# Poliwangi Jinggo Hotel reservation system as a pilot project for Teaching Factory (TEFA)

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Abstract: Poliwangi Jinggo Hotel is specially addressed for educational purpose which will be used as a Teaching Factory (TEFA), so in other words this hotel will go public in near future. To support the process and everything related to hotel operation, as a baby step it is necessary to create hotel management system. The system was designed using Windows-based application (Bistone Hotel Management System). Subsequently, the research and development were carried out based on waterfall model (requirements analysis and definition, system and software design, implementation and unit testing, integration and unit system testing, and operation and maintenance). As for the evaluation, the room reservation system was measured by quantitative approach using 30 respondents. The results obtained in this study were hotel reservation system which included setting room types, room rates, facilities, room numbers, guest input, making reservations, and printing invoices/receipts for the initial process. Based on USE Questionnaire, the results showed that the percentage of usefulness 81.2%, ease of use 80.2%, ease of learning 80%, and satisfaction 76%. Therefore, it can be concluded that Poliwangi Jinggo Hotel room reservation system is feasible to use, together with some developments and operation & maintenance process.

Keywords: Poliwangi Jinggo Hotel, reservation system, teaching factory, waterfall model

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### Introduction

The development of the hotel industry has been increasing rapidly along with the growth of tourism destinations in Banyuwangi, even though the Covid 19 pandemic caused the drop in almost every tourism sector, including hospitality industry. However, the government policies regarding New Normal Tourism and CHSE-based tourism, especially for the hotel industry, provided like a breath of fresh air in term of recovering the tourism economy (Mutiarin et al., 2021), so that the hotel industry in Banyuwangi during the Christmas and New Year holidays experienced a significant increase in 2023.

The hospitality industry, like any other business, opens up socio-economic opportunities for both owners and customers. This kind of opportunities are beneficial for providing hospitality services to customers such as travelers, foreigners, businessmen, tourists and visitors (Bemile et al., 2014) and (Kotler et al., 2016). Poliwangi Jinggo Hotel or commonly called Jinggo Hotel is an educational hotel which was inaugurated by the Ministry of Research Technology and Higher Education on 18 February 2017. This fourth floor hotel has a total of 53 rooms and equipped with several facilities such as a laundry, café and meeting room. Moreover, it also surrounded by the view of rice fields and Ijen mountain, which were built by emphasizing Banyuwangi local wisdom and to be specific would be used for practicum activities by all the students in Tourism Business Management. As shown in Figure 1, the room category of Jinggo Hotel, Politeknik Negeri Banyuwangi, consist of 2 types, standard superior and twin room.



(a) (b) **Figure 1(a).** Superior standard room **(b).** Standard twin room

Along with the development of the industrial revolution 4.0 and society 5.0, vocational students are required to follow and also take part in these developments, especially for the one in hospitality industry, so that Jinggo Hotel will become the pioneer of the TEFA (Teaching Factory) in Politeknik Negeri Banyuwangi. TEFA is one of the learning strategies that designed to enhance competencies and skills of the students, especially in the vocational education. In many various sources, TEFA is always associated with practical learning according to the real conditions or working environment in the industry. Focusing to the real working environment is the most important TEFA requirement, so that vocational education institutions should work together with the industry, both for products and services to bring in quality graduates (Triyono, 2012). In addition, TEFA development needs to be supported by the development of hotel management organizations (Regev, 2017) and (Westcott & Anderson, 2021).

Tourism Business Management, Politeknik Negeri Banyuwangi has done many cooperation agreements with several star hotels in Banyuwangi such as Kokoon, eL-Royale, Santika, Aston, and Luminor simultaneously as the part of student human resources and *Tri Dharma Perguruan Tinggi* activities. Referring to these hotels, Poliwangi Jinggo Hotel as TEFA of Politeknik Negeri Banyuwangi has been made some preparations in term of the infrastructure, however the hotel information system still has not built yet. So far, the reservation process is still carried out manually so that the hotel reservation process is an activity where a customer comes to the hotel to order a room and stay in the room that has been booked (Prabowo & Retnoningsih, 2017). Building a system or application can simplify the reservation process and complies with hotel industry standards. Some hotels also developed web-based applications for room reservation systems, like in these research (Syahab & Kuway, 2018) and (Dewi & Suminten, 2019).

