

Project Documentation Guidelines

Egypt Digital Pioneers (DEPI)
Ministry of Communications and Information Technology

Project Deadlines

Item	Student Deadline	Graduate Deadline
Project Planning & Management	2/20/2026	1/27/2026
Literature Review	4/20/2026	3/1/2026
Requirements Gathering	4/20/2026	3/1/2026
System Analysis & Design	5/1/2026	4/3/2026
Implementation (Source Code & Execution)	7/10/2026	5/17/2026
Final Presentation & Testing & Reports	7/17/2026	5/24/2026

Prepared By: Omar Mohamed Farook

Team Members:

Samar Hassan Abbas
Amr AbdelHakeem
Rania Adel Morsy
Samira Gamal Mohame

Submission Date: April 2026

Table of Contents

1. Project Planning & Management
2. Literature Review
3. Requirements Gathering
4. System Analysis & Design
5. Dashboard KPIs & Insights
6. Conclusion
7. Future Enhancements

1. Project Planning & Management

Project Proposal:

This project develops an interactive Power BI dashboard for Maven Fuzzy Factory to transform Raw E-commerce data into business insights.

Objectives:

To design and deliver a comprehensive Power BI dashboard that transforms raw e-commerce data into actionable insights,

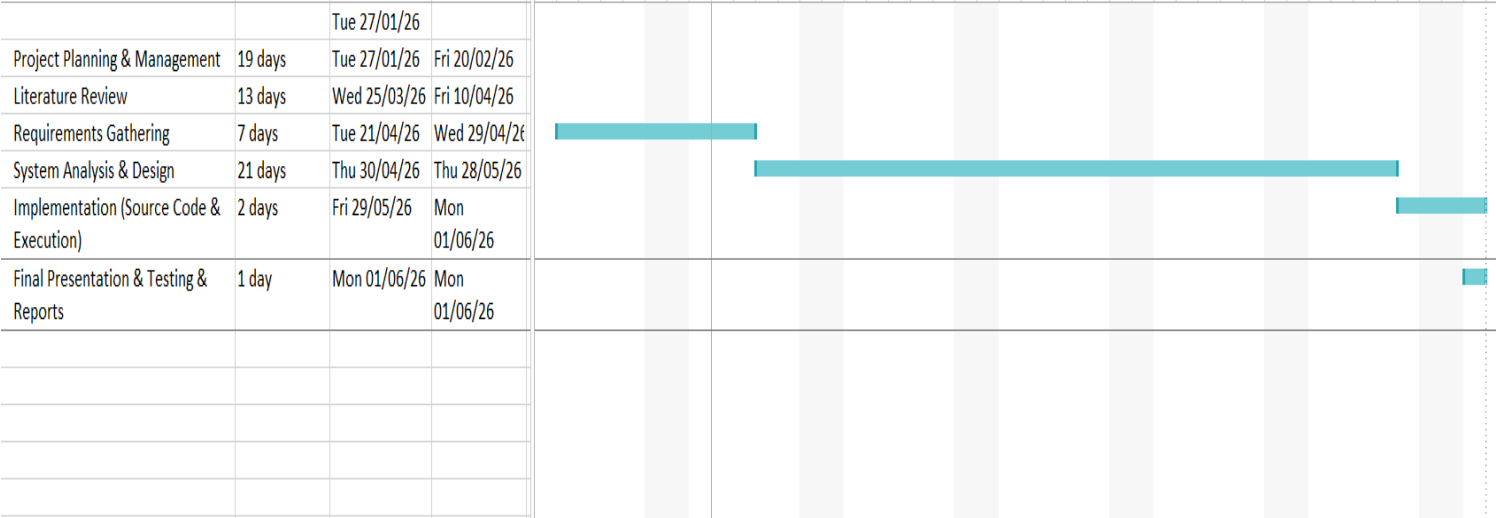
enabling decision makers to monitor performance

optimize marketing campaigns, and improve profitability.

To enhance Maven Factory’s sales performance and maximize ROI from marketing campaigns by leveraging data analytics, customer insights, and targeted optimization strategies.

- Analyze sales and revenue performance.
- Monitor website traffic sources.
- Measure conversion rates.
- Identify top-performing products.
- Support management decisions.

Project Plan:



Task Assignment Roles:

Name	Role
Omar Mohamed Farook (Team Leader)	Data Modeling & Dashboard Design
Samar Hassan Abbas	Data Cleaning & Dashboard Design
Samira Gamal Mohamed	Data Exploration & Dashboard Design
Amr abdel hakeem Mohamed	Data Visualization & Dashboard Design
Rania Adel Sakr	Reporting & Dashboard Design

Risk Assessment:

- Missing data → cleaning process
- Duplicate records → remove duplicates
- Slow performance → optimized model
- KPI mismatch → formula validation

2. Literature Review

Business Intelligence (BI) allows organizations to convert data into actionable insights.

