

Development of E-Commerce Website (A Case Study: Bali-Go.com)

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Abstract

The development of e-commerce website at PT. Wisnu Selaras Abadi, is expected to facilitate the customers to getting information about price and product promotion in the company, enabling customers to conduct online transactions, and help the company to compete with similar websites. So the e-commerce system will give the solution for the company's problem. The existing problems such as pricing, promotion, culinary, vacation packages, it can not serve as an online transaction. Methods of analysis and design systems for this paper based on unified process analysis using unified modeling language notation, data collection by direct interview with the Board of Commissioners, and literature study. By using the method above, it will help to achieve the company's goals which is the e-commerce website can complete the needs of the company and the customers. Thus, it can be concluded, the development of e-commerce can maximize sales, and with a large market share.

Keywords: *e-commerce, development, website*

1. Introduction

Today information technology is the one area that is very influential on the daily lives of the various aspects and growing up into the world of business. It can be seen from human behavior perspective for determining the choice, when they want to purchase goods or services. Usually they are not only concerned with price, brand or quality of a product but also how an organization or company can provide service to customers of an organization and the way in offering products or services to customers by using the websites. Information technology is also an important factor when people want to find information quickly and accurately.

Because information technology factors that make customers change, the marketing strategy for a product or service through quite a lot of changes, such as by using the website will facilitate the sale and purchase from the perspective customer and the company. It can be seen now; so many websites that are used to offer a product or service, the business activities include the sale and purchase of products or services performed in the virtual world or the internet known as E - commerce. E-commerce describes the process of purchase, sale, transfer or exchange of products, services or information via computer networks, including the use of the internet [1]. And according to Rainer and Watson, electronic commerce is now so well established that people generally expect companies to offer this service in some form [2]. According to O'Brien, e-commerce transactions can be performed between the various parties. A common type of e-commerce are: a) Business-to-Business (B2B); b) Business-to-Consumer (B2C); c) Consumer-to-Consumer (C2C); d) Business-to-Employess (B2E) [3]. But for this paper, we are focus for business to consumer.

Based on the results of a comScore survey, it was found that 50 % of Indonesian Internet users have visited a retail site in 2010, this figure rose from 41 % in 2009. Based on a survey of MarkPlus Insight in 2010 Internet users in major cities around 30 - 35 % or about 42 million people. According to the first report in a series of journals cited yStats.com [4], in 2011, more than 2 billion people worldwide use the internet and based on the latest predictions figure 1 is estimated to exceed 3 billion by 2015. Global revenue from B2C e-commerce is around 400-600 billion U.S. dollars in 2010, and it's expected to grow further to U.S. \$ 700-950 billion by 2015. Based on the data that has been obtained it can be concluded that e-commerce is growing each year, thus making the competition in the field of e-commerce business is getting tougher. Here is a picture of the results of the survey predicted growth of e-commerce from 2011 to 2016.



Figure 1. Growth of E-Commerce [5]

From the above data, that the growth of e-commerce in the Asia-Pacific in 2013 to 2016 exceeds that of other continents. It can be concluded that the prospects of e-commerce in Asia-Pacific will be very good for the future. In general, companies that already have a website will contain information about products or services offered to assist the company in expanding its marketing to reach the entire region and place. Marketing through the website is a strategy for the company to get the profit by the advantages of e-commerce websites.

Bali-go.com is a website owned by PT. Wisnu Selaras Abadi that offers services in tourism to the Bali Island. Bali-go.com used the website as a medium to deliver information and media to conduct the transaction. Many similar efforts have sprung up at this time and have a wide variety of strategies to be the best.

Although the previous bali-go.com website has been running, the website previously still in the development stage and has several shortcomings as there are several pages that can be accessed but it's still in the development stage (initial appearance, the ordering page, payment, location, detailed information). Therefore the problem above, we need to develop and improve the quality of services offered, we will develop the previous websites by adding some new features to the website in accordance with the needs of bali-go.com to have a selling points and can attract the new customers.

