### **Project Briefing: AI-Driven Student Support System**

#### **Objective:**

To develop an AI-driven system designed to provide personalized support and guidance for high school students through intelligent agents, leveraging APIs and natural language understanding. The system encompasses motivation, counseling, crisis handling, and therapy functionalities.

#### **Key Components:**

1. **Technology Stack:**
   * **Libraries and Tools:**
     + swarm (for agent orchestration)
     + requests (for API communication)
     + BeautifulSoup (for HTML parsing)
     + Google Colab's userdata (for secure API key management)
   * **Agents:** Implemented using the Swarm library to manage specialized roles and interactions.
2. **Agent Functionality:**
   * **Motivator Agent:**
     + Retrieves stoic motivational quotes via an external API.
     + Provides motivational support by relating quotes to the student’s experience.
   * **Counselor Agent:**
     + Offers academic and career guidance based on student data.
     + Ensures a supportive and engaging tone with concise recommendations.
   * **Crisis Handler Agent:**
     + Supports students in distress by providing empathy and reassurance.
     + Facilitates a connection to a human counselor when necessary.
   * **Therapist Agent:**
     + Engages with students to assess mental health based on mood history and academic data.
     + Dynamically routes students to the appropriate agent (Motivator, Counselor, or Crisis Handler) depending on their state.
3. **Workflow:**
   * User inputs are captured and passed through the **Therapist Agent**.
   * Based on the student's context (e.g., mood, academic goals), the **Therapist Agent** decides the best-suited agent for interaction.
   * Agents work collaboratively, transferring control as needed to maintain fluid and adaptive support.
4. **Features:**
   * Real-time interaction through terminal input and output.
   * Dynamic message rendering using ANSI escape codes for color-coded and styled text (e.g., agent names in blue, tool calls in purple).
   * Context-aware recommendations and actions.
   * Integrated environment variable handling for secure API key access.
5. **Contextual Data:**
   * Student Data: Personal details, class, family situation.
   * Mood History: Emotional patterns over time.
   * Academic Info: GPA, professional goals, extracurriculars.

#### **Implementation Goals:**

* **Accuracy:** Tailored responses to individual student needs.
* **Empathy:** Foster trust and support through friendly, non-judgmental communication.
* **Scalability:** Modular design for expanding functionality or agent roles.
* **Interoperability:** Easy integration with other APIs and data sources.