In this study, the research team focused in designing the reservation system for Jinggo Hotel room based on the Bistone Hotel Management System application, starting from room type settings, room rates, services, guest input, reservation, and printing out invoices and receipts. It should be done properly since Jinggo Hotel will be operated as a TEFA in Politeknik Negeri Banyuwangi this year. Several previous studies were used as references related to planning the hotel room reservation information system, such as in these papers (Prasetyo, 2015), (Akazue, 2016), and (Muliadi et al., 2020).

# Methodology

This research is conducted using the waterfall model, to be specific there are five stages in the Waterfall Method, such as Requirements Analysis and Definition, System and Software Design, Implementation and Unit Testing, Integration and System Testing, and Operation and Maintenance (Sommerville, 2013). The next step is to evaluate the reservation system after being tested using the USE Questionnaire involving 30 respondents from academia and students who are familiar with hotel/ front office department information systems.



Figure 2. Waterfall model (Sommerville, 2013)

According to the Figure 2 which waterfall model consists of the five steps, it can be described as follows:

### **Requirement Analysis and Definition**

Before carrying out software development, a developer should know and understand about the information needs of users related to the software. The method of information collection can be obtained in many various ways, including discussions, observations, surveys, interviews, and so on. The information obtained are processed and analysed in order to acquire complete data or information regarding the specification of user requirements, as for the software to be developed.

### System and Software Design

Information regarding the requirements specifications from the Requirements Analysis stage is analysed subsequently, to be implemented in the development design. Design planning is carried out to provide a completed "big picture" of what must be done. This stage will also help developers to prepare hardware requirements in making the overall software system architecture.

### Implementation and Unit Testing

The implementation and unit testing are the programming stages. Making the software is divided into small modules which will later be combined in the next stage. In addition, at this stage testing and checking are also carried out on the functionality of the modules that have been made, whether they meet the desired criteria or not.

### Integration and Unit System Testing

After all the units or modules that have been developed and tested, then the implementation stage is integrated into the overall system. Later when the integration process is completed, further inspection and testing of the system is carried out thoroughly to identify possible system failures and errors.

### **Operation and Maintenance**

In the final stage of this Waterfall Method, the finished software is operated by the user and maintenance carried out subsequently. Maintenance allows developers to make improvements to errors that were not detected in the previous stages. Maintenance includes repairing errors, repairing the implementation of system units, and upgrading and also adjusting the system as needed.

In this study, the software used by researchers to design Jinggo Hotel room reservation system is the Bistone Hotel Management System, because the system design is still offline-based which includes setting unit room type, room rate, services, room/beds, and reservation.



Figure 3. Use case diagram of the application content

Based on Figure 3, a simple logic can be seen in this reservation system which will be designed and made for the development of the hotel system here. In this case, the admin also acts as a receptionist considering that the application is designed to ease to use and reliable.

# **Results and Discussions**

### Results

Based on the discussions, observations, surveys, and interviews with several human resources managers and related parties such as the Head of the Laboratory and the Head of the Jinggo Hotel, applying the waterfall model will produce several results in term of planning and development of the reservation system, as follows:

### 1. Login page

First of all, the user (receptionist) must log in to the system before entering the start page. Based on Figure 4, for the default user, fill in Admin and leave the password blank then click login to enter the start page because the system is still in the design and development stage.

Bistone Hotel M	1anagement System - Full Board Version 🛛 🗙
	Bistonesoft Hotel Management System Full Board Version
User	Admin
Password	
The definition	ault user is Admin, and no password
	Login

Figure 4. Login page

### 2. Setting Room Type

After entering the home/landing page, the first step is to set the room type, add room type and enter information according to the needs and availability of Jinggo hotel rooms (Standard Room and Twin). In Figure 5, the dialog box displayed for Add RoomType which contains Name, Max AdultNo., Max Child No., Max Infant No., Code, Bed Type, and Smoking Allowed.

