***DHAANISH AHMED COLLEGE OF ENGINEERING***

***DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING***

***Domain Name: Data Analytics with Cognos***

***Project Title: product sales data analysis***

***phase 1:***

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\*\*Project Definition Document\*\*

\*\*Project Title:\*\* Sales Analysis Using IBM Cognos

\*\*Project Definition:\*\*

The project aims to leverage IBM Cognos for in-depth analysis of sales data to gain valuable insights into various aspects of the business, including top-selling products, sales trends, and customer preferences. The primary goal is to help businesses make informed decisions that will improve inventory management and marketing strategies by understanding sales patterns and customer behavior.

\*\*Design Thinking:\*\*

1. \*\*Analysis Objectives:\*\*

- The specific insights we intend to extract from the sales data include:

- Identifying the top-selling products by volume and revenue.

- Analyzing sales trends over time, including seasonal variations.

- Understanding customer preferences and segmentation.

- Defining these objectives ensures we have a clear focus on what the analysis should achieve.

2. \*\*Data Collection:\*\*

- \*\*Data Sources:\*\* We will gather sales data from various sources, including transaction records, product information databases, and customer demographic data. This information may be obtained from in-house databases or external sources.

- \*\*Data Gathering Methods:\*\* Depending on the sources, we will utilize SQL queries, ETL (Extract, Transform, Load) processes, or data imports to collect and integrate the data.

3. \*\*Visualization Strategy:\*\*

- \*\*IBM Cognos Tool:\*\* We will use IBM Cognos for data visualization and reporting due to its capabilities for creating interactive dashboards and reports. Cognos offers a range of visualizations such as bar charts, line graphs, pie charts, and more.

- \*\*Data Preparation:\*\* Before visualization, we will clean and transform the data to ensure its accuracy. This may involve handling missing values, removing duplicates, and structuring it for meaningful analysis.

- \*\*Interactive Dashboards:\*\* We will design interactive dashboards in IBM Cognos, which will include the following elements:

- Visual representations of top-selling products.

- Time-series graphs for sales trends.

- Customer preference analysis, potentially through segmentation and profiling.

4. \*\*Actionable Insights:\*\*

- Once we've visualized the data and identified key insights, we will focus on translating these findings into actionable recommendations.

- For instance, if we discover that certain products are top sellers during specific seasons, this can guide inventory management to ensure availability during peak periods.

- Understanding customer preferences may lead to tailored marketing strategies and promotions.

\*\*Next Steps:\*\*

1. Begin data collection from the various sources, ensuring that data is accurate and complete.

2. Clean and transform the collected data to prepare it for analysis.

3. Create visualizations in IBM Cognos based on the analysis objectives.

4. Derive actionable insights from the visualizations.

5. Present these insights in a clear and understandable format, potentially as part of reports or presentations.

By following this design thinking approach, we will be able to systematically work towards solving the problem and achieving the project's objectives.

**CONCLUSION:**

Here by I am concluding my knowledge at phase : Defination and Design thinking