E-commerce implementation in supporting business services strategy (case study at petshop gifaro evidence)

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Abstract. The aim of this paper is introduced the importance of information technology for all petshop business units. Givaro Petshop is a business to provides products for the needs of pet supplies and pet care services. Recently the Givaro Petshop still managed product inventory manually. To improve the business, Givaro Petshop need an e-commerce website that can improve the effectiveness of business processes. The development of the Givaro Petshop e-commerce website uses Systems Development Life Cycle (SDLC) with the Rapid Application Development Prototyping methodology. The results of this study are an e-commerce website that can be used to record inventory of products owned, record sales transactions, receive orders for animal care services, manage various reports needed and provide information to the general public.

1. Introduction
Indonesia is one of the countries in the South Asian region which can be said to be developing rapidly when compared to the tiger economy [1]. This growth was triggered by rapidly increasing urbanization and industrial levels. There are a number of low and middle income groups in Indonesia who like to buy pet food. This makes the economic growth of the pet food market in this country. This change is very important for the intended market in the future. Thus the Indonesian pet food market is segmented based on product types, prices, animals and sales channels. The market for Pet Meal and Treats together accounts for more than 90% of the market share in terms of volume. The market for organic products is on the rise, due to higher demand for diets with natural ingredients from the health aware consumers. This market is expected to grow at a CAGR of 7.1% for the next 5 years. Cats are preferred more as a pet companion to dogs due to the religious constraints in the country. Dogs account to around 30% of the Indonesia pet population while around 2 million cats are petted in this country. Economic pet food was the major and matured segment in terms of value in 2014, due to large number of lower and middle class populations [2].

With the increase in sales through the internet, the growth of e-commerce in this country has become important in the convenience of the food market, including pet food. With the development of technology that is very fast at this time, then a business must use technology for businesses that are run in order to benefit from existing technology. In responding to the needs of existing and incoming customers and clients, business people usually use information technology to provide excellent service to their customers. The contribution of Information Technology is very important for helping the owners to solve a number of problems related to the relationships of vendors, suppliers, and customers. An example is a real time transaction [3], [4].
The above statistic displays Indonesian respondents as reported by Rakuten Insight who are pet owners of month of June in year 2018. From the period surveyed, the most popular pet amongst the pet owners in Indonesia were cats, with 37% of the respondents were the owners of the pet owning were cats. In comparison, 15.5 percent of respondents who were pet owners owned are dogs [5].

One application of technology in the business field can be done by creating a web e-commerce for the company and or start up company. With the presence of sophisticated ICT software technologies in the current industrial era 4.0 a number of companies able to utilize in order to increase customers [6]. The good services of most business industries in the world already proved can influence intention of their customers as well as clients from time to time. The role of ICT is very essential tool in delivering those services [7, 8, 9]. The strategy of retaining customers and increasing a number of customers currently are used by some entrepreneurs as a strategy to win the market, because it can increase the sales and profits in terms of both financial and brand products [10].

The object of this study is Givaro Petshop, a small medium enterprises that is located in Gading Serpong, Tangerang, Banten. This company is a petshop that selling the variety of equipments and food for pets and also provides pet meeting owners in the plant and office. Few months ago, Givaro Petshop still sells manually/offline so that it manages products, sales transaction processes and transactions for pet services and the delivery of information about Givaro Petshop to the public, pet owners, is still not done online. To improve the services of businesses run by Givaro Petshop, an e-commerce website is needed to provide complete and effective information to customers. Case, the implementation of e-commerce for this company is one of the very urgent to be done. By installing an e-commerce website at Givaro Petshop, it is expected to improve customer services to the consisting of delivering information on products and services and sales transactions to customers that can be done quickly and can be done anytime and anywhere can be adjusted to improve service to customers [4].

Thus, this research aims to develop an e-commerce website for Givaro Petshop, to help Givaro Petshop in increasing the efficiency of business process.

