

Student service enterprise inventory system

[Business](#), [Management](#)



STUDENT SERVICE ENTERPRISE INVENTORY SYSTEM A Concept Paper

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ofTechnologyWith the power of technology nowadays, people get interested with computers. They tried to indulge themselves on it to have a productive result in a more efficient and time saving process.

It is highly valued in institutions like business enterprises, schools, hospitals, government and non government services. However, some of them are still using manual system. In this regard, we acknowledge the value of computerized system. CPU Student Service Enterprise is a store inside the campus where students, faculty, and staffs can buy goods, books, school supplies, P. E & school uniforms, etc. Each department's are also purchasing supplies for their offices. One of the problems of SSE is the manual Inventory System. The manual system is not accurate and time consuming. Quarterly, SSE is conducting their inventory.

When the inventory date is near work students and staffs are listing all the goods or items that are available in yellow paper. The paper contains the quantity, unit, description, and unit price of an item. In the proper date of inventory, work students manually count the goods or items. After counting all the available items, work students will put the unit price of each item. Finding the prices is time consuming. It takes two to three weeks to finish pricing those items. Prices of the items are all in the journal book. But some of the old stocks items are hard to find their prices.

After pricing all the items, the book keeper will encode that in Excel. After that, she will print it out and forward to the VPFE. Overview of the Desired State of Technology I would like to propose a computerized inventory system to be installed at the CPU Student Service Enterprise, a formal computerized approach to inventory storing. The system provides the user with fast, accurate data handling and retrieving. It makes adjustments for possible problems prior to their occurrence, as opposed to traditional control systems which looked at more historical demand and reacted to existing problems.

Furthermore, it directly serves as the system for CPU Student Service Enterprise. This system will help keep personnel from wasting their time counting supplies and trying to manually determine which products to buy and sell. The system also includes tracking of remaining inventory, tracking when new orders should be made, tracking which items are most popular and something to help the business decide what items are most profitable and which products to remove. They could also compare the inventory available at each customer to their corresponding needs.

Data on these transactions are very important in determining the availability of details on the products in needs of reviewing. Statement of the Problem These are the following problems encountered by CPU Student Service Enterprise: * The manual process consumes too much time for the work students and staff and rigid time to process a transaction. * Inaccurate daily updating, recording, and monitoring of inventory of products that goes in and out due to human errors in the manual system. * Time consuming retrieval due to manual search from numerous files. The availability of the product is difficult to identify due to lack of information regarding on files that are

outdated. * Slow and inaccurate resulting to problems like lost of items and unable to track the prices of an item. Objectives of the Study General Objective: * This study aims to solve the problems encountered and to change the Manual Inventory System and develop a Computerized Inventory System for CPU Student Service Enterprise. Specific Objectives: * To have an accurate inventory of stocks by providing the system an interactive GUI that capable of performing and handling accurate filling. To speed up the process of searching the data from the files. * To have a back up of data by creating a copy of database. * To ease process of monitoring the inventory of products by providing the system a normalized database system for storing all updated details on the inventory. Theoretical Framework Fast, Accurate, Reliable CPU - SSE INVENTORY SYSTEM Inefficient, Slow Processing, Unorganized, Inaccurate Systems Theory Figure 1. 0 Theoretical Framework based on Systems theory Theoretical Framework The figure above shows the elements needed in the development of SSE Inventory System.

It is a system that stores data of the products or an item. Significantly, the manual processes are replaced by a computerized one which utilizes data from the book storage of inventory, with the computerized inventory system, the user can easily review and monitor the current status of the products or an item, in which the overall processes are hastened using this system. System theory Systems theory is the interdisciplinary study of systems in general, with the goal of elucidating principles that can be applied to all types of systems at all nesting levels in all fields of research.

System theory is the transdisciplinary study of the abstract organization of phenomena, Independent of their substance, type, or spatial or temporal

scale of existence. It investigates both the principles common to all complex entities, and the (usually mathematical) models which can be used to describe them. ([http://www. utwente. nl/cw/theorieenoverzicht/Theory %20clusters/Communication%20Processes/System_Theory. doc/](http://www.utwente.nl/cw/theorieenoverzicht/Theory%20clusters/Communication%20Processes/System_Theory.doc/)) Inventory system Keeping an inventory (stock of goods) for future sale or use is common in business.

