**SYNOPSIS**

**Report on**

# Inventory Management System

**by**

Dewanshu Kaushik 2200290140053

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Under the supervision of

# Dr Amit Kumar

# ASSISTANT PROFESSOR

**KIET Group of Institutions, Delhi-NCR, Ghaziabad**



**DEPARTMENT OF COMPUTER APPLICATIONS**

**KIET GROUP OF INSTITUTIONS,**

**DELHI- NCR,** **GHAZIABAD-201206**

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# ABSTRACT

In today's fast-paced business environment, it is more important than ever to have an efficient and effective **inventory management** **system** in place. An inventory management system with voice recognition and GPS tracking can help businesses of all sizes to improve their efficiency, reduce costs, and increase profits.

An **inventory management** **system** with voice recognition and GPS tracking can also be used to track and manage expenses. This can help businesses to identify areas where they are overspending and to make more informed financial decisions.

The system will help businesses to track and manage their inventory more efficiently and effectively. This type of system can automatically track inventory levels, locations, and movements, and can generate real-time reports and insights.

Voice recognition can be used to input data into the system quickly and easily, without the need for manual entry. This can save time and reduce errors.

GPS tracking can be used to track the location of inventory items in real time, both within and outside of the warehouse. This can help businesses to prevent theft and loss, and to improve their delivery times.

* **Keywords**: Inventory management, GPS tracking

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# INTRODUCTION

Managing inventory is an important part of business administration. If you have excess inventory, money is being wasted (which is referred to as underutilization.) If you don’t have enough, it delays deliveries. Neither one is a good scenario

Inventory management tracks how much physical inventory you have in your organization. It monitors stock at other locations, such as distributors or subcontractors. When you have clear visibility into your inventory, you know when to order, where to store it, and when you need to stop selling.

An inventory management system tracks inventory availability at all points of your supply chain from purchasing, to production, and finally sales to consumers. An inventory management system is important for companies with large amounts of inventory in order to keep it at optimal levels.

This is a web-based application that allows businesses to track and manage their inventory levels.

The system is developed using the Python programming language, HTML for the user interface, CSS for the styling, and MySQL for the database.

**Technological Requirements**

* **Python:** Python is a popular programming language that is known for its simplicity and readability. It is also a very versatile language that can be used for a wide variety of tasks, including web development, data science, and machine learning.
* **HTML, CSS, and MySQL**: HTML, CSS, and MySQL are the core technologies used to develop web applications. HTML is used to create the structure of the web page, CSS is used to style the web page, and MySQL is used to store and manage the data.

# LITERATURE REVIEW

Inventory management systems (IMS) are essential tools for businesses of all sizes. They help businesses to track and manage their inventory levels, which can lead to increased efficiency, reduced costs, and improved customer service.

There are a few different IMS available, both commercial and open source. Some of the most popular open-source IMS are developed using Python, HTML, CSS, and MySQL.

Here is a literature review of some of the most notable open-source IMS developed using Python, HTML, CSS, and MySQL:

* **Inventory:**Inventory is a popular open-source IMS that is developed using Python, HTML, CSS, and MySQL. It is a feature-rich system that includes features such as product management, order management, inventory tracking, and reporting.
* **OpenCart:** OpenCart is a popular open-source e-commerce platform that includes a built-in IMS. The IMS is developed using Python, HTML, CSS, and MySQL. It includes features such as product management, order management, inventory tracking, and reporting.
* **Odoo:** Odoo is a popular open-source ERP software suite that includes an IMS. The IMS is developed using Python, HTML, CSS, and MySQL. It includes features such as product management, order management, inventory tracking, and reporting.
* **Stockroom:** Stockroom is a simple but effective open-source IMS that is developed using Python, HTML, CSS, and MySQL. It is a good choice for small businesses that need a basic IMS.

# PROJECT OBJECTIVE

The project objective of an inventory management system in Python, HTML, CSS, and MySQL is to develop a web-based application that allows businesses to track and manage their inventory levels. The system should be efficient, accurate, and easy to use.

The system should include the following features:

* Product management: Add, edit, and delete products from the inventory. Specify product attributes such as name, description, price, quantity in stock, and reorder level.
* Order management: Create and manage orders. Specify the customer details, the products ordered, and the quantity of each product ordered. Track the status of orders, such as pending, fulfilled, and shipped.
* Inventory tracking: Track the quantity of each product in stock in real time. Identify products that are running low and need to be reordered.
* Web Based Application: This inventory management system is a web based application will help the user to use it online without the cost of downloading
* Reporting: Generate reports on inventory levels, sales, and other key metrics. Use this information to make informed decisions about inventory and sales strategies.

