

PART II – Technology Requirements

A) Technological Requirements

Technology	Type	Pros	Cons	Usage
PHP	Programming Language	Widely used for web development, easy integration with MySQL, large community support	Older versions may not have some modern features, security concerns in older versions	PHP is ideal for server-side web application development, especially for small to medium-sized applications like EMS.
MySQL	Database	Reliable, widely used for relational data storage, supports complex queries and transactions	Scaling for large datasets can be challenging without proper optimization	Excellent for structured data storage and relationships (e.g., events, users, bookings).
HTML	Frontend	Standard for web page structure, supported by all browsers	No interactive functionality on its own, requires CSS and JS for styling	Forms the backbone of the user interface for the EMS web pages.
AJAX	Frontend	Enables asynchronous data loading, improves user experience (no page reloads)	Can be complex for debugging, not supported in older browsers	Enhances interactivity for features like event updates, booking management.

jQuery	Frontend Library	Simplifies DOM manipulation, AJAX calls, broad browser compatibility	Adds additional overhead, especially if not required for all tasks	Speeds up development of dynamic and interactive elements in the UI.
JavaScript	Frontend	Dynamic content, client-side validation, widespread support	Can be bypassed by users (e.g., disabling JS in browsers)	Essential for handling front-end interactivity, form validation, and AJAX requests.
XAMPP / WAMP / MAMP	Development Environment	Easy-to-use, integrates Apache, MySQL, PHP for local development	Not suitable for production environments, resource-heavy	Ideal for local development and testing of the EMS application.

B) Learning Plan

Team Member	Responsibilities	Existing Skill Level (%)	Start Date	End Date	Resources
Kalp Senghani	Backend Development (PHP, MySQL)	80%	20 th November	10 th December	PHP Manual, MySQL Documentation
Diya Patel	Frontend Development (HTML, AJAX, JS, jQuery)	80%	20 th November	5 th December	MDN Web Docs(HTML, Javascript, jQuery)

Jenil Shah	Database Design and Management (MySQL)	80%	20 th November	12 th December	MySQL Bootcamp(Udemy)
Neel Kinariwala	Deployment and Cloud Infrastructure	80%	25 th November	15 th December	XAMPP Setup, Localhost Deployment Tutorials
Leela Krishna	Testing and Debugging (Front-end & Back-end)	75%	22 nd November	5 th December	PHP Testing Tools, Browser Developer Tools
Mathew Pollock	Documentation and Reports	75%	20 th November	28 th November	Documentation Templates, MS Word