In order to meet demand on time, companies must keep on hand a stock of goods that is awaiting sale. The purpose of inventory theory is to determine rules that management can use to minimize the costs associated with maintaining inventory and meeting customer demand. Inventory is studied in order to help companies save large amounts of money. ([http://www. whitman. edu/mathematics/SeniorProjectArchive/2006/zapponj2. pdf](http://www.whitman.edu/mathematics/SeniorProjectArchive/2006/zapponj2.pdf)

Conceptual Framework SECURITY INVENTORY MANAGEMENT DATABASE MANAGEMENT SYSTEM Figure 2. 0 Conceptual Framework Conceptual framework

The figure above conveys the concept that composes a system. These concepts serve as the main basis of ideas on how the researchers derived and created the system design and functionalities. DBMS A database management system (DBMS) is computer software designed for the purpose of managing databases based on a variety of data models. It is a complex set of software programs that controls the organization, storage, management, and retrieval of data in a database. DBMS are categorized according to their data structures or types. Inventory Management

Inventory management is primarily about specifying the size and placement of stocked goods. The scope of inventory management also concerns the <https://assignbuster.com/student-service-enterprise-inventory-system/>

fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting. (<http://www.inventorymanagement.com/2007/07/inventory-management-definition.html>)

This will track down the stocks of materials if it's available or not, ready to be used and if need to be ordered. Through the database, the inventory log will be used as bases of the stocks if which product is the most demand by the customer. Through this management can decide whether in what product they should focus to meet customer's needs and expectation. Security Method of protecting information, computer programs, and other computer system assets which is the security of computer assets and capital equipment refers to computer location, access control, software protection, and storage procedures.

The objective of computer security includes protection of information and property from theft, corruption, or natural disaster, while allowing the information and property to remain accessible and productive to its intended users. (www.answers.com/topic/computer-security) Data and information will be secured, especially with stock in and out of materials. This will avoid any unauthorized transaction. A username and password will be provided to track the person who will stock out and stock in a material. Users

Entity that has authority to use an application, equipment, facility, process, or system, or one who consumes or employs a good or service to obtain a <https://assignbuster.com/student-service-enterprise-inventory-system/>

benefit or to solve a problem, and who may or may not be the actual purchaser of the item. (<http://www.businessdictionary.com/definition/user.html>) User will feel all the complexity of the system, easy to use with a user friendly interface that will let user easily understand the flow of the system

Scope and limitations of the study The Computerized Inventory System is intended only for CPU Student Enterprise.

This study mainly focused on providing business application using computerized system that enables business to track services and aims to provide accurate and reliable process on every transaction. This study looks into a better impact of using technology today on how it affects our daily lives especially for being a customer. With these studies it can help the beneficiaries to know the differences of using manual system to a computerized generation today. An inventory system is a system used to keep track of a business products and supplies.

These programs are invaluable tools for most businesses because they are able to complete tasks quickly that would take much longer if done manually. Only the administrator has the privilege to use the computerized reservation system. It also excludes maintenance and other transactions according to the system. Significance of the Study The study will be of great use to the customers and workers of CPU Student Service Enterprise. The study, through its output, can assist the SSE in accomplishing tasks in a shorter period of time. Aside from this, the proposed system has a storage system for data retrieval of previous inventories.

The proposed system utilizes the best way to organize the database type of system and to improve the services of the people involve. Moreover, the <https://assignbuster.com/student-service-enterprise-inventory-system/>

computerized system will guide the management in deciding matter involving assigning process. Manager will be informed on transaction through print out reports. Thus, the VPFE can manage well its finances and more likely to have savings with the proposed system. They can also expect that computer units built within the company have basis fact with the use of the propose system. Putting up good facilities can ease or minimizestressexperience by the staff and work students. Chapter II

REVIEW OF RELATED LITERATURE AND STUDIES
Inventory control system A process for keeping track of objects or materials. In common usage, the term may also refer to just the software components. Modern inventory control systems rely upon barcodes, and potentially RFID tags, to provide automatic identification of inventory objects. In an academic study performed at Wal-Mart, RFID reduced Out of Stocks by 30 percent for products selling between 0.1 and 15 units a day. Inventory objects could include any kind of physical asset: merchandise, consumables, fixed assets, circulating tools, library books, or capital equipment.