2. Related Work
In this section, researchers will explain about the related literature which is used in this study. Information systems are combinations of hardware, software, and telecommunications networks that people build and use to collect, create, and distribute useful data for supporting decision making [11]. E-commerce is the activity of buying and selling produce by electronic means such as by television, radio, mobile applications on online services or over the Internet. [11, 19]. Software Development Life
Cycle (SDLC) is the traditional system development methods used most by organizations today, is a framework that provides a structured sequential processes in the development of information systems. The stages of the SDLC begin with planning, requirement analysis, designing, programming / coding, testing and maintenance. Each stage of the SDLC involves a number of personnel who have special competencies such as in the stage of requirement analysis and design required Systems Analyst personnel, designing stages required programmer and so on. [12]. The prototyping model is a systems development method in which a prototype is built and tested. In the prototype model, the working programs are prepared quickly [12]. UML is a modeling language which helps to simplify the process of software design. UML includes a flexible graphical notification to create visual models of basically object-oriented software systems. [13]. Hypertext Preprocessor is a general-purpose programming language originally designed for web development. PHP is open source software that anyone can inspect, modify, and enhance [14]. MySQL is an open-source relational database management system (RDBMS) that can be used for developing web application [15].

3. Research Methodology

The research method is a method or procedure that must be carried out systematically in conducting a research.

Data Collecting Method

**Literature Review:**

Data collection performed with document study and interviewing the end user. In this case, the document was reviewed and studied carefully and some interviews were performed to learn the as-is system [17].

**Interview:**

Interview is meeting at which information is obtained from a person. In this research, interview is conducted by giving questions about service activities and business processes carried out by Givaro Petshop which had been conducted directly to the management of Givaro Petshop [18].

**Development System Method**

The system development method used is the System Development Life Cycle (SDLC) with the prototyping method approach. The proposed system will be built based on the stages in SDLC. SDLC stages in the development of this system are planning, analysis, design, and implementation [13]. Modelling of the Givaro Petshop e-commerce website used is UML 2.0 modelling and the application system technology used is PHP and MySQL database.

4. System Development and Analysis Result

The research method is a method or procedure that must be carried out systematically in conducting a research.

4.1 Interface Design

In the figure 2 below shows the User interface design of website e-commerce Givaro Petshop-Homepage. At the homepage, can be seen the display of all products of Givaro Petshop among others; dog food, cat food, pets supplements.
In the figure 3, it is shown that user interface design website e-commerce Givaro Petshop – customers’ transaction. At this customers’ transaction page, we can see all transaction, before doing the checkout process of shopping transaction.

There are scripts of PHP for developing Givaro Petshop Website e-commerce.

a. Login & Signup Script

The following code to validate passwords and sign up.
4.2 Add to Cart
When a user adds a purchased product to the cart, the system automatically checks the amount of available stock. If the amount desired by the user exceeds the stock, a notification will appear, stating that the stock is not enough. If there is enough stock, product information, quantity, and prices will be entered into a cart table in the database.

```php
if ($row['user_type'] == 'Admin' and $row['user_stat'] == 'Active') {
    if (is_array($row)) {
        $_SESSION['user_id'] = $row['user_id'];
        $_SESSION['user_name'] = $row['user_name'];
        $_SESSION['user_type'] = $row['user_type'];
        header('Location: backend/examples/dashboard.php');
    } else {
        $errmsg = "Invalid Email or Password!";
    }
} else if ($row['user_type'] == 'Customer' and $row['user_stat'] == 'Active') {
    if (is_array($row)) {
        $_SESSION['user_id'] = $row['user_id'];
        $_SESSION['user_name'] = $row['user_name'];
        $_SESSION['user_id'] = $row['user_id'];
        header('Location: index.php');
    } else {
        include 'config.php';
        $tangkapprod = $row['product_name'];
        $tangkapquan = $_POST['quantity'];
        $tangkapprice = $row['product_price'];
        $tangkaptotal = $row['product_price'] * $_POST['quantity'];
        $tangkapidproduct = $row['product_id'];
        $pic = $row['product_pic'];
        $tangkapcategory = $row['product_category'];
        $query = "INSERT INTO cart (product_id, user_id, prod_name, product_pic, quantity, category, price, total) VALUES ('$tangkapidproduct','$B', '$tangkapprod', '$pic', '$tangkapquan', '$tangkapcategory', '$tangkapprice', '$tangkaptotal');
        $res = mysql_query($query);
    }
```
$query1 = "SELECT * FROM cart WHERE user_id = '$B';"
$simpan1= mysql_query($query1);
$orderdate = date('Y-m-d');
$quantity = $_POST['quan'];