🏠 Bistone Hotel	Management	System - Full Board Ver	sion					- Ø ×
Home Rep	orts Admin	istration Languages	Help					
Reservations Reservation M	Room/Bed Search Center Ianagement	Guests Room Types	coms/Beds Rates Management	s Change My Lock Password System User Control Panel				
Room Types		Room Types						
Room Types		Name	Code	Max Adult No.	Max Child No.	Max Infant No.	Bed Type	Smoking Allowed
		Standard Twin	ST	2	1	1	Twin Bed	No
				Bame *	Coge Bed Type Smoking Alon	ed No		
		2 Record(s)						
		Add	Edit Delete					
		Notes Laundry Items		(	×			
								Ŷ
Poom Type		Edit						

Figure 5. Room type page

### 3. Setting Room/Beds

Figure 6 show the setting room or beds. This menu is similar to the room types, the difference is that on this menu you will be given a room name and room number. Jinggo Hotel has 5 standard type rooms named Jinggo 1-Jinggo 5 (Room Number: 201-205) which is located on the second floor, this room is often called the VIP Room so that the system also writes it as Superior Room. Meanwhile, on the third and fourth floors there are 48 rooms with the type of twin room and in this system they are named Sayu Wiwit 1-Sayu Wiwit 24 (Room Number 301-325) for the third floor, and Tawang Alun 1-Tawang Alun 24 (Number 401-425) for the fourth floor.

m,Bed Hame Hame Jango 01 Jango 02 Jango 03 Jango 03 Jango 04 Jango 03 Sayu Wint 01 Sayu Wint 02 Sayu Wint 04 Sayu Wint 04 Sayu Wint 04 Sayu Wint 05 Sayu Wint 05 Sayu Wint 05 Sayu Wint 05 Sayu Wint 07	Code 3201 3202 3203 3204 3205 SW301 SW302 SW303	Room No.           201           202           203           204           Add Room/Bed	Room Type Superior Room Superior Room Superior Room Superior Room	Max Adult No. 2 2 2 2 2	Max Child No. 2 2 2 2	Max Infant No. 1 1	Bed Type Single Bed Single Bed	Smoking Allowed No No
Jinggo 01           Jinggo 02           Jinggo 03           Jinggo 03           Jinggo 05           Sayu Writt 01           Sayu Writt 02           Sayu Writt 03           Sayu Writt 04           Sayu Writt 05           Sayu Writt 05           Sayu Writt 05           Sayu Writt 05           Sayu Writt 05	3201 3202 3203 3204 3205 SW301 SW301 SW302 SW303	201 202 203 204 Add Room/Bed	Superior Room Superior Room Superior Room Superior Room	2 2 2 2	2 2 2 2	1	Single Bed Single Bed	No No
Search(#5) //ngp0 02 //ngp0 03 //ngp0 04 //ngp0 05 Sayu Whitt 01 Sayu Whitt 02 Sayu Whitt 03 Sayu Whitt 03 Sayu Whitt 04 Sayu Whitt 05 Sayu Whitt 05 Sayu Whitt 07	J202 J203 J204 J205 SW301 SW302 SW303	202 203 204 Add Room/Bed	Superior Room Superior Room Superior Room	2 2 2	2 2	1	Single Bed	No
2 Jinggo 0.3 2 Jinggo 0.4 3 Jinggo 0.5 2 Sayu Wintt 0.1 2 Sayu Wintt 0.2 2 Sayu Wintt 0.4 2 Sayu Wintt 0.5 2 Sayu Wintt 0.5 2 Sayu Wintt 0.7	J203 J204 J205 SW301 SW302 SW303	203 204 Add Room/Bed	Superior Room Superior Room	2	2	1		
Jinggo 04 Jinggo 05 Sayu Winti 01 Sayu Winti 02 Sayu Winti 03 Sayu Winti 04 Sayu Winti 05 Sayu Winti 05 Sayu Winti 05	3204 3205 SW301 SW302 SW303	204 Add Room/Bed	Superior Room	2		*	Single Bed	No
Jinggo 05 Sayu Wimit 01 Sayu Wimit 02 Sayu Wimit 03 Sayu Wimit 03 Sayu Wimit 05 Sayu Wimit 05 Sayu Wimit 06	J205 SW301 SW302 SW303	Add Room/Bed			2	1	Single Bed	No
Sayu Winit 01 Sayu Winit 02 Sayu Winit 03 Sayu Winit 04 Sayu Winit 05 Sayu Winit 06 Sayu Winit 06	SW301 SW302 SW303				×	1	Single Bed	No
Sayu Wiwit 02 Sayu Wiwit 03 Sayu Wiwit 04 Sayu Wiwit 05 Sayu Wiwit 05 Sayu Wiwit 07	SW302 SW303					1	Twin Bed	No
Sayu Winit 03 Sayu Winit 04 Sayu Winit 05 Sayu Winit 06 Sayu Winit 07	SW303	Name *		Coge		1	Twin Bed	No
Sayu Winit 04 Sayu Winit 05 Sayu Winit 05 Sayu Winit 05						1	Twin Bed	No
Sayu Wiwit 05 Sayu Wiwit 06 Sayu Wiwit 07	SW304	Room No.		Koom Type +	·	1	Twin Bed	No
Sayu Wiwit 06 Sayu Wiwit 07	SW305	Max Adult No. 0		Bed Type	Standard Twin	1	Twin Bed	No
Savu Wiwit 07	SW306	C.				1	Twin Bed	No
	SW307	Max Child No. 0		Smoking Allowed	No 💌	1	Twin Bed	No
Sayu Wiwit 08	SW308					1	Twin Bed	No
Sayu Whit 09	SW309	Max Infant No. 0				1	Twin Bed	No
Sayu Wiwit 10	SW310			Cancel		1	Twin Bed	No
53 Record(s)	Edit De	elete						

