Project Title:

Power BI Report on Student Marks: Parental Control and Privacy Management

Data

Data Analysis Project

Project Overview:

The goal of this project is to create a Power BI report that allows parents to view their child's marks securely. Each parent should be able to see only their student's data. The final dashboard will be published publicly, but access to specific data will be restricted based on the user's credentials.

Objectives:

1. Create a live Power BI report that displays student marks.
2. Ensure parents can only view data specific to their own children.
3. Publish the dashboard publicly while maintaining privacy and security controls.

Tools and Technologies:

- **Microsoft Power BI**: To create the dashboard.
- **MYSQL Database**: To store the student marks data and Clean Data.
- **Power BI Service**: To publish and share the report.

Project Scope and 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.

2. **Dashboard Development:**
    - Import the student data into Power BI Desktop.
    - Create visuals that represent student performance, such as bar charts, line charts, and tables.
    - Design filters to allow data exploration (e.g., by subject, class, and term).
3. **Privacy and Security:**
    - Implement appropriate security measures to ensure that parents can only view data related to their own children. You may need to apply specific configurations or settings to achieve this.
4. **Publishing the Report:**
    - Publish the report to the Power BI Service.
    - Configure security settings as needed to ensure privacy.
    - Generate a public link to share the dashboard, while ensuring that security settings remain in effect.

Detailed Steps:

1. **Data Collection and Preparation:**

Gather student marks data, including information about each student's parent. An example dataset structure is as follows:
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Student ID	Student Name	Parent ID	Marks	Subject	Class
101	John Smith	P001	85	Math	5
102	Emma Brown	P002	92	Science	6

    - Clean and format the data for easy integration with Power BI.
2. **Creating the Power BI Report:**
    - Open Power BI Desktop and load the dataset.
    - Create a table visual to display Student Name, Subject, and Marks.
    - Add charts to show a visual representation of a student's progress over time (e.g., a line chart for marks trend).
3. **Publishing and Configuring the Report:**
    - Publish the Power BI report to the Power BI Service.
    - Ensure to configure necessary security settings to control data access.
    - Generate a public link to the report to allow easy access, while ensuring that security measures are in place to restrict data visibility.

Challenges and Solutions:

1. **Data Privacy:**
    - Challenge: Ensuring that each parent only views their own child's data.
    - Solution: Implement the appropriate security settings to restrict data based on the user's credentials.
2. **Public Sharing of Dashboard:**
    - Challenge: Sharing the report publicly while maintaining data security.
    - Solution: The public link will be shared, but data access will be controlled through the necessary security settings applied during the report configuration.

Conclusion:

This project successfully creates a Power BI report where parents can view their child's marks while ensuring data privacy. This approach ensures a user-friendly experience, providing parents with valuable insights into their child's academic performance without compromising confidentiality.