



# Application Information System Booking Space of Marine Cargo Ship

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**Abstract** - Application booking space based on website was an application to reserve a place of cargo on ship or called booking space, where customer can reserve cargo without having meet directly with the freight forwarder and carrier. A transaction was done from webs that have to provide convenience to the customers from the access. The method that used in the creation of websites booking space was a method of UML, using the programming language of MySQL and PHP. The result from the booking space of website creation was expected to provide facilities on reservation cargo to customer of processing booking space.

**Key words** : Booking Space, Freight Forwarder, Carrier, UML, Simple of booking

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## I. INTRODUCTION

In this era of technology, the Internet is a technology that has a wider coverage. Where the Internet is able to connect to every place indefinitely. Internet technology is currently able to provide a great share in all areas of business. In this case, a company engaged in cargo delivery services export-import (Freight Forwarder) which in the course of their business using the services of sea freight (shipping or carrier). A company engaged in cargo delivery services export-import (Freight Forwarding) there are still activities carried out manually as the manufacture of Shipping Instruction, manufacturing Bill Of Lading using excel, booking process space is done through the medium of e-mail and facsimile, checking the availability of space was conducted by telephone. Therefore, in order to provide the best service to the customer (shipper) felt it necessary to create an information system applications to support the business activities Use of the Internet and the information system application to be made is expected to provide a lot of convenience in the process of business activities in order to provide the best service to the customer (Shipper) and to improve the effectiveness and efficiency in the manufacture of a warrant shipment (Shipping Instruction), the process of booking a place (Booking space) on ships, the process of checking the availability of space, the manufacturing Bill Of Lading, and facilitate in making reports required by the company.

## II. LITERATURE REVIEW

The system is a group of elements that are closely related to one another, which function together to achieve certain goals [2]. Physical system is a series of elements that work together to achieve a goal [3][5]. Information is data that has been classified or processed or interpreted for use in the decision making process. Information processing system will process the data into information or process data in the form of useless becomes useful for those who receive [8]. Information is one of the important resources in an organization, used as a decision-making. In connection with the information to be of quality, and Grudnitski according to Burch, the quality of information given by (3) three factors, namely:

1. *Accurate (accurate)*  
*Information should be free from mistakes and not biased or misleading.*
2. *Timely (timeless)*  
*The information is up to the recipient must not be late.*
3. *Relevant (relevance)*  
*Such information has benefits for users.*

Freight forwarder can be regarded as the processing of documents and transport services on behalf of shipper or consignee and perform routine activities such as stuffing or unstuffing cargo, storage or warehousing, arranging local transport, to pay ocean freight [1]. The main role of the freight forwarder is a mediator shipper and consignee [7].

Object-oriented analysis or Object Oriented Analysis (OOA) is a stage to analyze the specification or the need for systems to be built with object-oriented concepts. Object oriented design or Object Oriented Design (OOD) is an intermediate stage to map specifications or system needs to be built with the concept of object-oriented modeling design to make it more easily implemented with object-oriented programming [6]. Object-oriented modeling is usually stated in the documentation of the software using object oriented modeling tools, including adala UML (Unified Modeling Language) [4]. OOA (Object Oriented Analysis) and OOD (Object Oriented Design) in the process of repeated often have limitations that vague, so the two stages is often called OOAD (Object Oriented Analysis and Design) or in Indonesian means Analysis and Object-Oriented Design.

UML (Unified Modeling Language) is a standard widely used language in the world to define the industry requirements, make and design, as well as describe the architecture of object-oriented programming. UML emerged for their visual modeling needs to specify, describe, construct, and documentation of the software system. UML modeling functions to perform. Below are some of the types and definitions of the UML diagram, as follows:

#### A. USECASE

Is modeling for behavior (behavior) information system that will be created. Use Case describes an interaction between one or more actors with the information system will be created

#### B. ACTIVITY DIAGRAM

Is a drawing that explains the workflow or activity of a system or business process or menu on the software.

#### C. SEQUENCE DIAGRAM

Describing the behavior of objects in use case by describing the life time of the object and the message sent and received between objects.

#### D. CLASS DIAGRAM

Is a structure of the system in terms of defining the classes that will be created to build the system. The classes that exist in the structure of the system must be able to perform these functions in accordance with the needs of the system so that the software maker or programmer can create classes in the software program in accordance with the design class diagram.

