

Inventory Application Design for Optimizing Business Processes for MSMEs 'Nyong Group' Yogyakarta

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Abstract

Nyong Group is one of the Micro, Small and Medium Enterprises (MSME) located in Sleman, Yogyakarta. Nyong group has several business units, namely nyong shoes and care Yogya, shoes and care Cilacap, nyong donuts, and nyong stalls (food, snacks and chili sauce). The problems by IBM partners include; First, (1) There is no Point of Sales application that uses inventory to meet the needs of the production process or is sold again, (2) Not yet has this Inventory covering raw materials, in-process goods, and goods so (finished goods). The output targets in this program are (1) the application of point of sales applications for recording sales transactions, (2) Adding an inventory application to the created point of sales applications. The service program is carried out in 2 (two) forms; First, (1) design of a point of sales application for Nyong Group's sales transactions. Second, making an inventory application to be able to determine whether to record goods based on arrival time or the amount of stock you can determine to record goods based on arrival time or stock amount. The implementation of this program is designed in four stages of activity, namely: (1) Coordination and preparation stage (2) Design stage (3) Science and technology implementation stage (4) Evaluation and refinement stage.

Keywords: Inventory, Science and Technology Implementation, MSME

INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) are efforts made by the people in the Unitary State of the Republic of Indonesia in improving the economy and standard of living. MSMEs need to be developed because they can become a big business so that they can improve the wheels of the economy. One way to improve MSMEs is by marketing their products through information technology (Sudaryanto *et al.*, 2019). We can imagine that companies that do not implement information technology will only wait for the day when the company goes bankrupt (Utami, 2010). Information technology users who must be able to take advantage of current technology, as well as further technological developments. Adaptation to the use of new technology that has developed and is mandatory to do. This is done so that the next generation is not left behind in terms of new technology. Some of these adaptation methods can be realized in the form of an Inventory Information System (Agusvianto, 2017). Currently organizations or companies make information systems important. With the information system, the organization or company can guarantee the quality of the information presented and can make decisions based on that information. Information can be obtained more easily and quickly, thanks to information technology (Syafarina, 2016).

In this modern era, the needs of human life are increasingly complex. One of the supports to fulfill these needs is the inventory of an item. Inventory of goods in a transaction activity is very influential on the level of customer satisfaction with the services of a shopping place. This illustration provides an overview of the importance of an application that has the ability to provide information on the availability of goods by matching the id of the goods on the display rack with the number of availability of goods in the warehouse or other locations. This system should also be able to be used on a mobile basis because each type and type of goods are in different locations (Putra Yudha, Sudarma and Arya Mertasana, 2018). Procurement of inventory

raises other costs, namely in the form of ordering costs, purchasing costs, maintenance costs, warehouse rental costs and damage costs. Therefore, proper inventory management is needed to avoid increasing inventory costs and maximize the proper financial management of MSMEs (Ahmad and Sholeh, 2019). Inventory and sales systems are important in a company, so they must be managed effectively and efficiently (Pratomo *et al.*, 2020). Human Resources (HR) is influential on the sustainability of MSMEs during the Covid-19 period (Ubaidillah, 2020).

The partner of this service is the Nyong Group which has several business units such as culinary and Shoes and Care. Mitra is located on Jl. Gitogati, Perum Gtiya Mulia Asri No. A-2, Sariharjo, Nganglik, Sleman. In terms of managing orders or product publications, partners use Whatsapp and Instagram. However, for the management of sales records, they still use dirty records and have not used the implementation of information technology as a supporting tool in optimizing business processes because they are still using manual processes in practice so far. It is very likely that business unit managers are not yet fluent in the use and utilization of information technology for business needs. The process of recording shopping or sales needs still uses a manual process as shown in Figure 1 and Figure 2.

With the inventory application, it is hoped that it can assist in recording, checking the stock of spare parts availability, so that it is not difficult to check the stock of goods. All incoming and outgoing goods can be clearly identified without any errors that interfere with the process of supplying goods (Putra and Prasetyaningrum, 2020).

