



# DATA

## ANALYST COURSE



# EXCEL

## 1. Basic Formulas

- Sum
- Average
- Mean
- Median
- Sum Product
- Concatenate





## **2. Advanced Formulas**

- Vlookup
- Index
- Match
- If
- Count if
- Sum if

**3. Remove Duplicate and Conditional Formatting.**

**4. Charts, Filters, Sort, and Slicers.**

**5. Pivot tables and pivot charts**

**6. Ignore VBA, Macros**



## **DML(Data manipulation language)**

- insert
- update
- delete

## **Aggregate function**

- max()
- min()
- avg()
- sum()
- count()



# Build-In function

concat()    replace()  
substr()    translate()  
upper()    greatest()  
lower()    least()  
initcap()    ascii()  
char()    lpad()  
nvl()    nvl2()  
nullif()    mod()  
round()    trunc()  
sqrt()    trim()  
ltrim()    rtrim()  
  
add\_month()  
months\_between()  
next\_day()    coalesce()  
to\_char()    to\_date()  
rpad()    char()  
instr()



# Constraint

- 1) Not- null constraint
- 2) unique
- 3) check
- 4) primary key
- 5) foreign key
- 6) composite key
- 7) enable
- 8) disable
- 9) how to check number of constraint in a table
- 10) Star Schema





# Group function

- 1) Group by
- 2) Group by two column
- 3) group by with where clause
- 4) Group by with having clause
- 5) group by with joins
- 6) grouping
- 7) ROLLUP using GROUP BY
- 8) CUBE using GROUP BY
- 9) GROUPING using GROUP BY
- 10) GROUPING SETS using GROUP BY



# Subquery

- 1) Single row subquery
- 2) multiple row subquery
- 3) multiple column subquery
- 4) correlated subquery
- 5) nested subquery
- 6) EXIST subquery
- 7) In operator , between, and ,like operator





# Join

## INNER JOIN :

LEFT (OUTER) JOIN  
RIGHT (OUTER) JOIN  
FULL (OUTER) JOIN  
self join  
cross join



# View

- 1)Creating VIEW
- 2)SIMPLE VIEW
- 3)WHERE using View
- 4)DMLoperation usingView
- 5)FORCE using View
- 6)Column Alias using View
- 7)GROUP FUNCTION using VIEW
- 8)materialized view





# Index

simple index

complex index

UNIQUE INDEX

Function Based Indexes

reverse index

clustered index

# SET Operator

1) UNION

2) UNION ALL

3) INTERSECT

4) Minus

5) set operator with more than two table

merge statement in sql

decode in sql

with check option in sql

Controlling User Access

CREATE TABLESPACE

Privileges in Oracle

CREATE USER

GRANTS

ROLE

Change Password

Object Privileges





# Advance SQL

- 1) WITH GRANT OPTION keyword
- 2) PUBLIC keyword
- 3) REVOKE Object
- 4) Privileges Dense and Rank
- 5) Partition of Table
- global temp table sql
- 6) SQL Loader
- 7) SQL Windows Function
8. Common Table Expression (CTE) in SQL
- 11) How to use Linked In for job search
- 12) Real time Scenario base questions
- 13. Practice Assignment**
- 8) SQL Project**
- 9) Mock Interview**
- 10) CV preparations**
- 11) Normalization in sql**

# Power Bi

**clearing the confusion  
3 ways to use power Bi**

- 1.PBI Desktop**
- 2.PIB Service**
- 3.PBI Moblie app**





# Roles in Data

1. Business Analyst
2. Data Analyst
3. Data Engineer
4. Data scientist
5. Data Admin

## Roles of Data Analyst

1. Business Intelligence (BI) COnccepts
2. Introduction and importance of business Intelligence
3. Tools and Technologies in business intelligence area



# Tableau

1. About Microsoft Power BI
2. Power BI Architecture
3. Power BI Introduction and its components
4. Power BI Over Excel

## Power BI Over Excel

1. Power BI Desktop - An Introduction
2. PBI- Most Important



# Free Preview

1. Download PBI Desktop and interface tour
2. Understanding key backstage option (file tab)
3. Understanding case study and role play

## Power Bi Practice Files

1. Connecting Power Bi with different data sources
2. Get Data from flat files (CSV, Text and Excel file)
- Get Data from OData feed
4. Connect to local folder



# Connecting to local folder

1. Data transformation through power query
2. Power query and power query editor introduction
3. Difference between transform and load
4. Merge, Add and Remove column
5. Sorting in power query
6. Merge and append queries
7. Transform Table tools: grouping , transpose , reverse rows, count rows, use as header
8. Transform column tools: detecting and changing data type, Fill, Unpivot etc.
9. Text column Tools : Splitting , replace values, extracting , merging , formatting and parsing columns.
10. Number column tools: Statistical , Standard , rounding and information
11. Building a complete calendar table
12. Conditional , Custom, Invoke custom , Index and duplicate column
13. Flashfill in power query (column from examples)
14. Understanding different view options
15. Connect to multiple files in a folder