The purpose of this study as follows: 1. Analyze information needs related to customer websites; 2. Analyzing business processes that are running on the website; 3. developing applications to improve competitiveness with similar websites.

2. Methods

Methods of Analysis and Design of Information Systems used in this paper is an object-oriented analysis and design (OOAD) with unified process using unified modeling language notation. OOAD is a method used to design a system that is analyzed and oriented to the object, and by using the objects that have been analyzed to solve a problem [6]. And data collection methods used in this paper is conducting interviews with the Board of Commissioners and direct observation to the website www.bali-go.com. This method is done by collecting, reading and reviewing the books and journals that are more theoretical and scientific literature related to the topic in question and conducted a search, gathering and learning information from a variety of books and websites, so it can be used as a theoretical basis.

3. Results and Discussion

3.1. Analysis the Current Business Process on the Previous Website

Customer bali-go.com visit the website, go to the home page of bali-go.com, customers choose the hotel, and then choose the room type. The system will check the availability of rooms, if the selected room is not available, then the customer will choose another hotel or another type of room. If the chosen room is available, then the customer will contact the sales via phone, fax, or email message. The sales will serve the customer according to the medium used to serve orders from the customer and the customer will make a booking in accordance with customer orders. After sales make a booking, the system will give a booking code, and the booking code will be sent to the customer.

Customer will check the booking on the website. The system will display the order information that has been made by the customer. After getting information about the booking, the customer will make payment to the booking. The sales will check payments made by the customer. When it is entered, the sales will send a booking confirmation via email to the customer, and the confirmation of the booking room to the hotel staff.

The hotel received a booking confirmation from the hotel room sales and performing checks on the confirmation. The sales made payments on hotel bookings using "Giro" to the hotel. The hotel will received the payment and receive information about customer pick up service from the sales.

Activity diagram for the current business process displayed in Figure 2 below.

