



ISSN: 2350-0328

**International Journal of Advanced Research in Science,  
Engineering and Technology**

**Vol. 6, Issue 3, March 2019**

# **Woodworks Purchase Order System**

**Jan Meinarj Sean S. Bocala, Franchette Darlene T. Cruz, Romenick R. Dominguez  
Jeffrey C. Hermosa, Jamuel V. Masinsin, Jasmin H. Almarinez**

BSIT 4<sup>th</sup> year student, College of Computer Studies University of Perpetual Help System Laguna  
BSIT 3<sup>rd</sup> year student, College of Computer Studies University of Perpetual Help System Laguna  
BSIT 3<sup>rd</sup> year student, College of Computer Studies University of Perpetual Help System Laguna  
BSIT 3<sup>rd</sup> year student, College of Computer Studies University of Perpetual Help System Laguna  
BSIT 3<sup>rd</sup> year student, College of Computer Studies University of Perpetual Help System Laguna  
Assistant Professor, College of Computer Studies, University of Perpetual Help System Laguna

**ABSTRACT:** Woodwork is a type of business where transactions is manually operated by the owner to get full details of customer order. The woodwork needs a computerized data transaction to create more accurate records and data. The work will be lessen and will be easier with the use of a program. The main purpose of the system is to upgrade the current operation of the business in regards to coordination as well as recording of orders and transactions between the different branches. Tracking the sales, orders, and keeping the records of the purchased items using the purchase order system .The system got an average of 83.33% for the software evaluation for the quality requirement that fits for the manager of pilot area. The system provides a more efficient way of processing and recording transactions for the business, to lessen the discrepancy between the different branches.

**KEYWORDS:** Tracking the sales, Keeping records, Processing and recording transactions, Lessen discrepancy.

## **I. INTRODUCTION**

A typical wood works have their own manufacturing operations, as well as retail. Most of the time they have it both at one site, but at times, due to expansion of range, they would have separate branches in which the manufacturing is separated from the retail to ensure if there are any other branches wherein the production will be centralized. Communication between retail branches and the manufacturing branch is very important since it will serve as the basis for the production that will lead to any sales that may take place. Recording of said sales could serve as a log that could also help the business in a way that it could track all the sales that they have generated.

This system's goal is to improve the purchase ordering transaction by creating a system that would be more accurate than the manual transaction. It also aims to help the pilot area through communication since our system can be accessed by both the manufacturing and the retail branches. The maintaining of files could also be easier through the use of our system. The pilot area can also be ensured of their security since the system doesn't just allow anyone to use the system, it only allows users with proper credentials. Even though this will be the first that the company would use a system like ours, they wouldn't have a hard time exploring it since it is very user friendly.

The purpose of the system is to help the owner, the manager and the employees in managing their business. The system will help to track the sales and orders made by customer and employees. It will be used whenever there is a transaction. This is also a big help in keeping the records of the purchased items and its availability. It makes it easier for the owner, as well, to check the items needed for the production.

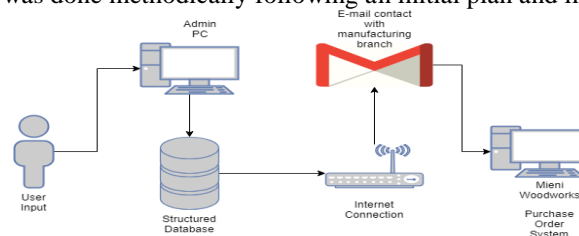
The study made for this system would benefit the business itself with its operations by allowing it to have a standardized way of communicating with the manufacturing branch as well as containing a proper way to store important data such as sales generated and orders. The system was thought of in a way that it would help the Business to be more efficient and effective to ensure that it would lessen the miscommunication and conflicts between the manufacturing branch and retail branch as well as have an efficient way of saving any transactions that have been made.

