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CS499: Computer Science Capstone

Southern New Hampshire University

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## Functional Requirements

| **Functional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| User Management | The Business owners and Management will need to be able to add or remove workers from the user’s list. If a worker is hired to the copmany they will need to be added, and if a worker has quit or been fired, they will need to be removed. | *Learning Management System Requirements - California*. https://www.calhr.ca.gov/Documents/LMS%20Functional%20and%20Non\_Functional%20Requirements.docx. |
| Inventory Management Based on User | As mentioned for user management, it’s important to add and remove users from the app. Based on the user’s position level, they should be provided with more access and capabilities in the app. | Colman, Learning Management System Requirements: an Ultimate Checklist. Explore the eLearningworld with us. |
| User Interface/User Experience | It’s important to have a simple and easy to use interface. If it’s too complicated or has a high learning curve it can turn people off and away from the application. The user interface will need to be scalable as the companies grow and evolve. | Savides, Grace. “LMS Requirements: Learning Management System Capabilities.” *SelectHub Raquo*, https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/#2d. |
| Inventory Management | The key component of this application it to track the current on hands of inventory in the system. User’s with privilege access should be able to add, edit, and delete inventory items. It should also provide users with specific item details such as name, description, and quantity. | *Learning Management System Requirements - California*. https://www.calhr.ca.gov/Documents/LMS%20Functional%20and%20Non\_Functional%20Requirements.docx. |
| Stock Tracking and Alerts | The application should keep track of item quantities and provide real-time updates on stock levels. It should send an SMS notification when stock falls below specified thresholds, helping users avoid stockouts and optimize inventory levels. | *Learning Management System Requirements - California*. https://www.calhr.ca.gov/Documents/LMS%20Functional%20and%20Non\_Functional%20Requirements.docx. |

## Nonfunctional Requirements

| **Nonfunctional Requirement** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Compatibility and Integration | The application should be compatible with various operating systems and devices to ensure broad accessibility for users. It should also integrate with other systems or APIs, such as accounting software or e-commerce platforms, if necessary. | Savides, Grace. “LMS Requirements: Learning Management System Capabilities.” *SelectHub Raquo*, https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/#2d. |
| Usability | The application should have an intuitive and user-friendly interface, allowing users to easily navigate and perform inventory-related tasks. It should support different user roles and provide appropriate access and functionality based on user permissions. | https://www.thinkmind.org/articles/bustech\_2018\_2\_20\_98003.pdf *Requirement-Driven Architecture for Service ... - Thinkmind*. https://thinkmind.org/articles/bustech\_2018\_2\_20\_98003.pdf. |
| Scalability | The application should be capable of handling a large volume of inventory data and supporting multiple concurrent users without a significant decrease in performance. | *Requirement-Driven Architecture for Service ... - Thinkmind*. https://thinkmind.org/articles/bustech\_2018\_2\_20\_98003.pdf. |
| Performance efficiency | The application should optimize resource usage, such as memory, CPU, and network bandwidth, to ensure efficient operation and minimize the system's hardware requirements. | *Requirement-Driven Architecture for Service ... - Thinkmind*. https://thinkmind.org/articles/bustech\_2018\_2\_20\_98003.pdf. |
| Data Integrity | The application should enforce data integrity rules to ensure accurate and consistent inventory information. This includes preventing duplicate entries, validating data inputs, and maintaining referential integrity when dealing with related data. | *Requirement-Driven Architecture for Service ... - Thinkmind*. https://thinkmind.org/articles/bustech\_2018\_2\_20\_98003.pdf. |

## Assumptions

| **Assumption** | **Rationale for Requirement** |  |
| --- | --- | --- |
| Data Accuracy | It could be assumed that the inventory data provided by the suppliers or entered by users is accurate and up-to-date, without any inconsistencies or errors. | Colman, Learning Management System Requirements: an Ultimate Checklist. Explore the eLearningworld with us. |
| User Competence | The assumption could be that the users of the application possess the necessary knowledge and skills to operate the system effectively, including understanding how to interpret inventory data and perform appropriate actions. | Savides, Grace. “LMS Requirements: Learning Management System Capabilities.” *SelectHub Raquo*, https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/#2d. |
| Security Measures | An assumption might be made that the necessary security measures, such as user authentication and data encryption, are in place to protect sensitive inventory information from unauthorized access or breaches. | Savides, Grace. “LMS Requirements: Learning Management System Capabilities.” *SelectHub Raquo*, https://www.selecthub.com/learning-management/learning-management-software-requirements-features-list/#2d. |

## Limitations

| **Limitation** | **Rationale for Requirement** | **Source(s), APA format** |
| --- | --- | --- |
| Data Accuracy | Inventory tracking applications heavily rely on accurate data input and updates. However, human error, system glitches, or delays in data synchronization can lead to inaccuracies in inventory records. | Leaman, Carol. “What If Your Learning Management System Isn't Enough?” *ELearning Industry*, 12 May 2021, https://elearningindustry.com/learning-management-system-isnt-enough. |
| Connectivity Dependencies | Inventory tracking systems often require internet connectivity for real-time updates and synchronization across multiple locations. Any disruption in network connectivity can hinder the application's functionality and real-time visibility. | Leaman, Carol. “What If Your Learning Management System Isn't Enough?” *ELearning Industry*, 12 May 2021, https://elearningindustry.com/learning-management-system-isnt-enough. |
| User Training and Adoption | Users interacting with the inventory tracking application might require training to understand its features and functionalities fully. If the application's user interface (UI) or user experience (UX) is complex or unintuitive, it may hinder user adoption and lead to errors or inefficiencies. | Leaman, Carol. “What If Your Learning Management System Isn't Enough?” *ELearning Industry*, 12 May 2021, https://elearningindustry.com/learning-management-system-isnt-enough. |