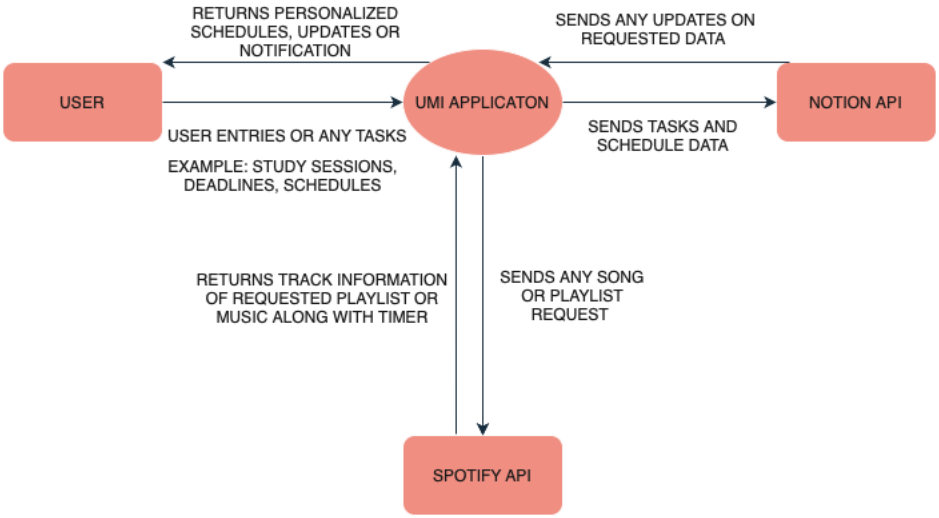
**Level 0 diagram**



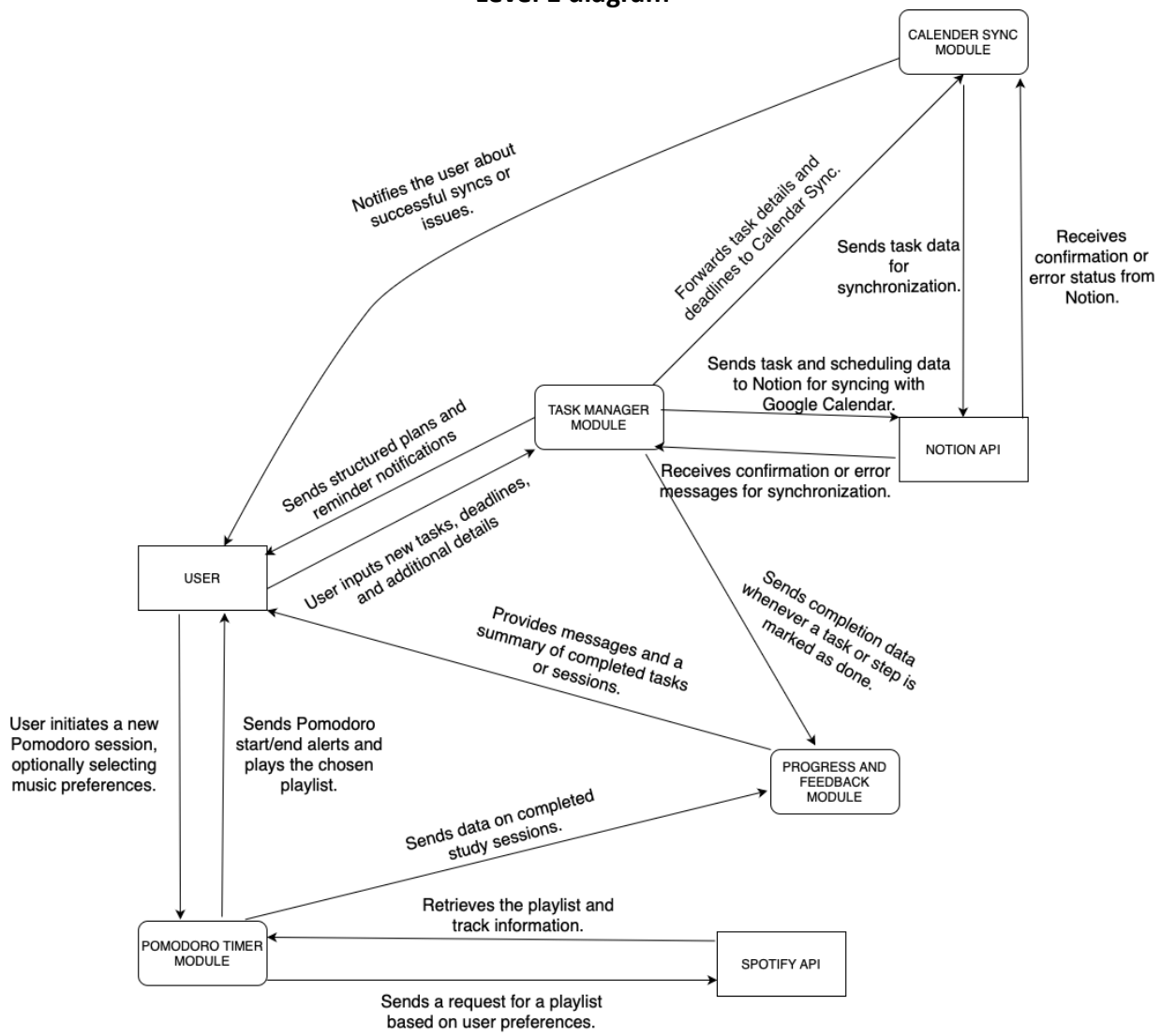

The level 0 data flow diagram shows the interaction flow within an application called "UMI Application" that interfaces with a user and two external APIs: Notion API and Spotify API. Here's a breakdown of each component and interaction:

1. **User**: The user interacts with the UMI Application by entering tasks, deadlines, schedules, or other study-related activities (e.g., study sessions).
2. **UMI Application**: This is the central component managing interactions between the user and the external APIs. It receives input from the user, processes it, and communicates with the Notion and Spotify APIs to provide task management and music services.
3. **Notion API**: The UMI Application sends tasks and schedules to the Notion API, which is likely used for managing notes, deadlines, or to-do lists. The Notion API responds by sending back updates or requested data, which the UMI Application can then relay to the user.
4. **Spotify API**: When the user requests music (such as a specific song or playlist) with a timer, the UMI Application sends this request to the Spotify API. Spotify then returns track information, including the requested playlist or song, which the UMI Application provides to the user.

**Interaction Flow**:

- The user inputs tasks, schedules, or requests for music.
- The UMI Application sends the relevant data to either the Notion API for task/schedule updates or the Spotify API for music requests.
- Each API responds with the requested information, which the UMI Application then forwards to the user, ensuring they receive updates on their schedules, tasks, or music information as per their input.

**Level 1 diagram**




This level 1 diagram represents a more detailed interaction flow for a user-focused productivity application, likely incorporating task management, calendar synchronization, and a Pomodoro timer with music integration. Here's a breakdown of each component and their interactions:

1. **User**: The user initiates interactions by inputting tasks, deadlines, additional details, and starting Pomodoro sessions with optional music preferences. They receive notifications, structured plans, and summary messages about completed tasks or sessions.
2. **Task Manager Module**: This module handles user inputs related to tasks and deadlines. It:
    - Forwards tasks and schedules to the Notion API for tracking.
    - Sends task details to the Calendar Sync Module to enable synchronization with calendar applications.
    - Notifies the user about successful syncs or issues in task management.
