Project Synopsis

Project Name: Madhav Ecommerce Sales Dashboard

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ANUDEEP ORGANIZATION ACCENTURE INDUSTRY BASED TRAINING

1.Title

Madhav E-commerce Sales Dashboard

2.Introduction

- The Madhav E-commerce Sales Dashboard project focuses on building an insightful and interactive dashboard using Power BI, enhanced by Python libraries like Pandas and Matplotlib for data manipulation and custom visualizations.
- The goal is to provide actionable insights into key performance indicators, sales patterns, and customer behaviors for Madhav E-commerce to support strategic decision-making.

3.Objectives

- To visualize core sales metrics and KPIs using Power BI.
- To incorporate Python-based data analysis with Pandas for data transformation and aggregation.
- To utilize Matplotlib within Power BI to create custom visualizations for more nuanced insights.
- To support data-driven decisions by identifying trends, high-performing products, and profitable customer segments.

4.Scope of Work

- Data Preparation: Loading and preprocessing e-commerce data in Power BI using Python (Pandas).
- Dashboard Creation: Building Power BI visualizations and integrating custom Matplotlib charts where needed.
- Analysis: Performing state-level profit analysis, customer segmentation, and trend analysis using both Power BI's native tools and Python scripts.
- Excluding detailed logistic or warehouse analytics in this scope.

5.Methodology

1.Data Loading: Import data into Power BI and use Python (Pandas) for additional cleaning and manipulation.

2.Data Processing: Use Pandas for advanced data manipulation, including handling missing values, and aggregating data for insights.

3.Dashboard Design: Create Power BI visuals and integrate Matplotlib for custom graphs.

4.Analysis: Perform trend analysis, customer profiling, and Category segmentation.

6.Modeling

- Implement descriptive statistics for summary insights.
- Create time series analysis for tracking sales patterns.
- Utilize clustering for customer segmentation if applicable, using Python in Power BI.

7.Evaluation and Interpretation

The dashboard's usability will be assessed through testing and user feedback.

Key metrics for evaluation include interpretability, relevance of insights, and interactive elements for ease of use.

8.Tools and Technology

1. Data Processing: Python (Pandas for data manipulation)
2. Visualization: Power BI with embedded Matplotlib for custom visuals
3. Database: Integration with data sources (e.g., SQL databases or CSV files)

9.Expected Outcomes

- A dynamic Power BI dashboard with integrated Python-based custom visualizations for enhanced analytical depth.
- Insights on state-level profits, customer behavior trends, and seasonal sales patterns.
- Actionable data points for strategic business decisions and performance optimization.

10.Timelines

Week 1-2: Data Collection and Cleaning (Power BI & Python)

Week 3: Dashboard Design and Matplotlib Visualization Integration

Week 4: Testing and Iteration

Week 5: Final Review and Deployment

Conclusion

The Madhav E-commerce Sales Dashboard will provide a robust, Python-enhanced analytical platform within Power BI, enabling Madhav E-commerce to leverage in-depth sales insights and improve operational strategies.