Functional Requirement Document (FRD)

# Project Title:

Student Score Analysis Project

# Purpose:

The purpose of this document is to define the functional requirements for the Student Score Analysis Project. It outlines the functionalities implemented in Python for data analysis and visualization.

# Functional Requirements:

1. Data Preparation:  
 - Load student dataset.  
 - Handle missing values and perform cleaning.  
  
2. Data Exploration:  
 - Summary statistics of student scores.  
 - Distribution analysis using histograms.  
 - Correlation matrix to identify relationships.  
  
3. Visualization:  
 - Score distribution plots.  
 - Boxplots for comparison across groups.  
 - Scatter plots for feature relationships.  
  
4. Predictive Analysis (if included):  
 - Simple regression or ML model for score prediction.  
  
5. Reporting:  
 - Summary of findings documented in the notebook.

# Non-Functional Requirements:

- Code should be reusable and well-documented.  
- Visualizations should be clear and interpretable.  
- Analysis should run efficiently on standard systems.

# Assumptions:

- Dataset is representative of student performance.  
- Users have access to Python (Jupyter Notebook).

# Constraints:

- Limited by the size and quality of the dataset.  
- Only libraries available in Python are used.