**Project Overview:**

This project will help students build a full-fledged interactive dashboard in Power BI that analyzes how students' social media usage correlates with sleep patterns, academic performance, mental health, and relationship dynamics.

Stakeholders:

* **Academic Advisors** – interested in academic performance and social media usage
* **Mental Health Counselors** – concerned with sleep, mental health, and addiction scores
* **Institutional Researchers** – want country- and gender-level insights
* **Students & Counselors** – view specific profiles for drill-through insights

**Project Structure:**

**Phase 1: Data Loading, Modeling, and Cleaning**

**Task 1: Load the Dataset**

* Load both sheets from Excel: Student Details and Platform Details
* Check data types and consistency

**Task 2: Create Relationships**

* Join both tables using Student\_ID
* Verify a **1:1 relationship**
* Ensure both tables are in **Star Schema** (fact = behavior metrics, dimension = demographics)

**Task 3: Add a Custom Date Table (for mock date-based analysis)**

* Create a simple date table using CALENDAR() for future use

DateTable = CALENDAR(DATE(2023, 1, 1), DATE(2023, 12, 31))

* Mark as a date table

**Phase 2: Data Preparation and Transformation**

**Task 4: Create Calculated Columns**

* Health Band = IF(Mental\_Health\_Score >= 7, "Good", IF(Mental\_Health\_Score >= 4, "Average", "Poor"))
* Conflict Level = SWITCH(TRUE(), Conflicts\_Over\_Social\_Media > 5, "High", Conflicts\_Over\_Social\_Media > 2, "Medium", "Low")

**Task 5: Create Measures**

* Avg Sleep Hours = AVERAGE(Student\_Details[Sleep\_Hours\_Per\_Night])
* Avg Usage Hours = AVERAGE(Platform\_Details[Avg\_Daily\_Usage\_Hours])
* % Affected Academically = DIVIDE(CALCULATE(COUNTROWS(Platform\_Details), Platform\_Details[Affects\_Academic\_Performance] = "Yes"), COUNTROWS(Platform\_Details))
* Addicted Student Count = CALCULATE(COUNTROWS(Student\_Details), Student\_Details[Addicted\_Score] > 7)

**Phase 3: Time Intelligence (Simulation)**

**Task 6: Use Date Table (Optional Time-Based Extension)**

* Create:
  + Monthly Trend = CALCULATE([Avg Usage Hours], DATESYTD(DateTable[Date]))

**Phase 4: Report Pages and Visuals**

**Page 1: Executive Overview**

* Card visuals:
  + Total Students
  + Average Usage
  + % Affected Academically
  + Avg Sleep Hours
* Bar chart: Addiction Score by Academic Level
* Line chart: Avg Usage Hours by Age
* Pie chart: Gender Distribution

**Page 2: Mental Health & Lifestyle**

* Matrix: Country vs Health Band
* Scatter chart: Addicted Score vs Mental Health Score
* Line chart: Sleep Hours vs Age

**Page 3: Academic Impact**

* Bar chart: Avg Daily Usage vs Academic Level
* Column chart: Academic Performance Impact by Platform

**Page 4: Relationships and Conflicts**

* Stacked bar: Conflict Level by Relationship Status
* Table: Student wise Addiction Score
* Pie: Relationship Status Distribution

**Page 5: Interactive Story View**

* Bookmark View 1: Social Media by Gender
  + Bar Chart: Avg\_Daily\_Usage\_Hours by Gender
  + Donut Chart: Most\_Used\_Platform by Gender
* Bookmark View 2: Social Media by Academic Level
  + Bar Chart: Avg\_Daily\_Usage\_Hours by Academic\_Level
  + Pie Chart: Most\_Used\_Platform by Academic\_Level
* Go to View > Bookmarks Pane and Selection Pane
* For Bookmark 1 (Gender View):
  + Hide the Academic Level visuals
  + Show the Gender visuals
  + Click “Add”, name it Gender View
* For Bookmark 2 (Academic Level View):
  + Do the opposite: hide Gender visuals, show Academic Level visuals
  + Click “Add”, name it Academic Level View
* Create two buttons to show Gender View and Academic Level View

**Page 6: Drill-through Page: Student Profile**

* Create a new page for Drill-through to Student\_ID
* Drill-through on Student\_ID
* Show:
  + Student Demographics
  + Sleep Hours
  + Usage Hours
  + Addicted Score
  + Most Used Platform
  + Conflicts
  + Mental Health Rating

**Phase 5: Interactivity and Storytelling**

**Task 7: Slicers & Filters**

* Add slicers for:
  + Mental Health & Lifestyle - Gender
  + Relationships & Conflicts – Country, Academic Level
  + Academic Impact - Age Range (using numeric slider)

**Task 8: Add Drill-down & Drill-through**

* Enable drill-down in charts with hierarchy (e.g., Country > Gender)

**Task 9: Add Custom Tooltip Page**

* Create a tooltip page with the following charts:
  + Donut Chart: Most\_Used\_Platforms by Student
  + Card: Mental\_Health Score
  + Card: Addicted\_Score
  + Card: Conflicts\_Over\_Social\_Media
* Apply it to Avg Usage Hours by Age chart in Executive Overview

**Phase 6: Publishing and Sharing**

**Task 10: Publish the Report**

* Save and publish to Power BI Service

**Task 11: Create and Configure Workspace**

* Name: Student Social Media Insights
* Assign roles: Viewer, Contributor

**Task 12: Schedule Refresh**

* If dataset is on OneDrive/SharePoint → set schedule
* If local file → install and configure gateway

**Phase 7: Security and Access**

**Task 13: Implement Row-Level Security**

* Create roles by Country: [Country] = "India"
* Assign users in Power BI Service under dataset > Security

**Final Deliverables**

Students should submit:

* Power BI .pbix file
* Screenshots of all 6 report pages
* Screenshot of bookmark toggle
* Drill-through page in action
* Publishing confirmation
* RLS setup screenshot
* Dataset refresh schedule screenshot