Figure 6. Room/ beds page

### 4. Setting Room Rate

The next step is to set the room rates, based on Figure 7 the prices are categorized into two, Rack Rate (week day prices) and the Best Available Rate (BAR) Rate (weekend prices), because the prices listed can still be changed according to policies and needs.

Bistone Hotel Management	System - Full Board Version						- 0
Home Reports Admini	stration Languages Help						
eservations Reservation Management	Guests Room Rooms/Beds Hotel Manager	Room Rates Services Passwor User Co	dy Lock d System antrol Panel				
om Rates	Rate Plan						
Add Room Rate 🥖 👄	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standard Twin				9/2/2020	9/3/2020	9/4/2020	9/5/2020
BAR Rate				1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00
BAR Rate	9/6/2020	9/7/2020	9/8/2020	9/9/2020	9/10/2020	9/11/2020	9/12/2020
🕒 🚰 Rack Rate	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00
	9/13/2020	9/14/2020	9/15/2020	9/16/2020	9/17/2020	9/18/2020	9/19/2020
	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00
	9/20/2020	9/21/2020	9/22/2020	9/23/2020	9/24/2020	9/25/2020	9/26/2020
	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00						
	9/27/2020	9/28/2020	9/29/2020	9/30/2020	10/1/2020	10/2/2020	10/3/2020
	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	16: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00	1G: Rp.250,000.00; Rp.200,000.00 Rp.150,000.00; Rp.130,000.00
	10/4/2020	10/5/2020	10/6/2020	10/7/2020	10/8/2020	10/9/2020	10/10/2020
	16: Rp.250.000.00:	16: Rp.250.000.00					
Room Pater	Update Rate						

Figure 7. Room/ beds page

5. Input Guest

The following stage is guest input, in which there are some information such as Name, Gender, Code, Company, Email, Phone1, Phone2, Identifier, and Guest Type. Figure 8 showed a list of guest names as a form simulation of initial data input regarding the system.