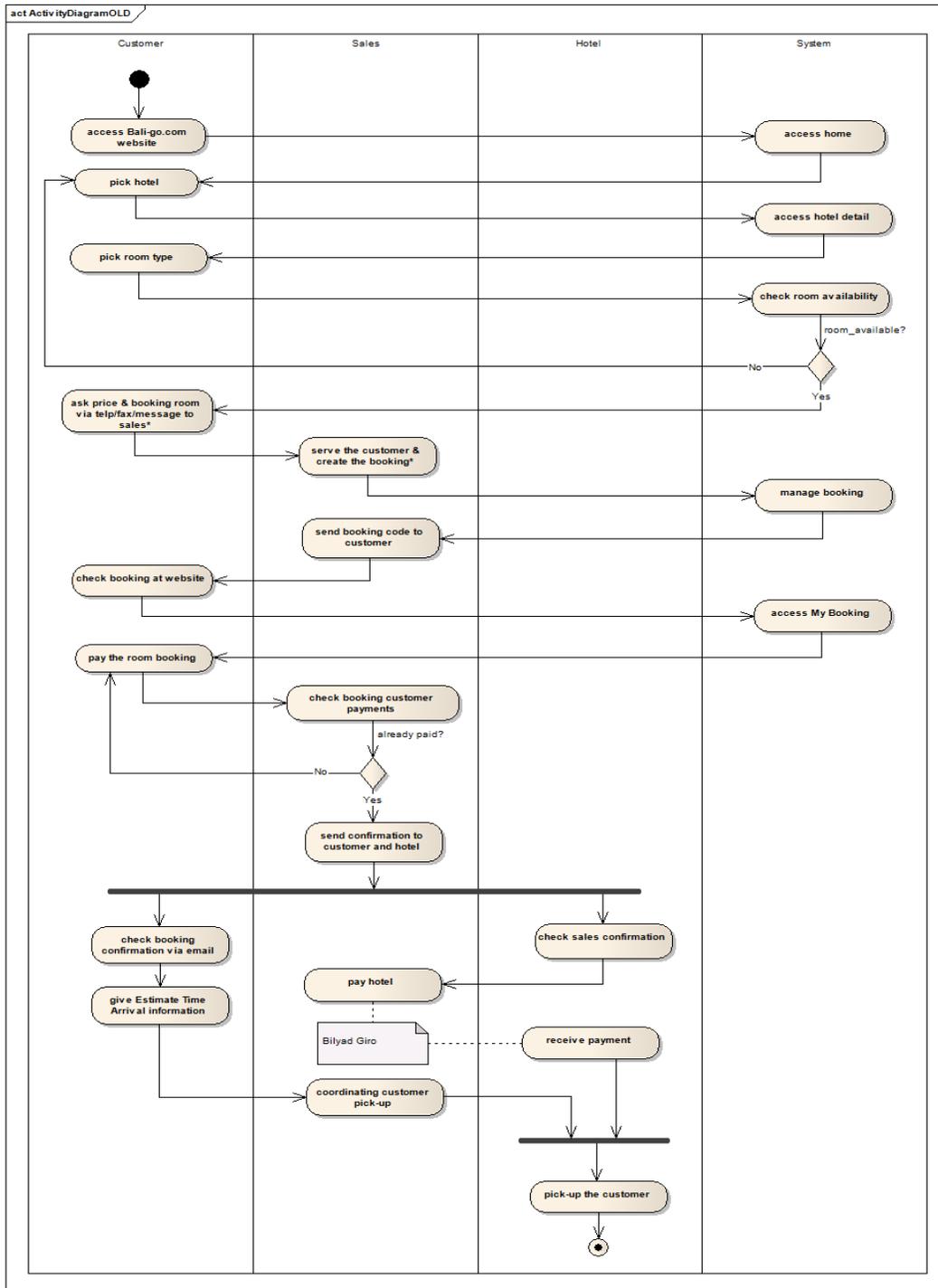


Figure 2. Activity Diagram for the Current Business Process via the Previous Website

Note : * = problematic activity on the system

3.2. Problem and Proposed Solutions

After analyzing the current business processes, then we can identify the problem and proposed solutions to develop/improve the websites bali-go.com (See Table 1).

Table 1. Problems and Solutions for the Company

No.	Problems	Solutions
1.	Every customer who wants to know the latest prices and to place an order, the customer must contact the sales through the medium of the telephone / fax / message. This will make the customer have to spend a little time just to find out prices and booking. The current system does not provide maximum service to customers	A system that can update at any price within the time specified by the company.
2.	Sales serving every customer who contacted them, and serve orders by the customer. It would be very time consuming for serving the customers.	A system that can directly serve the reservation made by the customer without having to contact the sales, so the customer can directly book the room.

We can do the Comparison of features from the old system (previous website) and the new system (new website), see Table 2.

Table 2. Comparison the Old and New System

No	Features	The old System	The New System	Description
1	Hotel Promotion	X	V	Information about price and hotel promotion
2	Culinary package	X	V	Information about prices Culinary Package is located on the Bali island
3	Travel Package	V	V	Information about the prices Travel Package located on the Bali island
4	Holiday Package	X	V	Information about the prices Holiday Package located on the Bali island
5	Multi-language	X	V	There is a language that can be changed on the website
6	Currency	X	V	There is a currency that can be converted on the website
7	Online transaction via Paypal	X	V	<i>Websites can handle transactions via Paypal</i>
8	Hotel testimony	X	V	<i>Users can provide testimonials / reviews on hotels that have their booking</i>
9	Transportation	V	X	Booking of transport to be used after arriving in Bali
10	Top Hotel	X	V	<i>List of hotels that are popular on bali</i>
11	Messages	V	V	<i>customer can send a message to admin</i>
12	Confirmation Payment	X	V	<i>customer can confirm the booking to admin</i>

Note :

- X → Not available
- V → Available

3.2. The New Design for Bali-go.com Website

Based on the problems outlined above, it is further proposed development of systems and procedures of the new website bali-go.com, depicted in Figure 3.