## II. RELATED WORK

This includes code used by business organizations & automatic correction of errors in data or text fields using data maintained by the PO System. A proper database system that link user to server interface, and have a system that can link smartphone to online ordering software[1]. A manufacturing system must balance human characteristics, needs, skills and capabilities within the technical and business environment, in order to be effective and successful[2]. The system includes a processor; a database, and a logic that, when executed by the processor, causes the system to perform a method, the method including receiving a description of an item for sale from a seller; receiving an ideal price, negotiable price, and minimum price associated the item for sale; and receiving an offer for transaction of the item from a buyer[3]. Current studies have shown that providing consumers with the item level based wood product information based on traceability systems increases product trust and purchase intentions, with those information items most valued by consumers being identified as well[4]. We consider a straightforward and simple to-execute APD conspire in which the purchaser appreciates value limits by submitting at the beginning to a fixed size of cutting edge request for every period alongside unexpected requests when required[5]. Besides, the framework tracks the advancement of the requests to guarantee that the requests are satisfied on time or that the proper expansions are acquired from the dissemination customers, if essential[6]. This paper presents a building automation system adopting SOA paradigm with devices implemented by device profile for web service (DPWS) in which context information is collected, processed, and sent to a composition engine to coordinate appropriate devices/services based on the context, composition plan, and predefined policy rules[7]. The Database method is a system that helps in displaying client's order and the status of order. By using this system, the owner can also easily distinguish what materials are needed[8]. Text fields are used to represent the invoice image data are compared to purchase order data from a purchase order system. If a text field fails to match the purchase order data from the purchase order system, then the one or more text fields are designated to special processing[9]. The prices of materials uses in overseas order are same used in local orders[10]. There are is a need for a specific Method for placing a purchase order via a communications network to ensure that the recording of the transaction done would be made properly and all that those who are involved when each one of those who are involved are identified properly since they have their own identifiers, in ordering the item to be purchased would also be recorded for all those involved to see[11]. A purchase order system would require the identifier relating to a specific customer for any items that are to be sold would be recorded having the complete transaction details as well as customer details which would be needed[12].

## III. METHODOLOGY

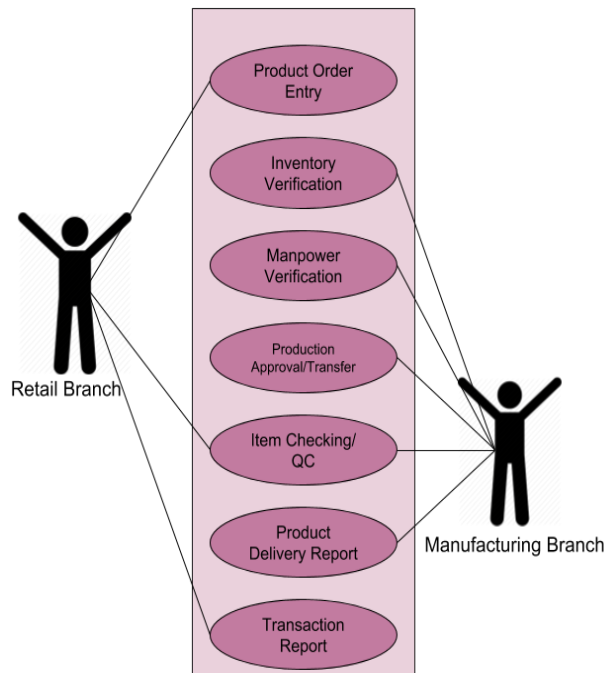
The model of software development used was the waterfall model in which a step by step process was done, starting with the gathering of the different information and requirements coming from the business, followed by the creation of the design for the system that would suffice with the needed requirements for the hardware and software all the while making sure the system design would be user friendly, and then followed by the implementation of the system itself little by little of the different process it would be able to do, next the testing of the system was done to ensure that there would be no problems that the user would encounter when using the system, finally deployment of the system and maintenance is done for the business to use the system throughout its operation. Waterfall model was the chosen model since the creation of the system was done methodically following an initial plan and implementing it.



**Figure 1.0 System Architecture**

Data processing of manual transaction to digital transaction between customer and manufacturing branch. In figure 1.0 it shows the process of how the system would be utilized. The recording of the initial transaction or order would be done by the admin from the retail branch, the data inputted would be recorded inside the database. From the system itself the admin would be able then to choose a specific record and export it into a word file which would be then

transferred to the manufacturing branch via email. The manufacturing branch would then process the order and verify if it would be possible to do and then reply to the retail branch with the details added to the sent file, and the admin of the retail branch would be able to add the necessary information regarding said transaction or order.



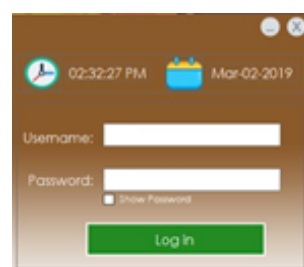
**Figure 2.0 Use Case Diagram**

Figure 2.0 shows those who would be playing a part in the use of the system. There would be two main actors for the use of the system the retail branch and the manufacturing branch. The retail branch would be the one who is responsible for the recording of the initial transaction or order and would be the one to make the full transaction report at the end of the process. The manufacturing branch is in charge with the verification of the fields that may affect the production within the business in response to the order made by the retail branch and then send the necessary details regarding inventory or manpower to the retail branch for the updating of a possible status change of the order done.