### III. METHOD OF DESIGN

#### 3.1 OLD ANALYSIS SYSTEM

Process activity currently is still done manually as in the manufacture of Shipping Instruction, booking space, check availability of space and also making reports of cargo shipping, with its activities :

1. *The shipper create and send shipping instruction by email or fax to the operational part.*
2. *The operational part of entering data into form shipping instruction form excel and molded into the company's letterhead that will be delivered to the cruise as a precondition for booking space.*
3. *The operational part of the cruise confirmed by telephone to obtain Booking Confirmation as proof of availability of space.*
4. *The cruise will leave Booking Confirmation if space is available and if not then Bookingan rejected the notified via email or fax.*
5. *Booking Confirmation obtain operational part of the cruise printed and sent to the shipper.*
6. *The shipper after obtaining Booking Confirmation used to take the container and seal (seal) in the warehouse then do the stuffing upon completion provide such data to be made to the operational part of the bill of lading.*
7. *The operational part of entering data into the form of bill of lading in the form of Excel and print them after receiving confirmation from the shipper and of course after the ship departed from the port.*

#### 3.2 NEW ANALYSIS SYSTEM

The proposed system to facilitate customers, the operational part and the cruise booking process in space to provide fast service and better serve customers and generate reports as required by the company in a single web-based application. The customer register and make booking online space to the admin. Then the operation can be viewed booking space which is then the admin section will issue a booking confirmation or give as a sign that the booking is accepted, then the customer's part to update the data booking to be received by the operational section to print the bill of lading