n Bistone Ho	lotel Management	System - Full Be	oard Versi	ion									-	٥
Home F	Reports Admin	istration Lan	nguages	Help										
Reservations Reservations	s Room/Bed Search Center on Management	Guests Ro Typ	oom Roo pes Hotel N	ms/Beds Ro Ra Management	om Services tes	Change My Password System User Control Panel								
Guests		Guests					1			1	1			
Name		Name			Gender	Code	Company	Email	Dear	Phone1	Phone2	Identifier	Guest Type	Balance
		Aditya Wiralatie	ef Sanjaya	S.ST., M.ST	Male	20082600001	Politeknik Negeri Banyuwangi	aditya.wirasan@poliwangi.ac.i	Aditya Wiralatief Sanj	082257717117	,	0006068905		Rp.000
<u>em</u> ail		Aprilia Divi Yusti	tita, S.Si., I	M.Si.	Female	20082600002	Politeknik Negeri Banyuwangi	aprilia.divi@poliwangi.ac.id	Aprilia Divi Yustita	082231152645	5	0025049201		Rp.000
Phone	· · · · ·	Auda Nuril Zazil	lah, S. Si.,	M. Sc.	Female	20082600003	Politeknik Negeri Banyuwangi	audanuril@polwangi.ac.id	Auda Nuril Zazilah	085732868153	3	0031089401		Rp.000
-india.		Ayu Purwaningt	ityas, S.Hu	it., M.M	Female	20082600004	Politeknik Negeri Banyuwangi	ayu.purwaningtyas@poliwangi	Ayu Purwaningtyas	081232755480	)	0028038707		Rp.000
	Search(F5)	Ayu Wanda Feb	brian, S.Pa	ar., MBA.	Female	20082600005	Politeknik Negeri Banyuwangi	ayuwanda@polwangi.ac.id	Ayu Wanda Febrian	085645799016	5	0004029201		Rp.000
		Eka Afrida Erma	awati, S.Po	d, M.Pd.	Female	20082600006	Politeknik Negeri Banyuwangi	ekaafrida22@polwangi.ac.id	Eka Afrida Ermawati	08113502207		0022028804		Rp.000
		Firda Rachma A	Amalia,S.E,	M.M.	Female	20082600007	Politeknik Negeri Banyuwangi	firdaamalia11@poliwangi.ac.id	Firda Rachma Amalia	087812975949	9	0011119001		Rp.000
		I Putu Sudhyan	na Mecha, S	S.Kom., M.Par.	. Male	20082600008	Politeknik Negeri Banyuwangi	sudhyanamecha@poliwangi.ac	I Putu Sudhyana Med	081231571175	5	0005089104		Rp.000
		Jemi Cahya Adi	i Wijaya, Si	E.,MM.	Male	20082600009	Politeknik Negeri Banyuwangi	jemi.cahya@poliwangi.ac.id	Jemi Cahya Adi Wijayi	085258400495	5	0029088702		Rp.000
		Kanom, S.Pd., I	M.Par.		Male	20082600010	Politeknik Negeri Banyuwangi	kanom@poliwangi.ac.id	Kanom	081933122371		0014088603		Rp.000
		Masetya Mukti,	S.ST.,M.M	1	Male	20082600011	Politeknik Negeri Banyuwangi	muktimasetya@poliwangi.ac.id	Masetya Mukti	085231484444	1	0009048905		Rp.000
		Nurhalimah, S.F	Pd, M.Pd		Female	20082600012	Politeknik Negeri Banyuwangi	nurhalimah@poliwangi.ac.id	Nurhalimah	088805929904	1	0724058603		Rp.000
		Putu Ngurah Ru	usmawan,	S.Pd, M.Pd	Male	20082600013	Politeknik Negeri Banyuwangi	putungurahrusmawan@poliwar	Putu Ngurah Rusmawa	082232854221	1	0721078703		Rp.000
		Randhi Nanang	Darmawar	n, S.Si., M.Si.	Male	20082600014	Politeknik Negeri Banyuwangi	randhi@poliwangi.ac.id	Randhi Nanang Darma	085231408293	3	0725108901		Rp.000
		Rudi Tri Handok	ko, S.ST.Pa	ar,M.Tr.Par.	Male	20082600015	Politeknik Negeri Banyuwangi	rudi_rafif@polwangi.ac.id	Rudi Tri Handoko	085815427014	1	0027087906		Rp.000
		15 Record(s)												Rp.000
		Add	-	Edit	Delete									
							(	*						_
		Notes												

Figure 8. Guest page

6. Setting Services

On the following menu, namely services, contained a menu to input several services available at Jinggo Hotel, including F&B services, Laundry, and Live Music. Based on Figure 9, an example of the services available at Jinggo Hotel and their rates can be seen.

