**SQL (STRUCTURED QUERY LANGUAGE)**

1. **BASICS OF DBMS**
2. **SQL COMMANDS**
3. **CONSTRAINTS AND DATA MODELING**
4. **CLAUSES , OPERATORS**
5. **JOIN AND FUNCTIONS**
6. **SUBQUERIES ,STORED PROCEDURES,DERIVED TABLES, COMMON TABLE EXPRESSIONS(T-SQL)**

**POWER-BI**

1. **INTRODUCTION TO POWERBI DESKTOP**
2. **DIFFERENT POWER BI MODULES**
3. **DATA PREPARATION IN POWER BI**
4. **DATA MODELS,RELATIONSHIPS IN POWER BI**
5. **REPORTING MODULE**
6. **INTRODUCTION TO DAX EXPRESSIONS AND ADVANCED DAX EXPRESSIONS**
7. **CREATING CALCULATED FIELDS**
8. **TYPES OF VISUALIZATIONS IN POWER BI**
9. **MATRIX, TABLES AND SLICERS CONCEPTS**
10. **CREATING INTERACTIVE DASHBOARDS**
11. **POWER BI SERVICES**
12. **SECURITIES, WORKSPACE AND REFRESH IN POWER BI SERVICES**
13. **PUNLISHING DASHBOARS AND EMBED DASHBOARDS**
14. **PROJECT : Email marketing Analysis**
15. **PROJECT: Bank Data Analysis**
16. **PROJECT: Sales and Inventory Analysis**

**Power Query**

* **All Home Menu options for data transformations**
* **Queries properties**
* **Query Settings**
* **M-Language Analysis**
* **Data Source Settings**
* **Parameters**
* **Merging & Appending**
* **Multiple Data sources connectivity**

**Data Modeling**

* **Data warehouse Concepts**
* **Schemas**
* **Facts & Dimensions**
* **Cardinalities**
* **Relationships**
* **Filtering directions**

**Power BI Desktop**

* **All Home menu options**
* **Different views in desktop**
* **Filter pane options**
* **Field pane options**
* **Bookmarks, Sync slicers, Selection, Performance Analyzer, Buttons & Filters**
* **Themes and Customizations**

**Visualizations**

* **All default visuals analyses**
* **Visual formatting**
* **Visual Analytics**
* **Visual customizations**

**DAX (Functions very often used will be discussed)**

* **Date Functions**
* **Time Intelligence functions**
* **Filter functions**
* **Relationship functions**
* **Logical functions**
* **Aggregation functions**
* **Table manipulation functions**
* **Information functions**
* **Parent & Child functions**
* **Text functions**

**Power BI Service**

* **Workspace creation**
* **App creation**
* **Gateways**
* **Subscriptions**
* **RLS**
* **Dashboard designing**
* **Data flows**
* **Alerts**
* **Incremental Refresh for updated data**
* **Reports schedules and publishing**

**DATA ANALYSIS WITH PYTHON**

1. **INTRODUCTION TO DATA ANALYTICS**
2. **TYPES OF DATA ANALYTIVS**
3. **INTRODUCTION TO PYTHON AND BASICS**
4. **DATATYPES(LIST,TUPLE,SETS,DICTIONARY)**
5. **FLOW CONTROLS(DECISIO N MAKING STATEMENTS,LOOPING STATEMENTS)**
6. **USER DEFNED FUNCTIONS,DECORATORS**
7. **FILE HANDLING PYTHON,MODULES**
8. **PYTHON LIBRARIES FOR PYTHON**
9. **NUMPY (ARRAYS AND OPERATIONS ON DATA)**
10. **PANDAS (DATA MANIPULATIONS AND DATA ANALYSIS)**
11. **MATPLOTLIB AND SEABORN FOR VISUALIZATIONS**
12. **STATISTICS**
13. **DESCRIPTIVE STATISTICS AND INFERENTIAL STATISTICS**
14. **PROBABILITY DISTRIBUTIONS**
15. **NORMAL DISTRIBUTIONS (ZSCORES)**
16. **HYPOTHESIS TESTINGS**
17. **ANOVA**
18. **PROJECTS ON STOCK PRICE ANALYSIS.**

**NUMPY**

* **Array creations,**
* **Conversions,**
* **Dimensional understandings,**
* **Shaping,**
* **Reshaping,**
* **Generating**
* **Sample large datasets,**
* **Linear algebra functionalities and numerical operations**

**SCIPY**

* **LINEAR ALGEBRA OPERATIONS**
* **INTERPOLATION**
* **NUMERICAL OPERATIONS**
* **FAST FOURIER TRANSFORM**

**PANDAS**

* **Introduction**
* **Pandas Data Frame basics**
* **Understanding data, looking at columns, rows and cells**
* **Sub setting Columns, Rows with methods**
* **Grouped and Aggregated Calculations**
* **Frequency Means and Counts**
* **Basic plot**
* **Pandas Data Structures**
* **Creating your own data (Series and Data Frame)**
* **Series (also called as Vector) Object operations**
* **Broadcasting and Scalar operations**
* **Data Frame Broadcasting (Vectorize)**
* **Making changes to Series and Data Frame**
* **Adding additional Columns**
* **Dropping values**
* **Exporting and Importing Data**

**MATPLOT LIB**

* **Introduction**
* **Matplotlib**
* **Statistical Graphics using matplotlib**
* **Univariate**
* **Bivariate**
* **Multivariate Data**
* **Seaborn Library Plotting methodology**
* **Univariate, Bivariate and Multivariate**
* **Pandas Objects Plotting**
* **Histogram, Density Plot, Scatterplot, Hexbin Plot and Boxplot**
* **Seaborn Themes and Styles.**

**Statistics**

* **Descriptive statistics,**
* **Inferential statistics,**
* **Probability distributions,**
* **Anova,**
* **hypothesis testing**