$query = "INSERT INTO transaksi (transaksi_id, user_id, address, orderdate, total, status) VALUES ('$finalcode','$uid', '$C', '$orderdate', '$sum3', 'On Going' )";

$res = mysql_query($query);
if($res) {
    $tampil= mysql_query("SELECT * from cart WHERE user_id='$uid'" );
    $banyak = mysql_num_rows($tampil);
    if($banyak >=1){
      for($i = 1; $i <= $banyak; $i++){
        while ($row = mysql_fetch_array($tampil)) {
          $cartID = $row['cart_id'];
          $productID = $row['product_id'];
          $productName = $row['prod_name'];
          $category = $row['category'];
          $productPic = $row['product_pic'];
          $quantity = $row['quantity'];
          $date = $row['date'];
          $time = $row['time'];
          $price = $row['price'];
          $total = $row['total'];

          $queryz= "INSERT INTO detailtransaksi (transaksi_id, cart_id, product_id, product_name, product_cat, product_pic, quantity, date, time, price, subtotal, total, status) VALUES ('$finalcode','$cartID', '$productID', '$productName', '$category', '$productPic', '$quantity', '$date', '$time', '$price', '$total', '$sum3', 'On Going');"
        }
    }
}

4.4 Transaction Confirmation
Change the transaction status and transaction detail status.

<?php
  $stats = $_POST['status'];
  if(isset($_POST['confirm'])){
    $query = "UPDATE transaksi SET status='$stats' where transaksi_id= '$transaksiid' ";
    $result = mysql_query($query);
    if($result){
      $queryz = "UPDATE detailtransaksi SET status='$stats' where transaksi_id= '$transaksiid' ";
      $resul = mysql_query($queryz);
      if($result){
        header("Location: donetransaction.php");
      }
    }else{
      header("Location: transaction.php");
    }
  }
?>
4.5 Implementation

After completing the design of the e-commerce website, testing is done first to test whether the menus are functioning properly or not. The results given by each menu must be in accordance with the initial design that has been determined. Testing is done using the blackbox testing method. After going through the stages of planning, analysis, and design and testing, the last stage in the development of a system is the implementation phase. E-commerce websites that have been tested will be implemented directly at Givaro Petshop.

Analysis and Result

4.6 Analysis of Research Results:
For Customer
The analysis for customer:

a) Customers can directly see the products sold by Givaro Petshop. Customers can know directly the amount of available stock and the price of products sold and make purchases online.

b) Customers can find out information on pet care services such as the number of availability of day care services and prices of pet day care services directly and make online pet care services transactions.

For Givaro Petshop
The analysis for the Management of Givaro Petshop are:

a) Givaro Petshop can manage all products, so that it can be seen in real time the existing stock of products.

b) Givaro Petshop can sale more similar or other related products directly and make pet care services transactions efficiently and better services delivery.

c) Givaro Petshop can print all reports that occur quickly and accurately.

5. Conclusion

The research result is an e-commerce website that has been designed to be used to help improve business processes run by Givaro Petshop. Based on these final results, the following conclusions can be concluded:

- This research result is an e-commerce website that shall urgently used by Givaro Petshop in giving the better service delivery to the customers;
- E-commerce website has a number of functions in order to process the inventory data and to control the existing stock of products and giving information accurately and real time;
- This E-commerce website can help customers for selecting and buying the Givaro products online easily without consuming time to go to the location.

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