Why Power BI:

- Powerful dashboards
- Strong data modeling
- Interactive reports
- Easy connectivity

E-commerce Analytics Importance:

- Revenue growth tracking
- Customer behavior analysis
- Product demand forecasting
- Marketing ROI measurement

3. Requirements Gathering

Stakeholders:

- Management
- Sales Team
- Marketing Team
- Analysts

User Stories:

- As a manager, I want to view total revenue.
- As a marketer, I want to compare traffic sources.
- As an analyst, I want monthly trends.

Functional Requirements:

- Display KPIs
- Filtering by date/product/source
- Revenue trends
- Product comparison

Non-Functional Requirements:

- Fast loading
- Reliable calculations
- Easy navigation

4. System Analysis & Design

Problem Statement:

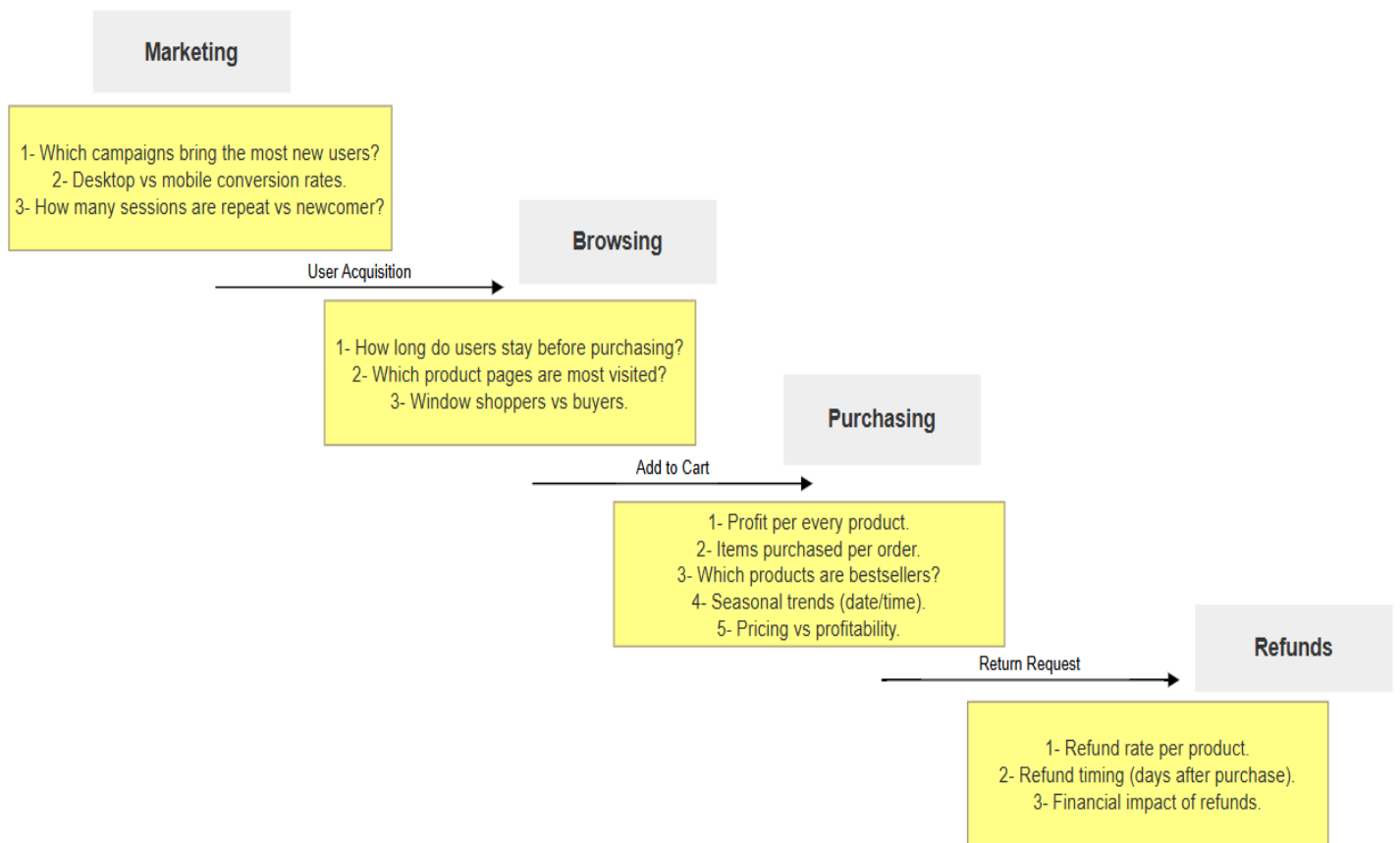
The company lacks a centralized analytics platform for decision-making.

