**Project Title:**

**Power BI Student Marks Dashboard: Parental Access with Privacy Controls**

**Project Overview**

This project aims to develop a secure Power BI dashboard that enables parents to view only their own child’s academic performance. The report will be publicly accessible via a shared link, but privacy controls will restrict access to student-specific data based on user roles or credentials.

**Objectives**

1. Build a live Power BI dashboard to display student marks.
2. Implement data access control so each parent sees only their child’s information.
3. Publish the dashboard to the web while preserving privacy and data protection.

**Tools & Technologies**

* **Microsoft Power BI** – for dashboard creation
* **MySQL Database** – for storing and preparing the student data
* **Power BI Service** – for publishing and managing access

**Project Scope & Requirements**

**1. Data Source Preparation**

* Collect student data, including columns like Student ID, Student Name, Parent ID, Marks, Subject, and Class.
* Store the data in a format compatible with Power BI, such as Excel or SQL Server.
* Ensure data accuracy and completeness for analysis.

**🔍 Sample Dataset Format**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Student\_ID** | **Student\_Name** | **Parent\_ID** | **Parent\_Name** | **Subject** | **Marks** | **Class** | **Term** |
| S101 | John Smith | P001 | Mr. Smith | Math | 85 | 5 | Term 1 |
| S101 | John Smith | P001 | Mr. Smith | Science | 90 | 5 | Term 1 |
| S102 | Emma Brown | P002 | Mrs. Brown | Math | 92 | 6 | Term 1 |
| S102 | Emma Brown | P002 | Mrs. Brown | English | 88 | 6 | Term 1 |

**2. Dashboard Development**

* Load the dataset into Power BI Desktop.
* Create visualizations including:
  + Tables for subject-wise marks
  + Line charts for performance trends
  + Bar graphs for class-wide comparisons
* Add filters by Subject, Class, and Term for easier navigation.

**3. Privacy & Security**

* Apply Row-Level Security (RLS) or similar features in Power BI to restrict access based on Parent\_ID.
* Configure rules so each user (parent) can only access data relevant to their own child.

**4. Publishing the Report**

* Publish the dashboard to the Power BI Service.
* Ensure security settings are applied before generating the public link.
* Share the link with restricted visibility in place.

**Challenges & Solutions**

**🛡️ Challenge 1: Protecting Student Data**

* Problem: Preventing parents from accessing other students' data.
* Solution: Use dynamic security filters like Row-Level Security (RLS) based on Parent\_ID.

**🌐 Challenge 2: Public Access vs Privacy**

* **Problem:** Sharing the report publicly without exposing full dataset.
* **Solution:** Configure report access settings in Power BI Service to ensure filtered, secure visibility.

**Conclusion**

This Power BI project offers a secure, insightful dashboard for parental engagement in student academics. It successfully combines data visualization, privacy control, and real-time reporting—providing a meaningful solution for educational institutions and guardians alike.