# Is power Query smart enough?

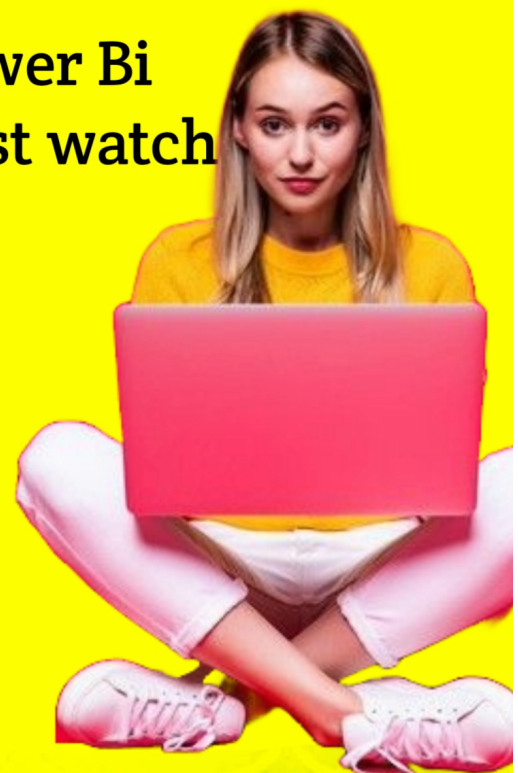
1. Data Modelling in Power BI
2. How to build relationship and relationship cardinality
3. Understanding filter flow and cross filter direction
4. Building entire model
5. Snowflake and star schema
6. Add Related tables
7. Understanding Data Analyst Expression (DAX)
8. Understanding Dax and its types
9. Difference between Calculated column and measures

# Basic Dax Functions

1. Basic DAX Functions- (Calculated columns)
2. Logical DAX
3. Understanding SWITCH Functions
4. Another example of conditional column
5. Understanding Year and Today function
6. Playing with Text functions (Left and search)

# Relational Functions

1. Bringing Data from any related table using RELATED Functions
2. Opposite of related function - RELATEDTABLE function
3. Understanding context in Power Bi
4. Filter and Row context - A must watch for any Power Bi User





# Understanding Measures

1. Understanding measures practically
2. Creating measures table
3. Counting values using count function

## Most Common DAX

1. Calculate and filter
2. Condition base calculation- calculated function
3. Building calculated table using filter function
4. Understanding variables with calculate ,filter and sameperiodlastyearfunction





# DAX For Iterators

1. Iterator function
2. Iterator function-Max
3. Filtering data using DAX
4. Crossfilter (Activate filter direction virtually)
5. Ignoring filter context by using all function
6. Nesting of filter and calculate function

# Date & Time DAX

1. Month, Qtr., Year to Date calculation
2. Previous Day, Month, Qtr., Year calculation
3. Periodic calculation



# Report Setup in Power Bi Desktop

1. Understanding Report view and creating a new report
2. Page display setting in a Power Bi report
3. Setting color theme aligned to project / company color theme & theme gallery

## Building Report

1. Adding Non-Visualization object
2. Inserting Basic charts and understanding format tab
3. Creating compression visuals (Doughnut chart)
4. Creating Bar Charts for top 5 customers
5. Plotting values on a Map visuals
6. Understanding matrix visual along with conditional formatting
7. Comparing Actual vs. Target using Gauge chart
8. Using slicers and understanding its impact on the report

# Advanced Visualizations

1. Advance report options
2. What if parameter
3. Setting RLS (Row Level Security)
4. Tooltip page
5. Different type of filters in report view
6. Change how visuals interact in a report
7. Publish the report to cloud
8. Publish the report to Power BI service



# Intro. to PBI service

1. Understanding Power BI service
2. Creating new PBI service account
3. PBI Interface tour
4. Type of content containers
5. My workspace vs. Workspaces vs. Apps

## Report and Dashboard

1. Understanding various options in report interface part-1
2. Understanding various option in report interface part -2
3. 3 ways of creating a dashboard
4. Understanding various option in dashboard interface
5. Gateways , Scheduled refresh and incremental refresh
6. Understanding gateways and its types
7. Enabling scheduled refresh through

# Personal Getway

1. Understanding various options in report interface part-1
2. Understanding various option in report interface part -2
- 3.3 ways of creating a dashboard
4. Understanding various option in dashbaord interface
5. Getways , Scheduled refersh and incremental refersh
6. Understanding gateways and its types
7. Enabling scheduled referesh through





## **Python :-**

Variables , Data types ,Lists , Tuples,  
Dictionaries, sets, conditional expression ,  
Modules , Functions, Operators, If  
statements, Loops , Classes and Objects

## **Python Libraries :-**

Pandas and Matplotlib

## **Pandas :-**

Read / Write CSV, excel and JSON  
files, work with a data frame , data  
manipulation , and analysis - group by ,  
concatenate , merge

# Matplotlib

Creating static, animated and  
interactive , visualization in  
python



# COURSE OFFER

**01** C/C++

**02** Java

**03** Data Analyst

**04** Python

**05** Power Bi

**06** Core dot net

**07** SQL

**08** PLSQL

**09** Web design

**10** angular js

**11** React js

**12** Spoken English

**13** c# dot net

**14** Advance excel



# Job-oriented Course

**01**

**Java-Fullstack (5 Months)**

**02**

**Dot net full stack 4-5 Months**

**03**

**Pythoj Full stack 5 months**

**04**

**Data Anyalst 3 Months**





# Why to Join Lotus IT Hub ?

**01** Training by industry experts

**02** Complete hands on practice

**03** Live Project

**04** Job-oriented training

**05** Daily Assignment to improve technical skill

**06** Mock/ Interview Preparation

**07** Weekly doubt session

**08** placement assistance

**09** placement guidance





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Signature Of Director

..... **23 / 04 / 2024** .....

Date