To record an inventory transaction, the system uses a barcode scanner or RFID reader to automatically identify the inventory object, and then collects additional information from the operators via fixed terminals (workstations), or mobile computers. Applications An inventory control system may be used to automate a sales order fulfilment process. Such a system contains a list of order to be filled, and then prompts workers to pick the necessary items, and provides them with packaging and shipping information. Inventory system also manages in and outwards material of hardware.

Real-time inventory control systems use wireless, mobile terminals to record inventory transactions at the moment they occur. A wireless LAN transmits the transaction information to a central database. http://en.wikipedia.org/wiki/Inventory_control_system

Golden Inventory System Golden Inventory System is an advanced inventory software designed for wholesale and manufacture businesses. This system has several advantages, including the Return Merchandise Authorization function, hierarchical groups for products, import and export functions for QuickBooks 2010, PDF and XML files, multi- currencies and expiration dates features. This inventory software has the flexible security function. You can define access rights for each your employee. Golden Inventory system works with MS SQL Server and MS Access database files. Now, our system calculates item costs using FIFO and Average methods. You'll be able to create orders and invoices very fast and send them via email to your customers. This is very flexible software with a lot of options. This inventory software can handle more than 100'000 items. You can install free MS SQL Server Express Edition on your server and Golden Inventory software on your computers and you'll obtain a very powerful network inventory system for any size business. www.executivpro.com/

Just-in-time (JIT) is an inventory strategy that strives to improve a business's return on investment by reducing in-process inventory and associated carrying costs. Just In Time production method is also called the Toyota Production System. To meet JIT objectives, the process relies on signals or Kanban, between different points in the process, which tell production when to make the next part.

Kanban are usually 'tickets' but can be simple visual signals, such as the presence or absence of a part on a shelf. Implemented correctly, JIT can improve a manufacturing organization's return on investment, quality, and efficiency. Quick notice that stock depletion requires personnel to order new stock is critical to the inventory reduction at the center of JIT. This saves warehouse space and costs. However, the complete mechanism for making this work is often misunderstood. (en. wikipedia. org/wiki/Just-in-time_(business) Inventory Valuation

Determination of inventory cost is the major aspect of financial reporting. Whether the periodic or the perpetual system is used, it is necessary to use a specific method for the assignment of costs to the ending inventory as well as to the cost of goods sold. Assignment of costs can be complex because goods are usually purchased at different costs during the accounting period. Thus, there must be a consistent procedure in assigning costs which is called the cost-flow assumption (Eisen, 2007). There are three cost-flow assumptions that can be used: First-In, First-Out (FIFO) Method.

This is based on the assumption that the first units brought are the first units sold. The oldest cost assigned to the inventory is the cost assigned to the goods first sold. Consequently, the most recent cost is assigned to the ending inventory. Although business organizations are free to choose among a number of inventory methods, many adopt FIFO simply because there is a tendency to dispose of goods in the order of their acquisition (Eisen, 2007). This method, though not as accurate as specifically identifying the item being sold, would give a close approximation of value.

Last-In, Last-Out (LIFO) Method. This method assumes that the most recent cost of goods acquired should be charged at the most recent sales made. Thus, the assignment of the cost to the ending inventory represents the cost of all earlier purchases, without regard to the order in which the goods are actually sold, since it is assumed that the goods are all the same and readily interchangeable (Eisen, 2007). Weighted Average Cost Method. This method yields a cost that is representative of the cost of the product over the entire accounting period. The weighted average cost of a unit of inventory is determined and all units are assigned this cost. The average cost is weighted by the number of units purchased at each cost (Carroll, 2006). Eisen further notes that in accounting periods where costs remain relatively constant, the FIFO method is probably the most appropriate. If it is important that replacement costs relate as closely as possible to the cost of the goods sold, the LIFO method is better. The weighted average method is a third option, even though it does not necessarily bring about the matching of costs and revenue. Its simplicity may have a cost-saving effect. Summary Every business big or small, is in need of inventory system for keeping tracks of records and specifically storing essential data in which could be reviewed and monitored by the manager. There are many ways and approaches to the inventory strategy. Inventory system is the heart of the business. The main advantage of the system that I will be going to develop is it will provide a computer generated output of the inventory a whole lot faster and accurate.

