

# PRODUCT REQUIREMENTS AND SYSTEM GOALS

## Key Product Requirements:

1. Ability to track pause/resume events and user engagement metrics.
2. Secure storage and retrieval of user data.
3. Seamless integration with analytics tools for data analysis.
4. User-friendly interface for pause/resume functionality.

# PRODUCT REQUIREMENTS AND SYSTEM GOALS

## Goals of the System:

- **Key Functionalities:**
  - Track pause/resume events.
  - Capture user engagement metrics.
  - Securely store and retrieve user data.
- **Performance Expectations:**
  - Real-time tracking of events.
  - High availability and reliability of data storage.
- **Limitations/Constraints:**
  - Compliance with data privacy regulations.
  - Scalability to accommodate growing user base.

## System Components:

1. **User Interface:** Provides interface for users to interact with the pause/resume feature.
2. **Event Tracker:** Tracks pause/resume events and sends data to the analytics system.
3. **Analytics System:** Collects and analyzes user engagement metrics.
4. **Data Storage:** Stores user data securely for retrieval.

# SYSTEM DIAGRAM

## Detailed System Diagram:

### 1. User Interface (UI):

- The UI component provides the user-facing interface for the pause/resume feature within the NextLeap platform.
- It includes buttons or controls allowing users to pause and resume their course progress.

### 2. Event Tracker:

- The Event Tracker component captures user interactions with the pause/resume feature.
- It records pause/resume events and associated metadata, such as user ID, timestamp, and course details.

### 3. Analytics System:

- The Analytics System collects and processes pause/resume events and user engagement metrics.
- It analyzes the data to derive insights into user behavior and course usage patterns.

### 4. Data Storage:

- The Data Storage component securely stores user data, including pause/resume events and course progress.
- It provides efficient retrieval and storage capabilities to support real-time data access.

## Interfaces and Interactions:

### 1. UI <-> Event Tracker:

- The UI interacts with the Event Tracker component to capture user actions.
- When a user triggers a pause/resume action, the UI sends a request to the Event Tracker to record the event.

### 2. Event Tracker <-> Analytics System:

- The Event Tracker communicates with the Analytics System to transmit pause/resume events and associated data.
- It sends event data in a structured format (e.g., JSON) via RESTful APIs for processing.

### 3. Analytics System <-> Data Storage:

- The Analytics System retrieves user engagement data from Data Storage for analysis.
- It may also update the Data Storage with processed analytics results or derived insights.

# SYSTEM DIAGRAM

## APIs, Data Formats, and Protocols:

- RESTful APIs are used for communication between system components.
- JSON (JavaScript Object Notation) is utilized as the data format for transmitting event data and analytics metrics.
- HTTPS (Hypertext Transfer Protocol Secure) is employed for secure data transmission over the network.

