**Software Requirements Specification (SRS)**

**Case Study: Inventory Management System**

**1. Introduction**

This document is a Software Requirements Specification (SRS) for an Inventory Management System. The system will be developed using HTML, CSS, Python, and MySQL. The system will be used by a variety of users, including warehouse managers, store managers, and sales representatives.

**2. Description**

An inventory management system (IMS) is a software system for tracking inventory levels, orders, and sales. It is a tool for organizing inventory data that was before generally stored in hard-copy form or in spreadsheets.

An IMS can be used by businesses of all sizes, from small businesses to large enterprises. It can help businesses to:

* Track inventory levels in real time
* Automate inventory management tasks.
* Reduce inventory costs.
* Improve customer service.
* Increase sales.

An IMS can be developed using a variety of programming languages and technologies. One popular combination is HTML, CSS, Python, and MySQL.

HTML is used to create the user interface of the IMS. CSS is used to style the user interface. Python is used to develop the backend logic of the IMS. MySQL is used to store the IMS data.

**Here is a simple overview of how an IMS might work:**

1. The user logs into the IMS.
2. The user selects the product that they want to manage.
3. The user can then view the current inventory level of the product, add, or remove inventory, or place an order for more inventory.
4. The IMS updates the inventory database and generates a report of the changes.

The IMS can also be used to generate reports on inventory levels, sales, and other metrics. This information can be used by businesses to make better decisions about their inventory.

**Here are some of the benefits of using an IMS:**

* Improved accuracy: An IMS can help businesses to track their inventory levels more accurately. This can lead to reduced inventory costs and improved customer service.
* Reduced costs: An IMS can help businesses to reduce their inventory costs by automating inventory management tasks and reducing the need for manual data entry.
* Improved efficiency: An IMS can help businesses to improve their efficiency by automating inventory management tasks and providing real-time visibility into inventory levels.
* Better decision-making: An IMS can help businesses to make better decisions about their inventory by providing them with reports on inventory levels, sales, and other metrics.

**3. System Requirements**

The system shall be able to:

* Manage product information, including product name, description, quantity, and price.
* Track inventory levels and generate reports.
* Manage purchase orders and receive shipments.
* Process sales orders and generate invoices.
* Manage customer and vendor information.

**Functional Requirements**

The system shall provide the following functionality:

* **Product Management**
  + Users should be able to add, edit, and delete products.
  + Users should be able to view product information, including product name, description, quantity, and price.
  + Users should be able to search for products by name or product code.
* **Inventory Management**
  + The system should track inventory levels for all products.
  + Users should be able to view inventory levels for individual products or for all products in a specific category.
  + The system should generate reports on inventory levels, including low inventory reports and stockout reports.
* **Purchase Order Management**
  + Users should be able to create and manage purchase orders.
  + The system should generate purchase orders in PDF format.
  + The system should track the status of purchase orders and generate reports on purchase order history.
* **Sales Order Management**
  + Users should be able to create and manage sales orders.
  + The system should generate sales orders in PDF format.
  + The system should track the status of sales orders and generate reports on sales order history.
* **Customer and Vendor Management**
  + Users should be able to add, edit, and delete customers and vendors.
  + Users should be able to view customer and vendor information, including contact information and billing and shipping addresses.
  + The system should generate reports on customer and vendor activity.

**Non-Functional Requirements**

The system shall meet the following non-functional requirements:

* **Security:** The system shall use appropriate security measures to protect data from unauthorized access.
* **Performance:** The system shall be able to handle a large number of users and transactions without experiencing significant performance degradation.
* **Scalability:** The system shall be scalable to accommodate future growth in the number of users and transactions.

**4. Use Cases**

The following use cases describe how the system will be used by different users:

* **Warehouse Manager**
  + The warehouse manager uses the system to manage product inventory, track shipments, and generate reports.
* **Store Manager**
  + The store manager uses the system to process sales orders, manage customer information, and generate reports.
* **Sales Representative**
  + The sales representative uses the system to create sales orders, manage customer information, and view inventory levels.

**5. Conclusion**

This SRS document has described the functional and non-functional requirements for an Inventory Management System. The system will be developed using HTML, CSS, Python, and MySQL. The system will be used by a variety of users, including warehouse managers, store managers, and sales representatives.