SERVER INTEGRATION SERVICES)

1. Introduction to SSIS and creation of Project.
2. Control Flow and Data flow
3. Creation of packages, working with .NET components and different types of data transformation and cleansing.
4. Working with transformations (Lookup, Split, Sort, conversion, merge, union etc)
5. Working with Data Increment, SCD (Slowly Changing Dimensions), and Update data.
6. Working with different source and destination like Flat file, OLEDB, OLEDB command, Excel, SQL Server destination
7. Containers – Sequence Containers, for loop Container and Foreachloop Container. Using containers to enter the details of multiple flat file, excel files. Using time stamp methods to archive excel data files.
8. Debug the package, logging, Test and Run Package.
9. SSIS Configuration, Buffering, Checkpoints.
10. Deploy the Package and create SQL Jobs using SQL server agent

4. DATA WAREHOUSE

1. Buiding Datawarehouse from source system or scratch
2. Star Schema and Snowflake Schema
3. Designing the Stage Database
4. The Naming convention of Data warehouse
5. Denormalization.

5. SSAS: SQL SERVER ANALYSIS SERVICES

1. Data warehousing concept Architecture OLTP VS OLAP Top Down and Bottom up Approach.
2. Dimension Modeling and Fact or measures Types of Dimensions Types of Facts Type Hierarchy
3. Designing Cubes for Analysis
4. Partition the cubes, aggregations
5. KPI
6. Deploying and viewing the cube
7. Schedule the cube updates
8. MDX Queries, set and Tuples

6. SSRS: SQL SERVER REPORTING SERVICES

1. Intro to Reporting and Report Life Cycle
2. Report server configuration
3. Create Single and cascade parameters. Parameters with the calendar.
4. Return multiple values using switch functions
5. Report and Sub-reports

7. POWER BI

1. Loading the Data from Excel or Database.
2. Data Transformation, appending, merging.
3. Working with Dataset and creating the relationship
4. DAX formulas, design of measures
5. Visualization, Custom Visualizations
6. Reports
7. Deploy these Reports.

SQL Developer, MS BI Stack, BI Consultant, Data Analyst, Report Analyst, Finance Analyst(Especially for those who have an accountancy background), Marketing Analyst(Marketing Background).