

Business Requirements Document (BRD) for Excel Pivot & Dashboarding

1. Project Overview

The objective is to create an **Excel Pivot Table and Dashboard** to analyze student performance based on various attributes such as gender, parental education, test preparation, and lunch type. The dashboard will provide insights into performance trends and help identify factors affecting student scores.

2. Scope

- Develop **Pivot Tables** to summarize and analyze student performance.
- Create an **interactive dashboard** to visualize key insights.
- Identify trends and correlations between test scores and demographics.

3. Data Source

The dataset consists of the following fields:

- **Gender** – Student's gender (Male/Female).
- **Race/Ethnicity** – Ethnic group classification.
- **Parental Level of Education** – Highest education level attained by parents.
- **Lunch** – Type of lunch received (Standard/Free or Reduced).
- **Test Preparation Course** – Whether the student completed a test prep course (None/Completed).
- **Math Score** – Score achieved in Mathematics.
- **Reading Score** – Score achieved in Reading.
- **Writing Score** – Score achieved in Writing.

4. Requirements

4.1 Functional Requirements

Pivot Table Features:

- Summarize data by **Gender, Race/Ethnicity, and Parental Education Level**.
- Calculate **average math, reading, and writing scores**.
- Compare scores based on **lunch type and test preparation status**.

- Filter by **Gender, Ethnicity, and Parental Education Level**.

Dashboard Features:

- **Overall Performance Summary** – Display average scores across subjects.
- **Gender-Based Score Distribution** – Bar chart comparing scores by gender.
- **Impact of Test Preparation** – Comparison of scores between students who completed the test prep course vs. those who did not.
- **Parental Education Influence** – Line chart showing score trends based on parental education.
- **Lunch Type & Performance** – Visualization of how lunch type affects student scores.

4.2 Non-Functional Requirements

- **User-friendly and interactive dashboard** with slicers and filters.
- **Dynamic updates** when new data is added.
- Optimized **Excel performance** to handle large datasets.

5. Deliverables

- **Excel File** containing:
 - **Pivot Tables** for data analysis.
 - **Dashboard with Charts** for visual insights.
 - **Filters/Slicers** for interactive data exploration.

6. Success Criteria

- Dashboard provides **clear and actionable insights**.
- Users can **filter and explore** data easily.
- Pivot tables accurately **summarize** student performance trends.