#### IV. RESULTS AND DISCUSSION

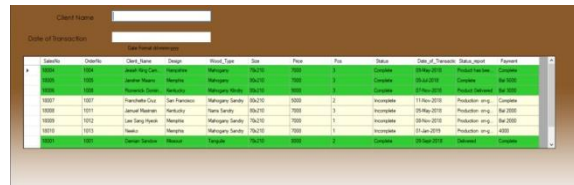
##### General Objective

In regards to the system there is a need for security, transaction recording, and overall user friendly. Security wise the system should only allow those with the proper credentials to be able to use the system itself. For transaction recording a more accurate approach would be needed which would then give a more efficient process. The user needs to be user friendly so even new users would easily understand and have firm control over the system even in a short amount of time.



**Figure 3.0 Login**

Figure 3.0 where only the admins will be allowed to use or access the system. The accounts of the admins will also be in the database so that these accounts could be manipulated as well. This would serve as the security which would not allow those who don't have the proper credentials to change or add any data within the database.



**Figure 4.0 Sales Menu**

Figure 4.0 allows the user to locate specific orders or check pending and complete transactions. It can filter out the search through the name or date. It also shows which transactions have been completed with those having green highlights as an indication that the transaction has been completed and yellow if it is still ongoing.



**Figure 5.0 Order Menu**

Figure 5.0 let users/admin to add order of their client. Also order menu saves the data into the database and it also display a specific data in the screen. This menu will also make it easier for the administrator to track the orders of the client.

**Table 1.0 Evaluation Result**

<b>Functional Suitability</b>	4.33	Acceptable
<b>Performance efficiency</b>	4.00	Acceptable
<b>Compatibility</b>	3.50	Acceptable
<b>Usability</b>	4.00	Acceptable
<b>Reliability</b>	4.00	Acceptable
<b>Security</b>	5.00	Acceptable
<b>Maintainability</b>	4.50	Acceptable
<b>Portability</b>	4.00	Acceptable

The overall response for the system is positive and only has minor disagreements which fall on the report generation's side while all others are acceptable for the manager of the pilot area. All characteristics and Sub-characteristics coincide with the system's purpose and use which has satisfied the client.

## V. CONCLUSION AND FUTURE WORK

This system aims to help the company/business to have a better order processing and transaction to their manufacturing branch. Through our application, we can help the company in reducing their paperwork's. The overall application can help lessen the discrepancy in the company.

We recommend this system to be more accurate when gathering and recording the orders and the transactions between the manufacturing branch and retail branch and that each item ordered should have its own ID to make sure that every order and sale made has their own records.



ISSN: 2350-0328

# International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 3, March 2019

## VI. ACKNOWLEDGEMENT

Firstly, we would like to thank God Almighty for enabling our team to create and finish this project, for without Him, our goal would not be clear. Second, we would like to thank our team members for contributing in the creation of our system. We have worked hard in finishing this, and the result has us very satisfied. And lastly, we would like to thank the people who inspired us and pushed us to work hard for our goal.

## REFERENCES

- [1] M.Z. Hashim et. al., Online purchase order system using android application: A review, Research India Publication, 2015p
- [2] Townsend, V., &Urbanic, J. (2015). A Case Study Measuring the Impact of a Participatory Design Intervention on System Complexity and Cycle Time in an Assemble-to-Order System. *Procedia Manufacturing*, 1, 134-145.
- [3] Variable Price Purchasing System and Method Boston, C. C. (2017). U.S. Patent Application No. 15/438,816.
- [4] Appelhanz, S., et. al.,(2016)Traceability system for capturing, processing and providing consumer-relevant information about wood products: system solution and its economic feasibility.Science Direct.
- [5] Simultaneous Optimization of Contingent and Advance Purchase Orders with Fixed Ordering Costs XianghuaGana , Suresh P.Sethib , LiangXua
- [6] System and method for fulfilling purchase orders by David Beech, Charles Q. Beech, III
- [7]Han, S. N., Lee, G. M., &Crespi, N. (2014). Semantic context-aware service composition for building automation system. *IEEE Transactions onIndustrial Informatics*, 10(1), 752-761.
- [8]Allocca, W., Hay, J., Leblang, J. A., McQueen, C., & Prudente, J. (2015). U.S. Patent No. 9,092,817. Washington, DC: U.S. Patent and Trademark Office.
- [9]Watanabe, K. (2015). U.S. Patent Application No. 14/042,291.)
- [10]Yin, Z., Guan, X., & Xiao, L. (2017). Managing global sourcing with disruption risks in an assemble-to-order system. *Transportation Research Part E: Logistics and Transportation Review*, 108, 1-17.
- [11]PeriHartmanSE ORDER WIAA COMMUNICATIONS NETWORK
- [12]Hewlett - Packard Development Com; Jeffrey P. Bezos; Shel Kaphan; Joel Spiegel(2012). Patent No. 5,960,411 METHOD AND SYSTEM FOR PLACING A PURCHApny, L .P . (2017). GENERATING PURCHASE ORDER DATA BASED ON PHYSICAL IDENTIFIERS. US 2017 / 0344389 A1.