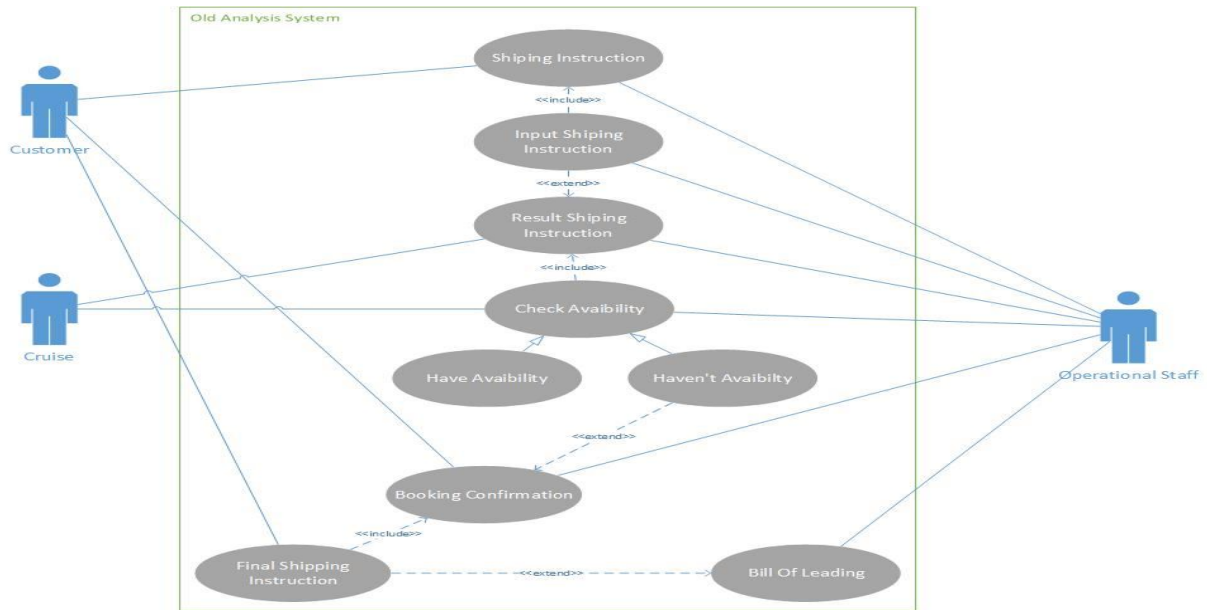


Fig 1. Old Analysis System

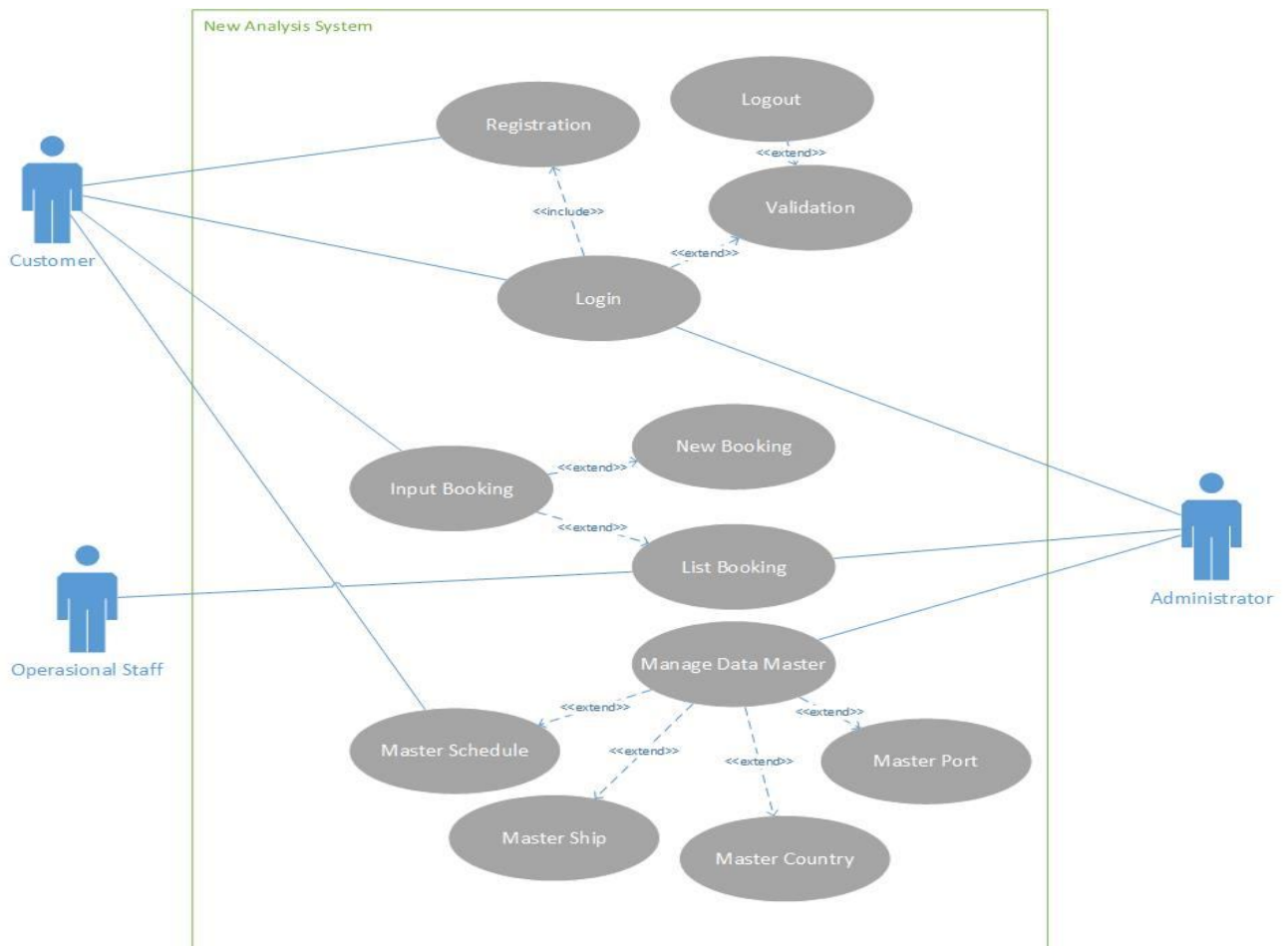


Fig 2. New Analysis System

3.3 DATABASE STRUCTURED

TABLE 1. M\_KAPAL

Nama Field	Tipe
ID_KAPAL	Int (11)
NOMOR_KAPAL	Varchar (15)
NAMA_KAPAL	Varchar (50)
MUATAN	Int (11)

TABLE 4. M\_TABEL

Nama Field	Tipe
JENIS	Varchar (50)
KODE	Varchar (10)
URAIAN	Varchar (100)

TABLE 5. M\_TRADER

Nama Field	Tipe
TRADER_ID	Int (11)
NAMA	Varchar (70)
ALAMAT	Text
NPWP	Char (15)
TELP	Varchar (20)
FAX	Varchar (20)
BADAN_USAHA	Varchar (20)
EMAIL	Varchar (255)
AJU_BOOKING	Int (11)
CREATE_DATE	Datetime
STATUS	Tinyint (4)