In addition to these features, the system should also be:

* Scalable: The system should be able to handle a large volume of data and transactions.
* Secure: The system should protect user data and prevent unauthorized access.
* User-friendly: The system should be easy to use for users of all skill levels.

By developing an inventory management system in Python, HTML, CSS, and MySQL, businesses can improve their efficiency, accuracy, and profitability.

# RESEARCH METHODOLOGY

The research methodology for developing an inventory management system in Python, HTML, CSS, and MySQL can be divided into the following steps:

1. Requirements gathering and analysis: The first step is to gather and analyze the requirements for the system. This includes identifying the needs of the users and the features that the system should have.
2. System design: Once the requirements have been gathered and analyzed, the next step is to design the system. This includes designing the database, the user interface, and the system architecture.
3. Database design and development: The next step is to develop the database. This includes creating the database tables and relationships.
4. User interface design and development: The next step is to design and develop the user interface. This includes designing the layout of the screens and the controls that the users will interact with.
5. System integration and testing: Once the database and user interface have been developed, the next step is to integrate the two and test the system. This includes testing the system to ensure that it meets all of the requirements and that it is free of errors.
6. Deployment and training: The final step is to deploy the system and train the users on how to use it. This includes installing the system on the production server and providing training to the users on how to use the system.

**Modules Designed:**

1. Login Page
2. Admin Panel
3. Add Category
4. Add Product
5. Add User
6. About
7. Seller Panel
8. Search
9. Bill Generator

# PROJECT OUTCOME

The expected outcome of an inventory management system in Python, HTML, CSS, and MySQL is a web-based application that allows businesses to track and manage their inventory levels in a more efficient, accurate, and user-friendly way.

The system should be able to perform the following tasks:

* Track inventory levels: The system should be able to track the quantity of each product in stock in real time. This will help businesses to identify products that are running low and need to be reordered.
* Manage orders: The system should allow businesses to create and manage orders. This includes specifying the customer details, the products ordered, and the quantity of each product ordered. The system should also be able to track the status of orders, such as pending, fulfilled, and shipped.
* Generate reports: The system should be able to generate reports on inventory levels, sales, and other key metrics. This information can be used by businesses to make informed decisions about their inventory and sales strategies.

By using an inventory management system in Python, HTML, CSS, and MySQL, businesses can improve their efficiency, accuracy, and profitability.

Here are some specific examples of how businesses can benefit from using an inventory management system:

* Reduced costs: Businesses can save money by reducing inventory costs, such as overstocking and stockouts.
* Improved customer service: Businesses can improve customer service by ensuring that they always have the products that customers need in stock.
* Increased sales: Businesses can increase sales by being able to quickly and easily fulfil orders.
* Better decision-making: Businesses can make better decisions about their inventory and sales strategies by having access to real-time data and reports.

Overall, an inventory management system in Python, HTML, CSS, and MySQL is a valuable tool that can help businesses of all sizes to improve their efficiency, accuracy, profitability, and customer service.

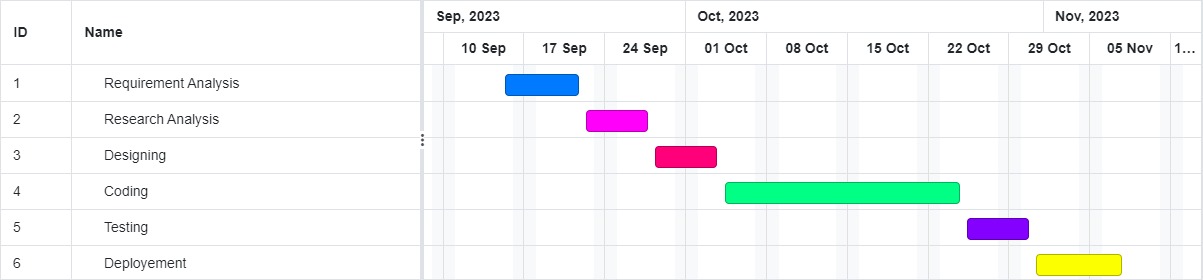
# PROPOSED TIME DURATION

The proposed time duration for developing an inventory management system in Python, HTML, CSS, and MySQL can vary depending on several factors, including:

* The complexity of the system
* The size and experience of the development team
* The resources available to the development team

However, a typical time duration for developing a basic inventory management system using these technologies would be around 8-10 weeks. This would include the following steps:

* Requirements analysis: 2 weeks
* Research Analysis: 1 week
* Designing : 1-2 weeks
* Coding : 3-4 weeks
* Testing: 1 week
* Deployment: 1 week



# REFERENCES

Here are some references for developing an inventory management system in Python, HTML, CSS, and MySQL:

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