



## Assignment # 02

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Department:- Business Information System

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## SHORT EXPLANATION:-

This project is a web-based interactive data dashboard developed using Streamlit and Python. The purpose of this dashboard is to analyze sales performance and provide meaningful insights through data visualization.

The dataset is loaded using the Pandas library, and data preprocessing steps such as handling missing values, date conversion, and calculated columns (profit percentage, month, and year) are performed. To improve performance, Streamlit's caching feature is used.

The dashboard includes sidebar filters such as date range, category, region, and sales range, allowing users to interactively explore the data. Based on the selected filters, all charts and KPIs update automatically.

Key performance indicators like Total Sales, Total Profit, and Average Order Value are displayed using metric cards. Visualizations include a line chart showing monthly sales trends, a bar chart for category-wise sales, a pie chart for regional distribution, and a top 10 products table.

This dashboard helps users understand sales patterns, compare categories and regions, and support data-driven decision-making in a simple and interactive way.