3. **Notion API**: The Notion API interacts with both the Task Manager Module and the Calendar Sync Module:

    - Receives task and scheduling data from the Task Manager Module for storage and tracking.
    - Returns confirmation or error messages, allowing the Task Manager Module to update the user on sync status.
    - Sends completion data to the Progress and Feedback Module when a task or step is marked as done.
4. **Calendar Sync Module**: This module handles synchronization with calendar applications (like Google Calendar):
    - Receives task data from the Task Manager Module and sends it to the Notion API for further syncing.
    - Confirms sync success or reports errors, relaying this information back to the Task Manager Module and ultimately the user.
5. **Progress and Feedback Module**: This module tracks and manages task completion:
    - Receives data from the Notion API when tasks or steps are marked as complete.
    - Provides users with messages summarizing completed tasks or sessions, helping them stay updated on their progress.
6. **Pomodoro Timer Module**: This module supports the Pomodoro technique, allowing users to focus on timed study sessions with optional music:
    - Initiates a Pomodoro session based on user input, sending start/end alerts.
    - Requests playlist or track information from the Spotify API when the user wants background music.
    - Sends data on completed study sessions to keep the user informed.
7. **Spotify API**: The Spotify API supplies music for Pomodoro sessions:
    - Receives playlist requests based on the user's preferences from the Pomodoro Timer Module.
    - Returns playlist and track information, which the Pomodoro Timer Module uses to play music during sessions.

**Interaction Flow**:

- **Task Management and Calendar Sync**: The user inputs tasks, which the Task Manager Module processes and sends to the Notion API and Calendar Sync Module. The modules confirm or report errors and provide updates to the user.
- **Progress Tracking**: As tasks are marked complete, the Notion API and Progress and Feedback Module communicate, ultimately notifying the user about completed tasks or sessions.
- **Pomodoro and Music Integration**: The user initiates a Pomodoro session with the Pomodoro Timer Module, which can request a playlist from the Spotify API. The module manages the start and end of the session and keeps the user informed about session completion.

This system integrates task management, calendar synchronization, progress tracking, and timed study sessions with optional music, offering a well-rounded productivity application for users.