Azure Sql Server - Course Content

1. Database
    1.1 Create Database
    1.2 Use Database
    1.3 Temp Database
2. DataTypes (INT(INT, BIGINT, TINYINT SMALLINT based on the length of value),CHAR,BIT,VARCHAR,NVARCHAR,DATETIME,DATE,DECIMAL
3. Table
    1.1 Table Name
    1.2 Columns and its datatypes
    1.3 Data
4. Real time project Table Creation with rules
    1.1 Table Name
    1.2 Columns and its datatypes
    1.3 Integrity Constraints(Primary key, Composite key ,Foreign key, unique key and check constraint and Indexing wherever required as per the business requirement to suite our database maintainace)
    1.3 Data
5. Table
    1.1 Table Creation
    1.2 Alter Table
    1.4 Drop Table
    1.5 Truncate Table
6. Insert
    2.1 Insert the Data into Tables
7. OPERATORS(AND,OR,NOT,=,A union B,A intersection B, Union)
8. Querying using below keywords
    as, TOP, Distinct, order by , where, isnull, is not null, between, AND, OR, IN ,(=),NOT IN and (!= or <>),LIKE,EXISTS,ON,CASE,GROUP by, Having
9. Table creation using Query
10. Table joins
11. Functions
    String Functions
    Date Functions
    Aggregate Functions
    Math Functions
    Conversion Functions
    Analytical Functions

System Functions
11. Subquery and Corelated subquery
    1.3 Table Alias for sub queries

12.Views
13.Temp tables
14. Update
15. Delete
16.T-SQL
> Declare
> Variables
> Variable select
> Table Variable

17.Stored Procedures.
18.Try catch Transactions or exception handling
19.Complex Query with all above topics in single go.
20.Complex Stored Procedure with all above topics in single stored procedure

Azure Databricks:

Azure Databricks
> 1.Data engineering with python pandas and pyspark
> 2.Python Concepts
>> List
>> Set
>> Dictionary
> 3.Dataframes
>> Read and write csv files
>> Select columns from dataframes
>> Flters on Dataframes
>> Derived Columns
>> Rename column name
>> Data type conversion
> 4.For loops over rows and columns of Dataframes
> 5.Move pandas dataframe spark dataframe and performing join select statement
> 6.Sample project on data engineering

Azure Sql Datawarehouse:

Azure Sql Datawarehouse
> 1.Sample Datawarehouse Table design
>> 2.Azure Sql Datawarehouse Concepts
>>> MPP(Massive Parllel processing) Architecture
>>> Distributions
>>> Polybase
>>> Differences between Azure Sql and Azure SqlData warehouse
>> Intigrity Constraints Differences Azure SqlData warehouse from Azure Sql

Dataypes Differences Azure SqlData warehouse from Azure Sql

3.Stored Pocedures creations
    CTAS
    External Tables creation

Azure Data Factory:

Azure Data Factory
1.Introduction on ADF
    What is ADF
    Difference from normal ETL tools
    Uses
    How Robust it is and Advantages
    limitations
2. Resource Creations
    Azure Data Factory creation
    Azure Storage explorer
    Azure Data lake creation
3.Components of ADF
    3.1 Connections
        3.1.1 Integration Runtime
            Azure IR
            Selfhosted IR
            SSIS IR
        3.1.2 Linked Services
            Azure BlobStorage
            Azure Datalake store gen1
            Azure Datalke store gen2
            Azure Key valut
            Azure Sql Database
            File System
            Sql Server
            Azure Databricks
3.Functions in ADF
    Builtin Functions
    Date Functions
    String Functions
    Aggregate Functions
4.Datasets
    4.1 Datasets creation on supported sources and targets.
        Filesystem
        Sql Server
        Azure Data lake store gen1 and gen2
        AzueSql Data base
        Azure Sql Datawarehouse

5.Parameters and Expression writing

       Pipeline parameters

       Dataset parameters

       Dynamic Content expression writing

       Expression builder using Functions and parameters

       Dynamic Content expression writingusinginterpolation

       Expression builder using Functions and parameters

6. Activities

       Common

              6.1 Copy

              6.2 Delete

              6.3 Set Variable

              6.4 GetMetaData

              6.5 Lookup

              6.6 Stored Procedure

7.Filter Activities

       Filter

       Foreach

       IF condition

       Switch

       Until

8.Dataflows

  Supported Dataflows

9.Pipelines

       Pipelines creation with all mixing activities and Realtime flow of implementations

10.Triggers

       Scheduled trigger

       Event based trigger

       Windows trigger

End to End Azure BI stack Project implementation -- 7 days