METHOD

In community service activities using the interview method with partners, related to the problems faced by partners. Interviews were conducted with the owner of the MSME 'Nyong Group'. The form of this community service activity is in the form of an inventory point of sales application for the Nyong Group business unit. The material in making the application uses the PHP (Hypertext Preprocessor) programming language, which is an open source server-side web programming. The PHP function here is for website development. Database management system that will access and process data using MySQL. The method used in the development of this application system is to use the CodeIgniter framework

RESULTS

From the results of partner interviews conducted, there are several partner problems, including:

1. There is no information technology-based inventory recording system that can facilitate data storage and further processing of the sales data.

2. Sales policies such as promos or restocking of raw materials are still calculated using the manual system.

Through the solutions provided, this service activity has two output targets to be achieved, namely:

1. Making point of sales inventory application for recording stock of goods
2. Implementation of point of sales system in partner business units.

DISCUSSION

This service activity is carried out with the aim of solving existing problems. The solutions given to solve these problems in this service activity are:

1. Design and implement point of sales inventory applications to assist partners in recording and managing sales data.
2. Making point of sales inventory applications to help partners further process their sales data. Provide insight and knowledge regarding matters relating to sales records within a certain period of time related to products sold or customer interest in a product.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this service, it can be concluded as follows:

1. Inventory point of sales application is built with features such as incoming and outgoing goods transactions, total stock of goods, and reports in the form of availability of goods/stocks of goods, sales reports in one month and year, as well as profit/loss reports.
2. From testing this system, it produces data in the form of graphs and reports to monitor the stability of Nyong Group's asset management.
3. The information system provides output in the form of goods data reports, inventory reports, sales reports and profit/loss reports in detail.

Recommendations

The development that can be done on this system for further research, is more focused on the stages in designing an inventory system. Update on the development of the mobile application system to make it more accessible.

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APPENDIX

This appendix contains images that document data on the implementation of Community Service at the UMKM 'Nyong Group' Yogyakarta.

Figure 1. Manual Bookkeeping



Figure 2. Order recording



Figure 3. Report on the Amount of Best Selling Sales Data by Category

No	No Faktur	Jumlah Total	Waktu Transaksi	Aksi
1	FA5967	2 Produk	15 Apr 2016, 07:07:23 WIB	[Detail] [Tambah Transaksi]
2	FA1234	3 Produk	13 Apr 2016, 06:00:00 WIB	[Detail] [Tambah Transaksi]
3	FA0033	1 Produk	14 Apr 2016, 00:00:00 WIB	[Detail] [Tambah Transaksi]

Figure 4. Display of All Incoming Goods Transactions

No	Nama Kategori	Aksi
1	Teknologi	Edit Hapus
2	Elektronik	Edit Hapus
3	Bumbu Dapur	Edit Hapus
4	Rumahnya Tangga	Edit Hapus
5	Perabot	Edit Hapus
6	Pencernaan	Edit Hapus
7	Media	Edit Hapus

Figure 5. Product Category Management Display

No	Nama Customer	No Telpin	Alamat Lengkap	Total Transaksi	Aksi
1	Udin Sediana	081257711328	Ular Karang, Padang, Sumatera Barat	4 Kali	[Detail] [X]
2	Annie Bourneville	0894355763	Pagor Alam, Bandar Lampung	0 Kali	[Detail] [X]
3	Gonita Arigun Nikmah	086768194030	Plozowarno, Pringsewu	0 Kali	[Detail] [X]
4	Ummi Elharaq Gani	087888133004	Strany, Nalar	1 Kali	[Detail] [X]
5	Utari	088810889404	Ratar, Lampung Selatan	0 Kali	[Detail] [X]
6	Pupul Indayanti	089841504077	Rajabasa Permai, Bandar Lampung	0 Kali	[Detail] [X]
7	Suatiwati	086783333873	Banyuwangi, Jawa Tengah	0 Kali	[Detail] [X]
8	Vika Ariyanti	085708497282	Rajabasa Permai, Bandar Lampung	0 Kali	[Detail] [X]
9	Winda Sugiya	085738453838	Bandar Jaya	2 Kali	[Detail] [X]
10	Decha Laili	08679653043	Rajabasa Permai, Bandar Lampung	0 Kali	[Detail] [X]

Figure 6. Display of All Customer Data



Figure 7. Display of Sales Data Amount Report