Chapter III METHODOLOGY OF THE STUDY Figure 3. 0 Modified Iterative Waterfall Model ([www. nfolab. stanford. edu](http://www.nfolab.stanford.edu)) In the development of the system, the researchers followed the phases of a Waterfall Method with the

combination of an Iterative Model. The model is illustrated in figure 3.

System Analysis The first phase that the researchers undertake is the system analysis which includes initial investigation and data gathering to prove the viability of the system. An interview (which is an interactive tool) with the management and employees of the organization was also conducted and at the same time the group observed how their transactions work.

It is also in this phase where the group observed and interacted with the users to further understand what information users need to perform their jobs. It is in this phase wherein other forms of interactive tools were used such as observation of the users involved and the organization's environment.

Requirement Definition In the requirement definition phase includes the definition of problems, objectives and estimation of scopes and limitations after the gathered data was summarized. During this phase wherein the researchers identified the information requirements for particular users involved.

As an output the group had a deeper understanding of how the business function and have the complete information of the people, goals, data, and procedures involved. Interactive tools are used to accomplish tasks in this phase, observation and interviewing the people involved.

System Design System analysis leads to design decision, which exactly determines how the system operates in terms of process, data, hardware, network infrastructures, user Interface and other important factors in the system environment.

System Development

In this stage where the coding phases will start. Application software will be used in the development of the system. It is in this phase includes the

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programming of the system such as coding and program testing and to add more to that this phase also comprises the development or implementation of the system design. Microsoft Visual Basic 6.0 is used as the development tool for the front end and MySQL Server 5.0 as the back end. Photoshop and Corel Draw serve as an enhancement tool for the GUI and with the Corel Draw it.

In this phase a constant interaction with the users is done to gather comments/feedbacks, validation and suggestions of the system design and layouts. Testing and Maintenance The testing and maintenance stage includes the preliminary implementation of the system together with the users and programmers using sample data or accurate data of the current system. A series of test is undergone to pinpoint neglected or unseen problems of the system before it will be handed down to the organization for operational implementation. The system documentation begins in this phase.

The system manual or documentation includes all the necessary information that will guide the users about the systems functionality. System Implementation This is probably the most resource, cost and time-consuming phase of all. This is when the system is actually built, tested, and finally installed. It also includes activities such as user training and system maintenance. Some experts like to separate them into different phases Deployment and Maintenance. However the four phases are the most commonly known and accepted steps. Gantt Chart

PHASE	Activities	Mar	Apr	May	Jun	July	ExpectedOutput
Planning	Understanding why the system should be built						Give the best solution and easy access to the system
Requirements	Adjustment and changes from						

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the users to the system being developed| | | | | Well Developed System|
 Design| Architecture design of the System| | | | | Should be user friendly|
 Implementation| The system is actually built| | | | | Ensured and well runned
 system| Test| The System Is Being Tested| | | | | Completely functioning |
 Maintenance| Undergo Some Changes| | | | | System Run Successfully|

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 Diagram of the Current System Staff/Work Student Book Keeper Manual
 Inventory System Record Record Counts items Item info Printed Inventory
 record VPFE

Data Flow Diagram Level 0 of the Current System Staff/Work Student Record Counts Item 2. 0 Counting and Classifying Of Items 1. 0 Record Item Info Record Item Info 3. 0 Determines Price List VPFE D1 Item_Journal Printed Record Recorded Item Info 5. 0 Print Inventory Record 4. 0 Encode Items in Excel Book Keeper Record Item List Recorded In Excel Item Info Context Diagram of the Proposed System D1Item_DBMS Item Info SSE Computerized Inventory System Book Keeper Staff/Work Student

Username Inventory Password Records Printed Inventory Records VPFE Data Flow Diagram Level 0 of the Proposed System 1. 0 Encode Item Info 2. 0 Calculate all Item Prices Staff/Work Student Username Item List Password Item Info Calculated Price List Price List D1 Item_DBMS Book Keeper Inventory 4. 0 Print Inventory Records 3. 0 Check Inventory Records VPFE Printed Check Inventory Inventory RecordsRecords