**Product Sales Analysis With Cognos**

**TEAM MEMBERS**

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**Step 1: Define Analysis Objectives**

Clearly state the objectives of your analysis. What are you trying to achieve with this project? For example, you might want to identify top-selling products, analyze sales trends, or understand customer behavior.

**Step 2: Collect Sales Data**

Obtain the sales data from the source shared with you. Ensure that you have all the necessary datasets and files. If the data is in multiple files, you might need to consolidate them into a single dataset.

**Step 3: Data Preprocessing**

Data cleaning is crucial to ensure the accuracy and reliability of your analysis. Here are some key preprocessing steps:

**a. Handling Missing Data:** Check for missing values in your dataset and decide how to handle them. You can either impute missing values or remove rows or columns with a significant number of missing values.

**b. Dealing with Duplicates:** Look for and remove duplicate records if they exist in the dataset.

**c. Data Transformation:** Convert data types, if necessary, to match your analysis requirements. For instance, dates should be in the date format, and numeric data should be in the appropriate numeric format.

**d. Outlier Detection:** Identify and address outliers that could skew your analysis. Decide whether to remove, transform, or investigate these outliers further.

**e. Data Validation:** Ensure that the data follows a logical structure and that the values are within expected ranges. For example, check that product prices are positive, and quantities sold are non-negative.

**Step 4: Data Loading with IBM Cognos**

Use IBM Cognos for data loading. You'll typically create a data source connection in Cognos that connects to your cleaned and preprocessed dataset.

**Step 5: Data Visualization**

After loading the data into IBM Cognos, use its visualization capabilities to create charts, graphs, and dashboards that help you analyze the sales data. Common visualizations for sales analysis include bar charts, line charts, and pie charts.

**Step 6: Perform Initial Analysis**

Start your analysis by generating basic insights from the visualizations. Identify any immediate trends, patterns, or interesting observations in the data.

**Step 7: Review and Refine**

Review the visualizations and initial analysis. Ensure they align with your project objectives. Make refinements to your visualizations and analysis as needed.

**Step 8: Documentation**

Keep detailed records of all your data preprocessing steps, data loading, and initial visualizations. This documentation will be valuable for future phases of your project and for your project report.