

SE 216 – SOFTWARE PROJECT MANAGEMENT
PROJECT NEEDS DOCUMENT

PROJECT NAME: SeatTracker

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#	SOFTWARE NEEDS	DESCRIPTION
1	Operating Systems	The system must support the following operating systems: <ul style="list-style-type: none">- Windows 10 or higher.- MacOS 10.13 or higher.
2	Integrated Development Environment (IDE)	The development team will use Visual Studio Code as the primary IDE 1.64 or higher version is recommended.
3	Collaboration and Communication Tools	To facilitate collaboration and communication between team members working on the system, the development team will use Discord for this purpose (14.10.2 or higher).
4	Programming Languages	The system will be built using the following programming languages: <ul style="list-style-type: none">- C++ (ISO/IEC 14882:2020): communicating with hardware.- JavaScript (ECMAScript 2021): for user interface.- Node.js (18.14.0(LTS)): to create server-side running application.- MQTT (5.0): real-time communication protocols.
5	Documentation	The system documentation will be created using Google Docs to track the process easily and work on the same document simultaneously, and stored in GitHub.
6	Database Management	MySQL (version 8.0.31) and SQL (16.0.1000.6) will be used to store and manage data such as orders and tables status.
7	User Interface (UI) library	The system will use a UI library such as Riot.js (v 7.1.0) to create a responsive and simple interface for the restaurant staff and customers.

#	HARDWARE NEEDS	DESCRIPTION
1	Interactive Device	The system will be connected to a device that updates the table status as occupied or vacant.
2	Screen	A high-resolution display with a minimum of 32-inch screens are required to display tables status to the customers.
3	Networking Equipment	The system will require a WiFi network that can be set up to provide local connectivity between devices with no necessity of an internet connection.

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4	Computer	The development team will require computers with at least 8 GB RAM and Intel Core i5 processors to work on the project, on the other hand, computers for the system to operate and for employees to manually track and control the system are also needed.
5	Backup Power Source	A backup power source such as an uninterruptible power supply (UPS) will be required to prevent data loss in the event of power outages.

#	SUPPORT NEEDS	DESCRIPTION
1	Technical Support	When problem occurs, IT support can be requested from specialized experts in different areas, such as network, software and hardware, to provide assistance.
2	Staff Training Support	Restaurant staff should receive appropriate training on how the system works and be prepared for future updates by experts in the field.
3	Integration Support	To prevent possible errors, the "Seat Tracker" system must be compatible with the other programs used in the restaurant.
4	Maintain Support	Regular maintenance and updates are necessary to ensure the system's performance is optimized.
5	Owner Support	Feedbacks that are given by restaurant owners are really important. These feedbacks are used to improve the system and update it.
6	Quality Assurance Support	Ensuring that the equipment and software meet the necessary qualifications.
7	Security Support	Security measures to protect system data such as customers numbers and orders.