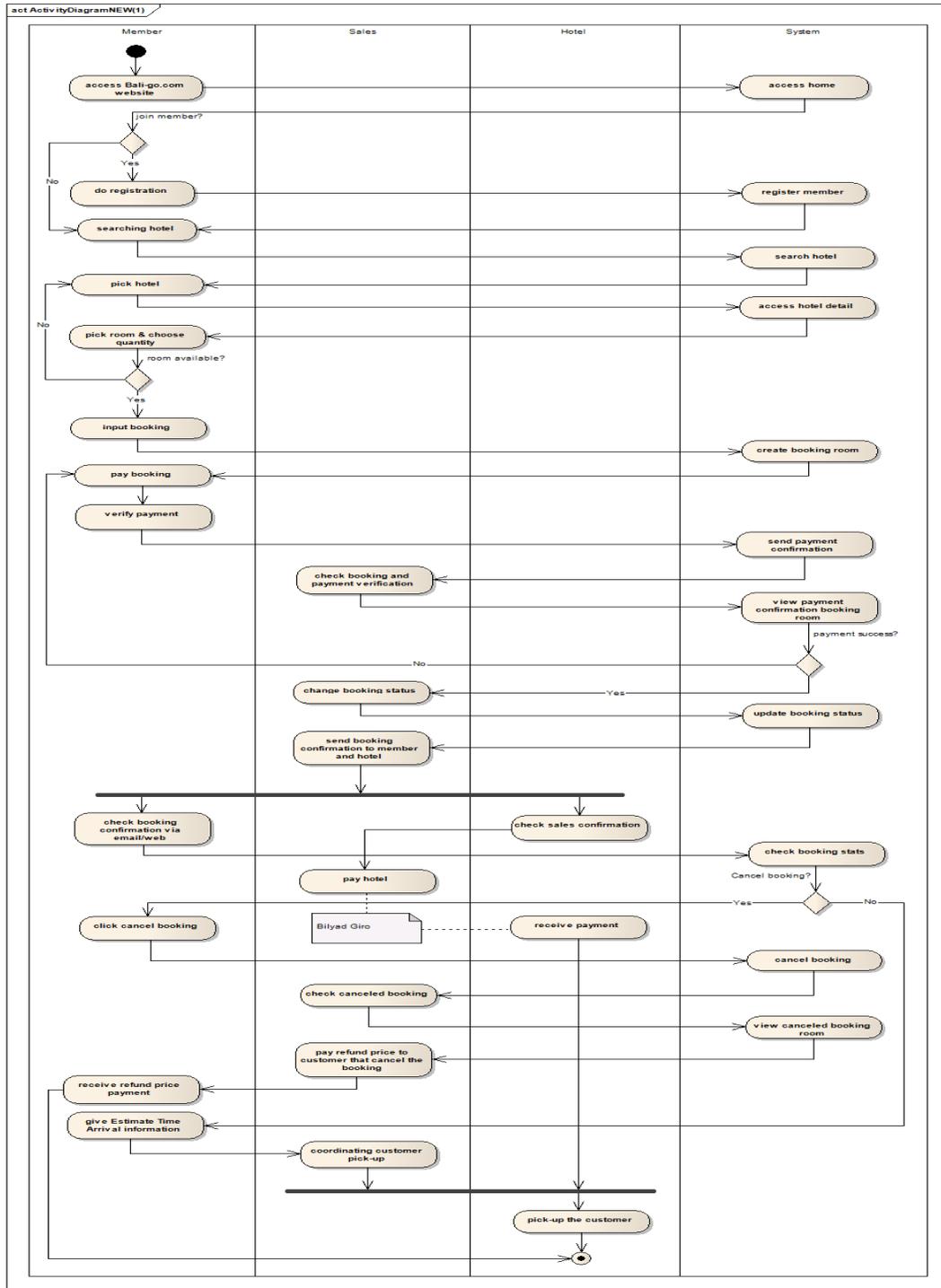


Figure 3. Proposed Activity Diagram for the New Web

Functionality of the e-commerce system built reflected through the use case diagram below. Each usecase reflect the functions or features of the system. Figure 4 presents the use case diagram for backend systems that will be accessed by the admin company bali-go.com. and Figure 5 reflects the functionality of the system from the members perspective. While figure 6 presents the use case diagram for sales department bali-go.com.

