Step 1: Planning & Strategy

- **Project Planning & Timeline (Non-Technical)**
  - Define project goals, assign roles, and create a detailed timeline with milestones.
  - **Deliverable:** `Project_Planning_and_Strategy.pdf`
- **Target Audience & Marketing Strategy (Non-Technical)**
  - Identify student demographics and stakeholders; plan outreach channels and key messaging.
  - **Deliverable:** Marketing strategy document integrated into your planning file or as a separate section.
- **Literature Review & Theoretical Framework (Non-Technical)**
  - Research student mental health and psychology, compile existing studies, and develop a theoretical basis for your project.
  - **Deliverable:** `Research_Foundations_and_Methodology.pdf`
- **Research Methodology & Data Collection Design (Non-Technical)**
  - Develop survey/interview questions and define data collection procedures.
  - **Deliverable:** Integrated in the research methodology section or as part of the data collection design document.
- **Ethics & Data Security (Non-Technical)**
  - Establish ethical guidelines, consent forms, and data security measures to ensure privacy and compliance.
  - **Deliverable:** `Data_Collection_Design_and_Ethics.pdf`

Step 2: Data Preparation

- **Data Normalization (Technical)**
  - Develop SQL scripts to restructure and organize raw data into a normalized database.
  - **Deliverable:** `data_normalization.sql`
- **Data Cleaning & Preprocessing (Technical)**
  - Write Python scripts to handle missing values, standardize formats, and remove duplicates using libraries like pandas and NumPy.
  - **Deliverable:** `data_cleaning_and_analysis.py`
- **Data Quality & Validation (Technical)**
  - Conduct data quality checks, document error handling, and record corrective measures.
  - **Deliverable:** `Data_Quality_and_Validation_Report.pdf`

Step 3: Data Analysis & Modeling

- **Exploratory Data Analysis (EDA) (Technical)**
  - Generate visualizations (e.g., histograms, scatter plots, box plots) and compute descriptive statistics to identify trends and outliers.
  - **Deliverable:** Include key findings and visuals in your analysis report.
- **Advanced Analytics / Predictive Modeling (Technical)**
  - Build and validate models (such as regression analysis or clustering) to uncover deeper insights or predict mental health trends.
  - **Deliverable:** `Data_Analysis_and_Modeling_Report.pdf` with model details, performance metrics, and interpretations.

Step 4: Dashboard Development & Testing

- **Dashboard Development (Technical)**
  - **Static Dashboard:**
    - Design and implement a dashboard using Power BI or Tableau to present key findings visually.
    - **Deliverable:** e.g., `Final_Project_Dashboard.ppix` (or an appropriate file extension)
  - **Interactive Dashboard:**
    - Develop an interactive dashboard within a Jupyter Notebook using Plotly or Bokeh, incorporating interactivity with widgets.
    - **Deliverable:** `Interactive_Dashboard.ipynb`
  - **Dashboard Report:**
    - Compile a report that captures the dashboard's static visual outputs for documentation purposes.
- **User Testing & Dashboard Usability Feedback (Non-Technical)**
  - Organize testing sessions with target users, collect feedback, and document improvements.
  - **Deliverable:** Usability feedback report (can be a section within your final documentation).

Step 5: Code Documentation & Repository Management

- **Code Documentation (Technical)**
  - Ensure all SQL and Python scripts are well-commented and adhere to coding standards.
  - **Deliverable:** Code comments integrated within `data_normalization.sql` and `data_cleaning_and_analysis.py`
- **Repository Management (Technical)**
  - Set up a GitHub repository with a comprehensive `README.md` that outlines the project structure, installation instructions, and an overview of the work.
  - **Deliverable:** `README.md`

Step 6: Final Documentation & Presentation

- **Final Documentation & Presentation Preparation (Non-Technical)**
  - Compile all phases of work into a comprehensive document covering methodology, data handling, analysis, and key findings.
  - **Deliverable:** `DEPI_Final_Project_Documentation.pdf`
- **Final Presentation (Non-Technical)**
  - Prepare a polished PowerPoint presentation summarizing your project, methodology, insights, and recommendations.
  - **Deliverable:** `DEPI_Final_Project_Presentation.pptx`
- **Reflection & Lessons Learned (Non-Technical)**
  - Document challenges, successes, and key insights from the project experience.
  - **Deliverable:** Reflection report (can be integrated into the final documentation or as a separate file)
- **Optional: Project Website or Blog (Non-Technical)**

- o Create a website or blog to share your findings with a broader audience.
- o **Deliverable:** `Project_Website.zip`