Home Repo	orts Adminis	stration Languages Help			
Reservations S Reservation Ma	Room/Bed Gearch Center anagement	Guests Room Types Hotel Management	Ces Control Panel		
Services		Services			
Sandras		Service Name	Code	Type	Rate
gervices		Food & Beverage	FB01	Jinggo Padkages	Rp149,999.000
	Search(F5)	Laundry	L01	Laundry Jinggo	Rp200,000.000
		Live Music	LM01	Jinggo Band	Rp49,999.000
		3 Record(s)			
		Add Edit Delete			
			(m	¥	
		Notes			
		Edit			

Figure 9. Services page

7. Reservation Simulation

After making some settings, the next step is the reservation process using simulations of several gust lists that have been previously added. Based on Figure 10, on the reservation menu the process began by selecting Add a new Add Reservation window, then some information will be appeared and needs to be inputted correctly by a receptionist, which specified with the information marked with an asterisk (\*) such as Code, Status, CheckIn, Check Out, Room, and Guest Name, and Add Services if needed.

Home Re	ports Admini	stration Langu	ages Help													
0	6	82 m	Add Reservation									×				
Reservations	Room/Red	Questa Room	-Common Inform	ation								_				
Reservation	Search Center	Туре	Co <u>d</u> e *	20091900007		Statys *	CheckIn		Source			1				
Reservation	ns	Reservations	Booking Time	9/19/2020 5:06:29 PM		User	Admin		Guarantee							
Booking Time 👻	Today	Code Stat	r Room Informatio	on		-Guest Informa	ation		Bilino Address				Total	Paid	Balance	Specia
From	/19/2020		Check In *	9/19/2020		Guest Name	Kanom, S.Pd., M.Par.		Address							
To 9	/19/2020		Check Out *	9/20/2020		Company	Politeknik Negeri Bany	Jwang (	City							
Guest	121220		Adult No.	1		Emai	kanom@poliwangi.ac.i	1	State							
Boom			Child No.	0		Phone	081933122371		Country							
-	Search(F5)		Infant No.	0	1	Special		*	Post Code							
			Room *		4	reeston erner in		Y	Service Inform	ation						
			Date	Rate		-Daymant Infra			Add Se	rvice 2 a						
						the Add Da	mont 2 m		Provide Law		in the second	11				
						Time	Pay Type Total	atals	Date Nar	ne Kate Qty	SUDIDITAL					
						in the second	ray type Total	/E long						- 10		-
		0 Record(s)	2	<no data="" display="" to=""></no>												
		<					<no data="" display="" to=""></no>			<no data="" display="" to=""></no>				_		,
		Add														
		Services Paym														
		Date	Room Total	Rp.000	1	Discount	Rp.000	-	Total	Rp.000	1		Subtotal			
			Service Total	Rp.000		Tax		•	Paid	Rp.000						
			Net Total	Rp.000		Tax Total	Rp.000		Balance	Rp.000						
							OK Gancel									
									_		_	-	_			
Reservatio	ins	-														

Figure 10. Add reservation page

After all the Add Reservation processes have been filled in, the reservation page will appear as shown in Figure 11 where Net Total, Discount, Tax, Total, Paid, and Balance are listed according to the room, length of stay, and services. The following step is to select Print Invoice to get an Invoice or select Print Receipt to get a Receipt, which is provided in pdf format.

Home Reports Adm	nistration Languages Help				
Reservations Reservation Management	Guests Room Rooms/Beds Types Hotel Managemen	Room Services Rates t	k m d		
Reservations	Reservations				
Booking Time <ul> <li>Today</li> <li>Byl19/2020</li> <li>Guest</li> <li>Boom</li> </ul> <ul> <li>Search(P5)</li> </ul>	Code Status Room 2099190000 Checkin Jingpo 03	Guest Name: Company Guest Email Kanom, S.P.c Politeinik Ne kanom @poli	Guest Phone Oreck In Check Out   Adult No. 0819031223 9/19/2020 9/20/2020 2	Child No. Infant No. Itel Total Discourt 1 0 Rp1,299,99 Rp.000	Tox         Total         Paid         Balance         Speci           Rp129,999.         Rp1,429,994         Rp.000         Rp1,429,994         Rp1,429,994
	I Record(x) ≪	Delete Print Tourise	Diet Barriot		Rp129,999 Rp1,429,99 Rp.000 Rp1,429,99
	Ban A Ear	Perece hunt tuZore	Print Becept		
	Services Payments Notes Stat	us Change Log			
	Date	Name	Rate	Quantity	Subtotal
Bernwiting	2) 23 (24 COL 3 (17 )	LIVE MONC	KUT75,5995.000		Total - Bn148 997 000

Figure 11. Reservation page

# Discussion

Setting design of the Jinggo Hotel room reservation system was conducted using the Bistone Hotel Management system which has been implemented previously, and tested using quantitative approach based on 30 respondents from academia and students at Politeknik Negeri Banyuwangi, focusing to whom were often involved and used the Jinggo Hotel room facilities, by adapting the USE Questionnaire (Lund, 2001). The results can be seen in the Table 1 below.