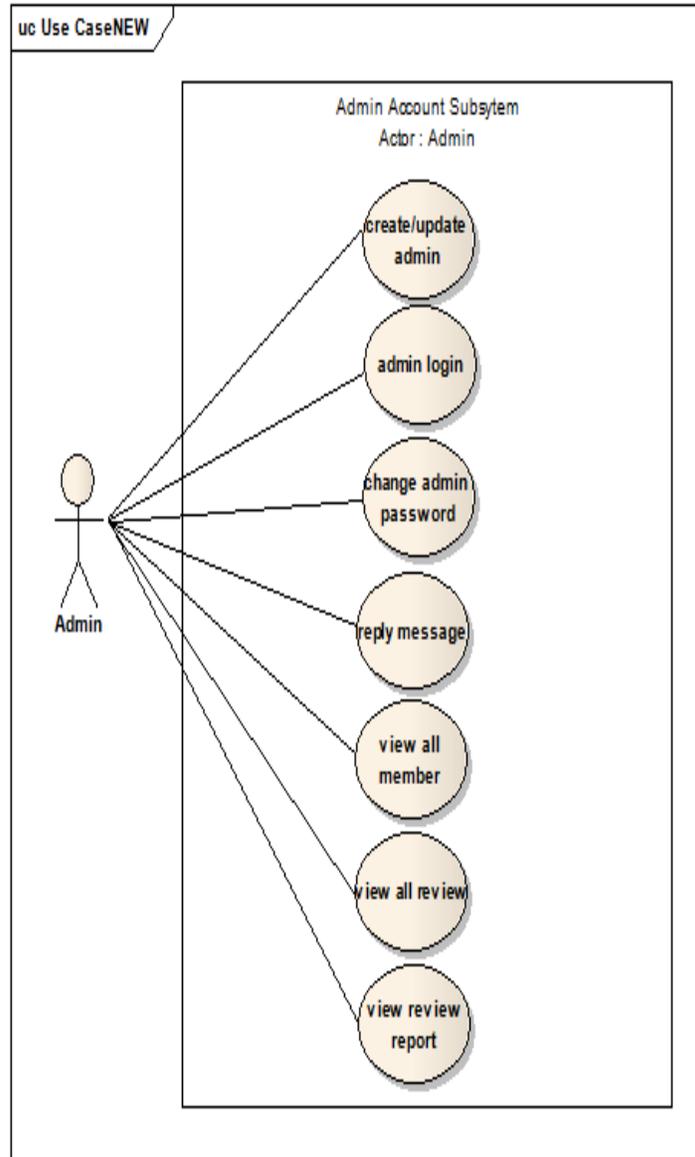


Figure 4. Use Case Diagram: Admin Account Subsystem

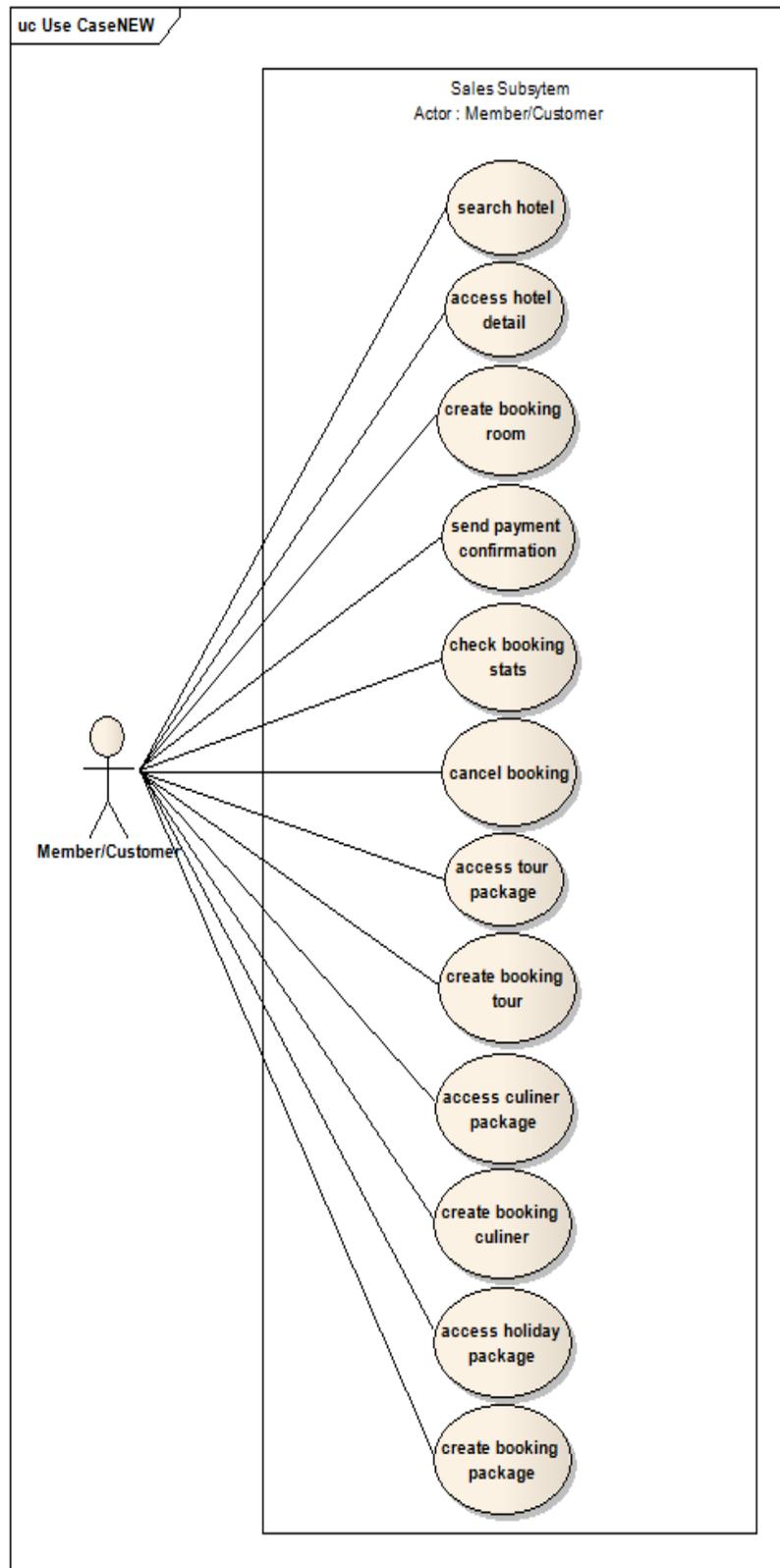


Figure 5. Use Case Diagram for Member Account Subsystem

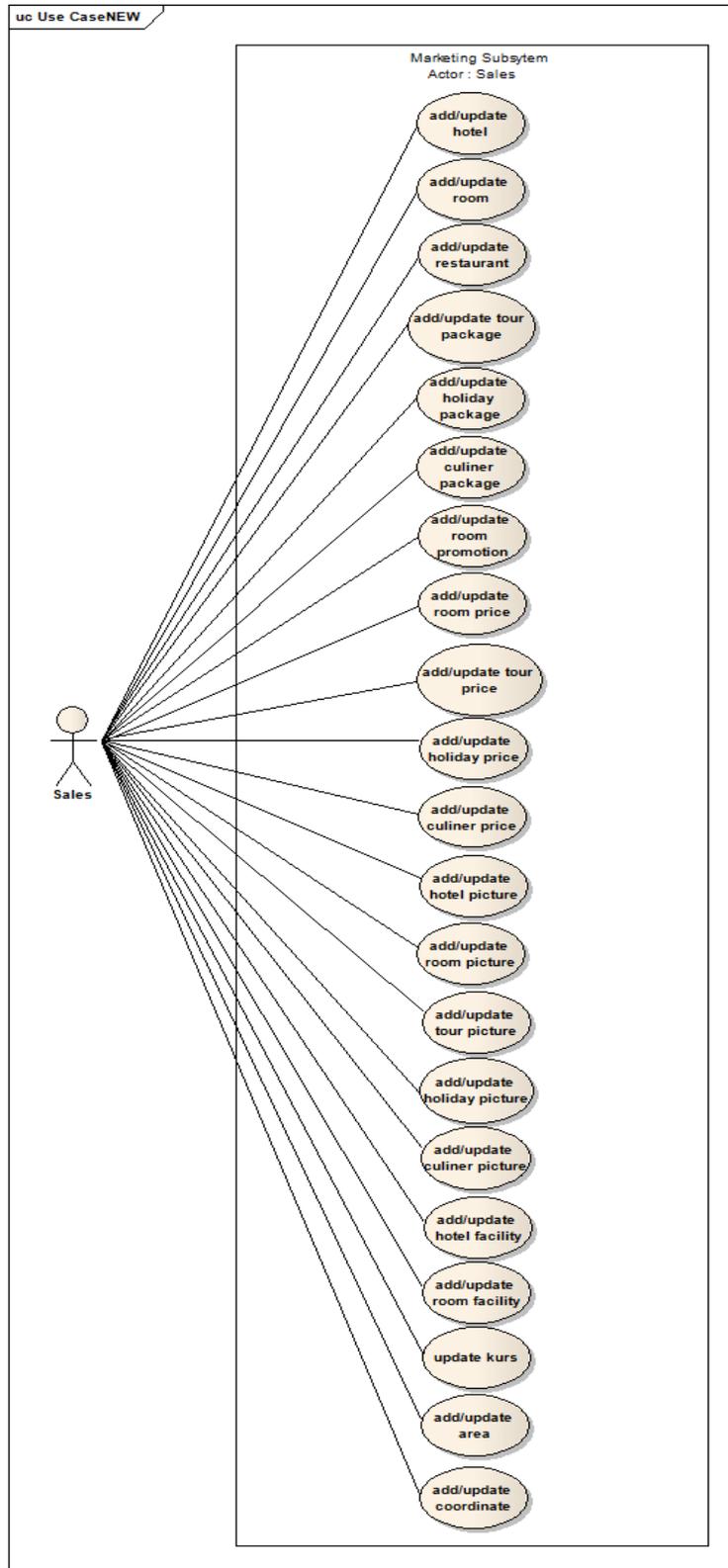


Figure 6. Use Case Diagram for Sales

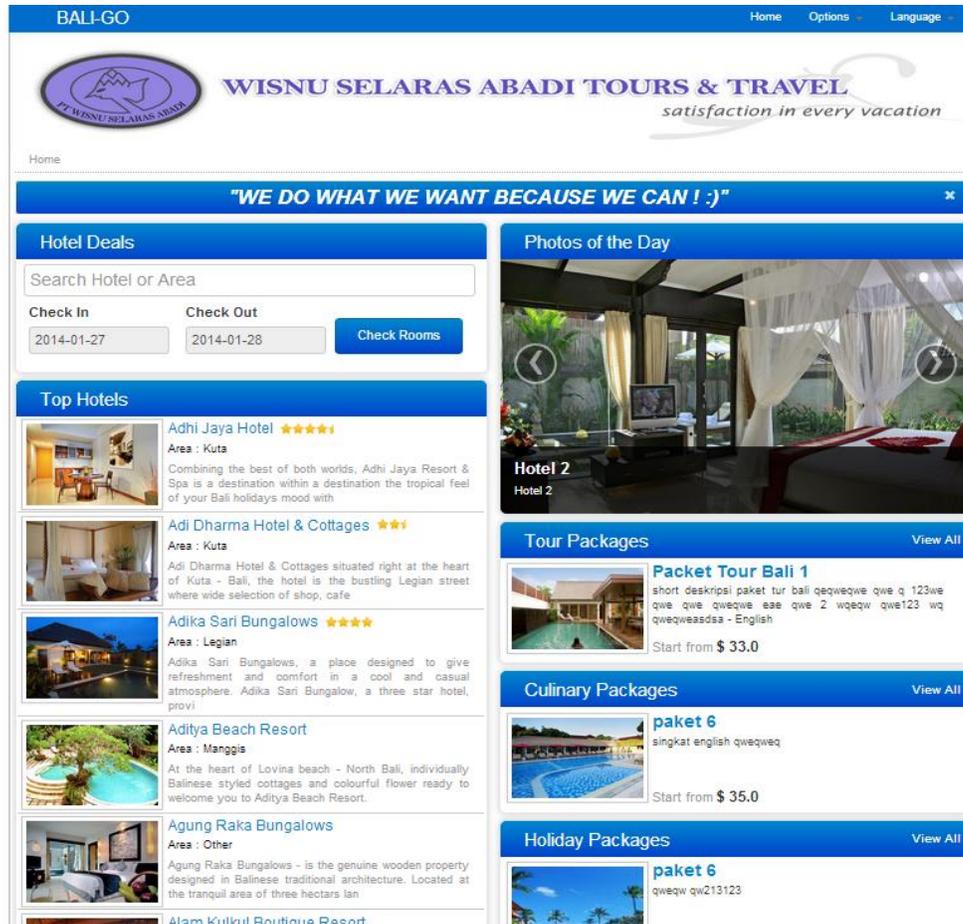


Figure 8. User Interface Front End

4. Conclusion

Based on the analysis and design that has been created, it can be concluded that the problems existed previously severely hampered the sales process in the company. The problems that exist in the company must be solved by (1.) The added facility setting prices and