

PTM1 - DATA ANALYTICS & VISUALISATION (POWER BI) (Practical Training Module Level-1)

OBJECTIVES:

Power BI is a powerful business intelligence and data visualization tool developed by Microsoft. It is designed to help individuals and organizations analyze data, make data-driven decisions, and create interactive reports and dashboards. By learning Microsoft Power BI, you can accelerate your career and become a data professional. Python typically covers the fundamentals of the Python programming language, its syntax, and its applications. Python is a popular and versatile programming language used for a wide range of tasks, from web development to data analysis, machine learning, and automation.

LEARNING OUTCOMES:

After completion of this training, trainees will be able to:

- transform and visualize the data;
- do modeling and perform optimization;
- perform powerful visual storytelling;
- execute advanced analytics and AI integration;
- learn Python for analytics;
- execute Python data processing and analysis with Pandas;
- make data-driven decisions.

SYLLABUS CONTENTS

**PART - A:
 POWER BI**
1. Power BI Data Transformation and Visualization

- Clean Data in Power BI
- Transform Data in Power BI
- Model and Combine Data in Power BI
- Create a Dashboard in Power BI

2. Advanced Power BI Data Modeling and Performance Optimization

- Design a Data Model in Power BI
- Creating Measures Using Data Analysis Expressions DAX
- Optimize a Model for Performance in Power BI

3. Case Studies/ Projects/ Assignments

- Related to above mention topics

4. Powerful Visual Storytelling with Power BI

- Create Power BI Visuals
- Create a Data-driven Story with Power BI Reports
- Create Dashboards in Power BI

5. Advanced Analytics and AI Integration in Power BI

- Perform Analytics in Power BI
- Work with AI visuals in Power BI

6. Case Studies/ Projects/ Assignments

- Related to above mention topics

**PART - B:
 PYTHON**
7. Python for Analytics

- Python Programming

- Programming Python Variables
- Python Data Types: Integers, Floats, Strings
- Python Lists
- Python For Loops
- Python If, Else, Elif Statements
- Python If, Else, Elif Statements: Multiple Conditions
- Python Dictionaries
- Python Dictionaries and Frequency Tables
- Python Functions: Using Built-in Functions and Creating Functions
- Python Functions: Arguments, Parameters, and Debugging
- Python Functions: Built-in Functions and Multiple Return Statements
- Python Functions: Returning Multiple Variables and Function Scopes
- libraries like Pandas 3.0 and Polars.

8. Python Data Processing and Analysis with Pandas.

- Cleaning and Preparing Data in Python
- Python Data Analysis
- Working with Dates and Times in Python
- Introduction to pandas
- Exploring Data with Pandas Fundamentals
- Exploring Data with Pandas: Intermediate Data Cleaning

9. Case Studies/ Projects/ Assignments

- Related to above mention topics