No	Criteria	Average likert scale						
Usef	ulness							
1	It helps me be more effective.	4,0						
2	It is useful.	4,5						
3	It makes the things I want to accomplish easier to get done.	4,2						
4	It saves me time when I use it.	4,1						
5	It does everything I would expect it to do.	3,5						
Aver	Average 4,06							
Ease	of Use							
6	It is easy to use.	4,5						
7	It is simple to use.	4,2						
8	It is user friendly.	4,2						
9	It is flexible.	4,1						
10	Using it is effortless.	4,0						
11	I can use it without written instructions.	3,7						
12	I can recover from mistakes quickly and easily.	3,5						
13	I can use it successfully every time.	3,9						
Aver	age	4,01						
Ease	of Learning							
14	I learned to use it quickly.	4,0						
15	I easily remember how to use it.	4,0						
16	It is easy to learn to use it.	4,0						
17	I quickly became skillful with it.	4,0						
Aver	age	4,0						
Satis	faction							
18	I am satisfied with it.	3,5						
19	I would recommend it to a friend.	3,5						

**Table 1**. USE questionnaire (Lund, 2001)

20	It is fun to use.	4,0
21	It is wonderful.	4,0
22	It is pleasant to use.	4,0
Ave	rage	3,8

Based on Table 1, the design of the Jinggo Hotel room reservation system had a good rating with the aspects of usefulness = 81.2%, ease of use = 80.2%, Ease of Learning = 80%, and Satisfaction = 76%, and can be seen in more details below in Figure 12.



USE Questionnaire

Figure 12. Results of USE questionnaire

Based on Figure 12, it can be seen that the four evaluation criteria showed a good value, and can be categorized as feasible (Ernawati, 2017). However, there are several things that need to be improved in terms of the satisfaction criteria which shows an average value of 3.8 which indicates the need for improvement. Considering that Jinggo Hotel room reservation system is still in the initial design stage and operates offline, so it is necessary to design and implement it by online in near future. Jinggo Hotel will operate as a TEFA of Politeknik Negeri Banyuwangi and all the needs should be taken into account. Besides that, the satisfaction criteria experienced a score below 4, because most of the respondents are familiar with the hotel system in the hospitality industry such as VHP, Power Pro, and HotelMu.

### Conclusions

The design of the Poliwangi Jinggo Hotel room reservation system with a waterfall model approach based on the Bistone Hotel Management System application has already done and refer into some important points. The first is the hotel room reservation system application that has been carried out, is a desktop application that works perfectly on the Windows operating system, and the initial login page as the initial design is still by default. There are seven menus that are used to design the Jinggo Hotel room reservation system, starting from setting room type, room rates, room/beds, room/beds search center, services, guests, and reservations. All of those have been set according to the results of observations, interviews, and the real conditions of Jinggo Hotel. For the process of inputting quest data, reservations, and printing out invoices, the receptionist will not have too many difficulties considering that the application that has been designed is easy to use and reliable. The sesond is the feasibility evaluation of Jinggo Hotel room reservation system was conducted by quantitative approach with 30 respondents using the USE Questionnaire, so the results can be concluded as follows, Usefulness = 81.2%, Ease of Use = 80.2%, Ease of Learning = 80%, and Satisfaction = 76%. Based on those, the design of room reservation system was included into the feasible category, even though from the satisfaction aspect was still below 80%, and this aspect needs to be enhanced for the next system development.

Many studies and research are still needed to build and develop the system for Jinggo Hotel room reservation, noting that the satisfaction aspect which was still below 80%. So basically, some similar research focusing on reservation systems can be a perfect fit, especially the one which explained about reservation system in more details, that are already connected online and collaborated with third party, such as travel agents.

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