promos on the backend of website, then the price and promos can always be updated in accordance with the wishes of the company; (2.) By added facilities and booking functionality on the website, customers can book hotel rooms, tour packages, culinary and vacation packages directly on the website; (3.) By added a facility setting U.S. Dollar exchange rates and Indonesian Rupiah, facilitate the customers from Indonesia and the other country to know the price of hotel rooms, package tours, and vacation packages offered on the Website; (4.) By added a multi-language facility to provide convenience for customers in Indonesia and abroad to get the right information.

By the implementation of a system that has been designed, the following are suggestions that can improve the company's sales process:

- Develop systems to the other platforms such as mobile commerce, and so forth in accordance with technological developments.
- Having separate servers to support security company's website.

- Develop a system so that all parties are working together with the company, can be given permissions to add the products and description on the website.

References

- [1] R. K. Rainer and E. Turban, "Introduction to Information Systems: Supporting and Transforming Business", John Wiley and Sons, New Jersey, **(2009)**.
- [2] R. K. Rainer and H. Watson, "Management Information Systems Moving Business Forward", John Wiley and Sons, New Jersey, **(2012)**.
- [3] J. A. O'Brien and G. M. Marakas, "Introduction To Information System, McGraw-Hill, New York, **(2010)**.
- [4] "Research and Markets: B2C E-Commerce is gaining more ground world wide", <http://www.ystats.com/en/press/release.php?id=101>.
- [5] "Growth of e-commerce", <http://www.emarketer.com>.
- [6] J. W. Satzinger, R. B. Jackson and S. D. Burd, "Systems Analysis and Design in a Changing World", Cengage Learning, Boston, **(2012)**.