TABLE 7. T\_BOOKING\_LOG

Nama Field	Tipe
BOOKING_ID	Varchar (26)
WAKTU	Datetime
KEGIATAN	Varchar (255)
CATATAN	Text
USER_ID	Int (11)

TABLE 8. T\_JADWAL

Nama Field	Tipe
ID_JADWAL	Int (11)
TGL_BERANGKAT	Datetime
TGL_TIBA	Datetime
ID_PEL_TIBA	Char (5)
ID_PEL_BRKT	Char (5)
ID_KAPAL	Int (11)

TABLE 9. T\_USER

Nama Field	Tipe
USER_ID	Int (11)
USER_NAME	Varchar (20)
PASSWORD	Varchar (32)
STATUS_USER	Tinyint (4)
LOGIN	Datetime
LOGOUT	Datetime
TRADER_ID	Int (11)
NAMA	Varchar (100)
TELP	Varchar (20)
EMAIL	Varchar (50)

TABLE 2. M\_NEGARA

Nama Field	Tipe
NEGARA_ID	Char (2)
NEGARA_DETAIL	Varchar (50)

TABLE 3. M\_PELABUHAN

Nama Field	Tipe
PELABUHAN_ID	Char (5)
PELABUHAN_DETAIL	Varchar (100)
DAERAH_DETAIL	Varchar (100)
NEGARA_ID	Char (2)

TABLE 6. T\_BOOKING

Nama Field	Tipe
BOOKING_ID	Varchar (26)
TANGGAL_AJU	Datetime
JUMLAH_KONTAINER	Int (11)
BERAT_KONTAINER	Int (11)
JENIS_KONTAINER	Varchar (5)
SIZE_KONTAINER	Varchar (50)
SPACE	Varchar (50)
KOMODITAS	Text
DESKRIPSI	Text
STATUS	Char (4)
CHK_SYARAT	Varchar (255)
TANGGAL_SI	Date
TANGGAL_DO	Date
TANGGAL_BL	Date
CREATED	Timestamp
UPDATED	Datetime
ID_JADWAL	Int (11)
TRADER_ID	Int (11)
USER_ID	Int (11)
PENANGGUNG_JAWAB	Varchar (125)
TELP_PENANGGUNG_JAWAB	Varchar (20)
EMAIL_PENANGGUNG_JAWAB	Varchar (50)
NAMA_PENERIMA	Varchar (150)
ALAMAT_PENERIMA	Text

TABLE 10. USER\_LOG

Nama Field	Tipe
USER_ID	Int (11)
WAKTU	Timestamp
KEGIATAN	Varchar (255)

TABLE 11. T\_USER\_ROLE

Nama Field	Tipe
USER_ID	Int (11)
ROLE	Char (2)
KK_ID	Char (6)

#### IV. RESULTS AND DISCUSSION

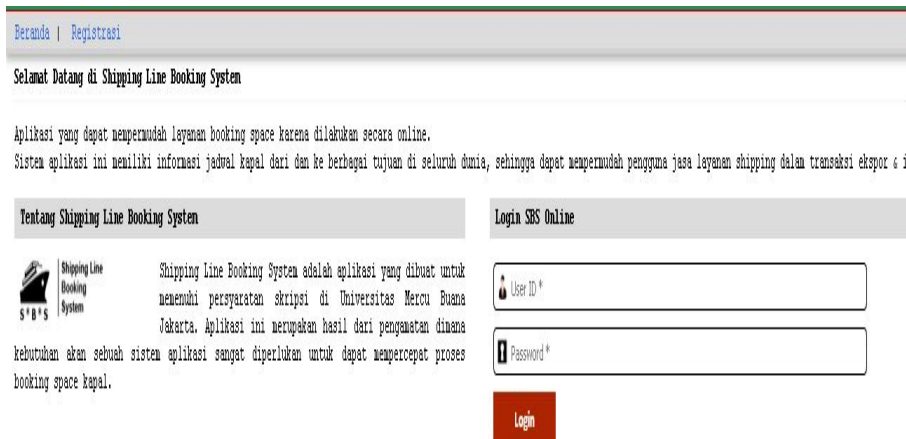


Fig 3. Form Login Users

On this page there is a menu veranda and registration to register for a new user and login form for users who have registered and have a user id and password. Login Form the main page is used by the user to be able to sign in and access the user page next

