

## **Group 4**

**Project name** Analysis of Supermarket Sales

### **Team members**

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- Ahmed Nabil Mohamed
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## **Project Planning & Management**

### **1. Project Proposal**

**Project Title:** Analysis of Supermarket Sales

**Objective:** Analyze a supermarket sales dataset to extract meaningful insights, identify sales patterns across categories and regions, and provide forecasting insights. The findings will be visualized in a dashboard and presented in a final report.

**Scope:**

- Data cleaning and preprocessing
- Exploratory data analysis
- Determining analytical and forecasting questions
- Building a visualization dashboard for key findings

### **2. Project Plan**

#### **March 1 - March 8: Build Data Model, Data Cleaning, and Preprocessing**

- **Tasks:**
  - Data preprocessing: Cleaning and structuring the dataset
  - Building a data model
- **Deliverables:**
  - Cleaned dataset ready for analysis
  - Data preprocessing notebook

#### **March 9 - March 15: Analysis Questions Phase**

- **Tasks:**
  - Identify key data analysis questions relevant to the business

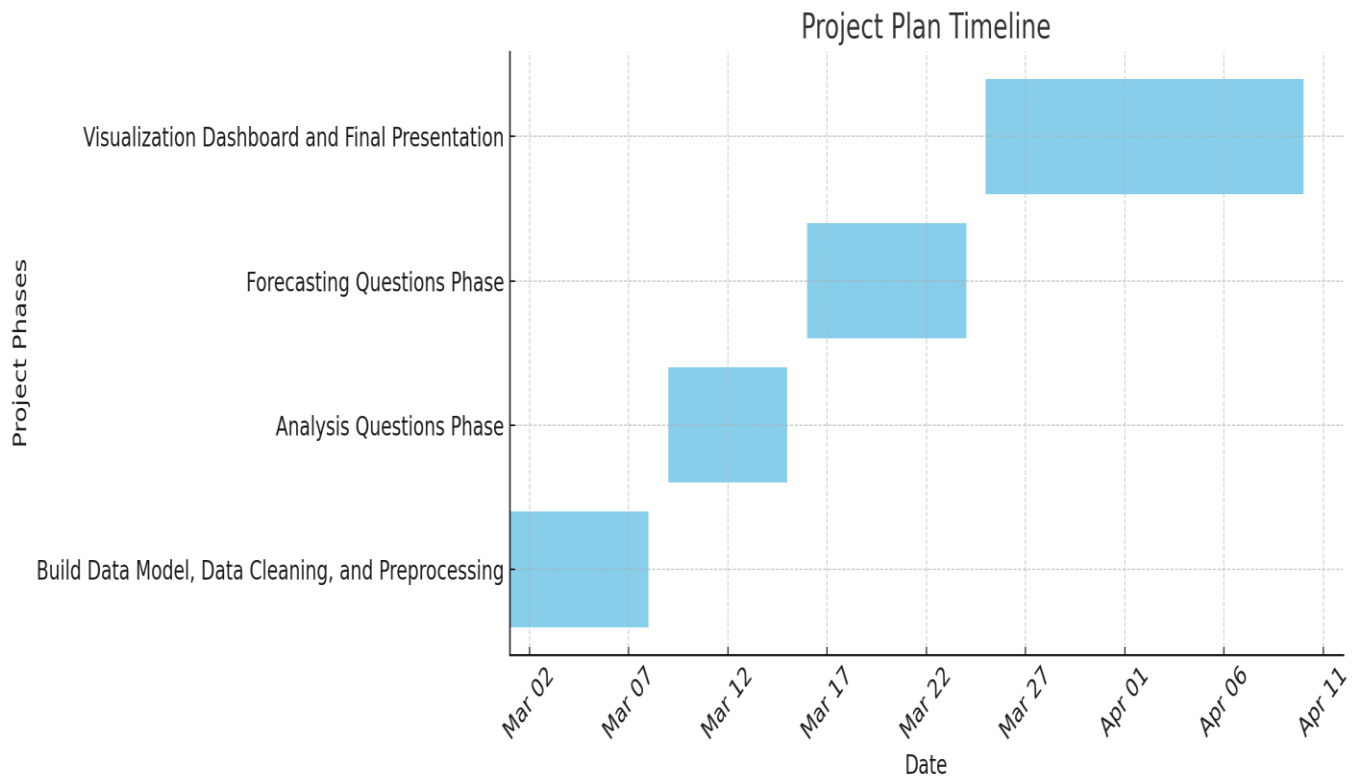
- **Deliverables:**
  - A set of analysis questions derived from the dataset

### March 16 - March 24: Forecasting Questions Phase

- **Tasks:**
  - Define forecasting questions based on trends in the dataset
- **Deliverables:**
  - Visualization plots answering forecasting questions

### March 25 - April 10: Visualization Dashboard and Final Presentation

- **Tasks:**
  - Build an interactive visualization dashboard
  - Prepare the final presentation summarizing key insights
- **Deliverables:**
  - Visualization dashboard
  - Final report and presentation



3. Task Assignment & Roles

- **Data Cleaning & Preprocessing:** [all the team members]
- **Data Analysis & Question Formulation:** [all the team members]
- **Forecasting Model Development:** [all the team members]
- **Dashboard Development & Presentation:** [all the team members]

4. Risk Assessment & Mitigation Plan

| Risk                     | Impact | Mitigation Strategy  |
|--------------------------|--------|--|
| Data Quality Issues      | High   | Implement thorough data validation and cleaning steps.           |
| Scope Creep              | Medium | Clearly define project goals and stick to the timeline           |
| Tool Limitations         | Medium | Ensure familiarity with tools and seek alternatives if needed    |
| Visualization Complexity | Medium | Keep dashboard design simple and user-friendly                   |
| Time Constraints         | High   | Stick to the planned timeline and allocate resources efficiently |

5. KPIs (Key Performance Indicators)

- **Data Accuracy Rate:** Percentage of cleaned and structured data.
- **Number of Insights Derived:** Total business relevant insights identified.
- **Dashboard Usability:** Measured via feedback
- **Presentation Effectiveness:** Assessed based on clarity of findings.