Data Sources:

website_sessions, orders, order_items, products, traffic_sources

Data Exploration :

business flows **Marketing → Browsing → Purchasing → Refunds.**



Data Cleaning:

- Handle all Missing values (null)
- Remove duplicates
- Splitting Columns
- Correct data type issues
- Rename columns
- Make conditional Columns (Customized)

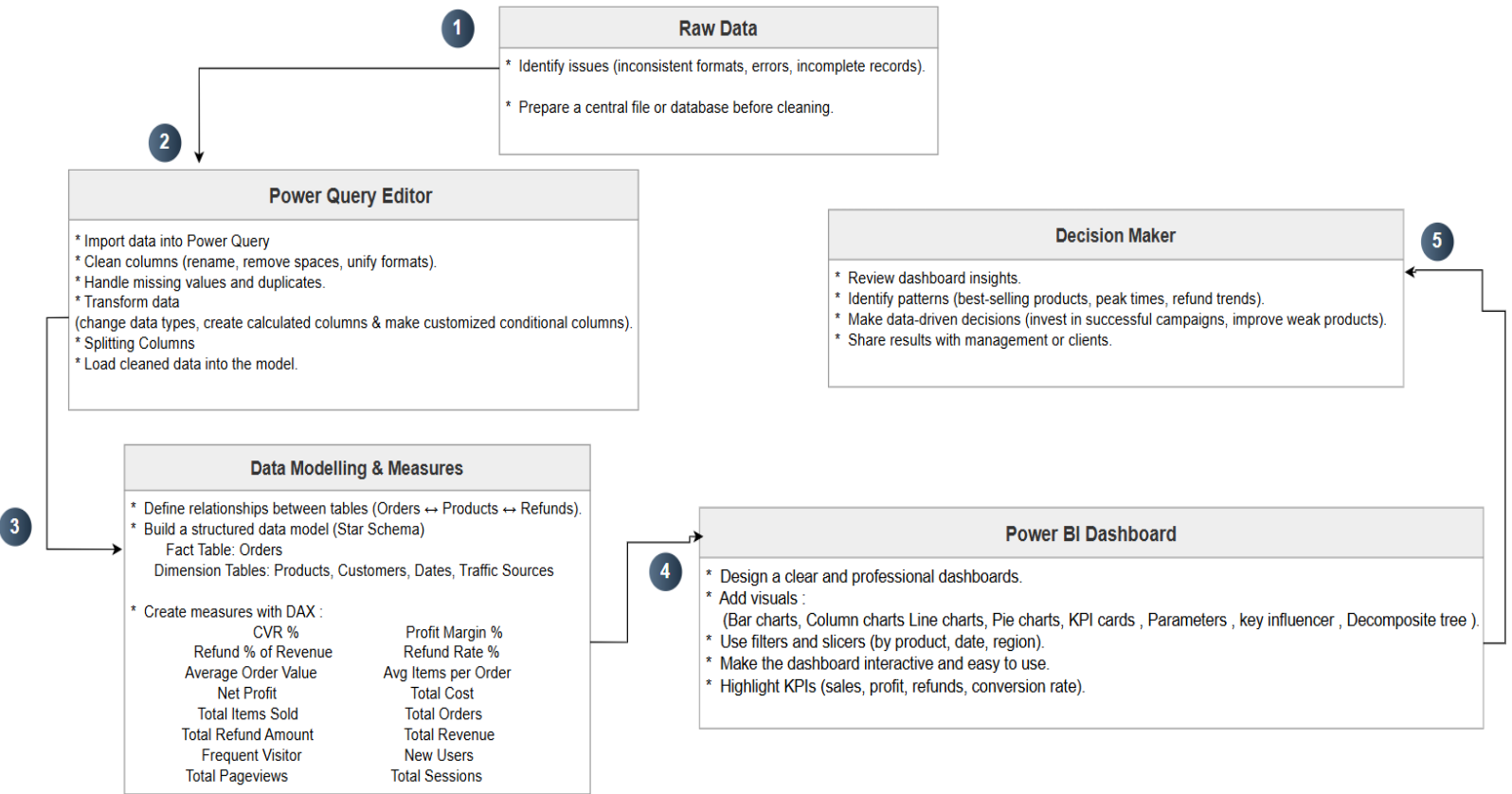
Star Schema Model:

Fact Table: Orders

Dimension Tables: Products, Customers, Dates, Traffic Sources

Data Flow:

Raw Data → Power Query → Data Model → Power BI Dashboard → Decision Maker



Dashboard Pages:

1. Executive Summary
2. Sales Performance
3. Marketing Analytics
4. Customer Insights

5. Dashboard KPIs & Insights

KPIs:

- Total Revenue
- Total Orders
- Conversion Rate (CVR %)
- Average Order Value
- Profit Margin %
- Total Items Sold
- Avg Items per Order
- Total Pageviews
- Total Sessions
- Refund % of Revenue

Expected Insights:

- Best-selling products
- Highest revenue periods
- Best traffic channels
- Customer purchase patterns

6. Conclusion

This dashboard converts Maven Fuzzy Factory data into clear visual insights that improve strategic decision-making and operational performance.

7. Future Enhancements

- AI forecasting
- Real-time refresh
- Mobile dashboard
- Automated alerts