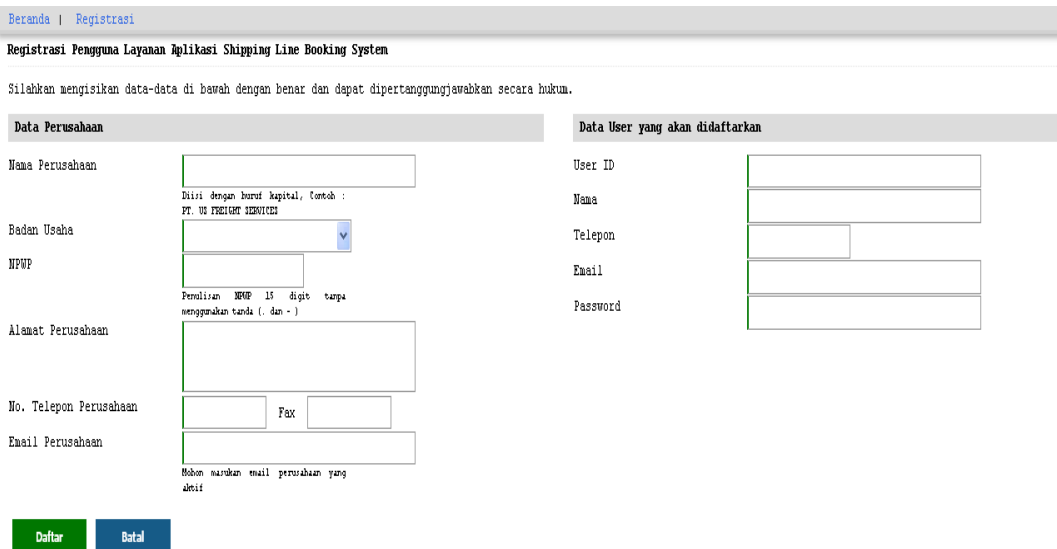


Fig 4. Form Registration

The registration page is a page where customers / new user entering company data that is useful for obtaining user id and password needed to access the user page.

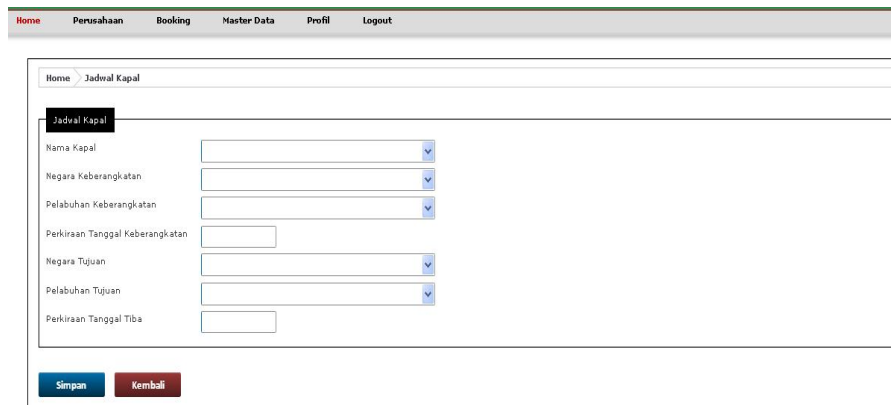


Fig 5. Form Master Schedule of Ship

## V. CONCLUSIONS

Based on the results of tests performed on this application can be summarized are:

1. *Creating a booking app space information system is intended to improve service to customers. The services to be provided to the customer that is before customers make an online booking, customers must first register into the system which then examined by a cruise. If the cruise approve the registration of the customers get a user id and password. With user id and password obtained customers can log into the system and be able to do booking a space online to obtain a booking confirmation made by the cruise.*
2. *Make a booking space information system applications that facilitate in making the Bill of Lading, the required reports and monitor the number of cargo shipping that is part of the customer on the booking space melakukan renewal of the reforms made, the operational part can directly process the bill of lading. From booking activities such space operations section to print bills of lading, shipping parts can print shipping instruction and parts customers can print out the booking confirmation. With this application is also part of a cruise can monitor the number of cargo shipments by looking at the status bar located in the master schedule for the vessel form.*

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