

## SPA AND REFLEXOLOGY SERVICES ORDERING INFORMATION SYSTEM

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**Abstract.** Booking spa and reflexology services online is increasingly popular in this digital era. However, there are still many spa and reflexology entrepreneurs who do not have an online booking system. This can cause crowds and inconvenience for customers. Therefore, it is necessary to develop a spa and reflexology service booking information system to provide convenience and comfort for customers. This research aims to develop an effective and efficient spa and reflexology service booking information system. This system is expected to provide convenience and comfort for customers in ordering spa and reflexology services. This research uses an information system development method with a waterfall approach. The stages include requirements analysis, system design, system implementation, system testing, and system maintenance. Data is collected through direct observation at the spa and reflexology place which is the object of research, interviews with customers, and literature studies related to the development of service booking information systems. Data obtained from data collection techniques are analyzed using descriptive analysis and content analysis. The results showed that the spa and reflexology service booking information system developed successfully provided convenience and comfort for customers in ordering services. In addition, this system also helps managers in managing booking schedules and optimizing services to customers.

**Keywords:** Information System, Booking, Services, Spa, Reflexology

### I. INTRODUCTION

The development of an increasingly modern and dense lifestyle refers to the trend of life that is increasingly fast and complex in this modern era. Many factors influence this development, such as technological advances and rapid economic development. This modern lifestyle is characterized by a busier lifestyle and often results in stress and fatigue in individuals. Therefore, many people are looking for ways to relieve stress and restore balance in life, and one of the ways is by consuming spa and reflexology services. Spas and reflexology are popular forms of body care that offer a variety of benefits for health and well-being. Spa includes various types of treatments designed to improve skin health and beauty, such as facials, body scrubs, and massages (Nugroho, 2006). Meanwhile, reflexology is a foot massage technique that focuses on reflex points on the feet associated with certain body organs (Zunaidi et al, 2014). These two types of treatment have been known for thousands of years and are still a popular choice today (Da, 2011). In addition, the wider availability of information about the benefits of spa and reflexology has also become a major factor in increasing public interest in these services. The benefits of spa and reflexology are very diverse. Some of its benefits are increasing blood circulation and metabolism, reducing stress and anxiety, improving sleep quality, boosting the immune system, and reducing pain and tension in the body (Afianti & Mardhiyah, 2017). In addition, spa treatments such as facials and body scrubs can help remove dead skin cells and maintain skin moisture (Dira & Dewi, 2011),

while reflexology can help improve various health problems, such as headaches, insomnia, and digestive disorders (Praja Satria, 2021).

Ordering spa and reflexology services online is increasingly popular in this digital era. Information systems for ordering spa and reflexology services can speed up the ordering and payment process, reduce errors in data recording, and make it easy for customers to choose the desired service. However, there are still many spa and reflexology entrepreneurs who do not have an online ordering system. This can cause crowds and create inconvenience for customers. Therefore, it is necessary to develop an information system for ordering spa and reflexology services to provide convenience and comfort for customers. This study aims to develop an effective and efficient information system for ordering spa and reflexology services. This system is expected to provide convenience and comfort for customers in ordering spa and reflexology services.

### II. RESEARCH METHODS

This study uses the information system development method with the waterfall approach. The waterfall approach is one of the oldest and most commonly used software development models in software development. This approach assumes that software development is carried out in a series of sequential stages (Rianto, 2021). The steps taken include needs analysis, system design, system implementation, system testing, and system maintenance. Data were collected through direct

observation at spa and reflexology places which were the objects of research, interviews with customers, as well as literature studies related to the development of service ordering information systems. Data obtained from data collection techniques were analyzed using descriptive analysis and content analysis. Descriptive analysis is used to understand the characteristics of the research object and content analysis is used to analyze user needs for the service ordering information system.

### III. RESULTS AND DISCUSSION

The design of an Information System for Ordering Spa and Reflexology Services uses an ERD (Entity Relationship Diagram) which aims to describe the relationship between entities or objects in the information system (Hasugian & Shidiq, 2012). This ERD consists of several entities or objects such as customers, spa services, reflexology services, order schedules, and payment transactions. Each of these entities has attributes or data associated with that entity. In this study, the entity consists of: Customer entity (Customer) which has the attributes Customer ID, Name, Address, Phone Number, and Email. Employee entity (Employee) which has the attributes Employee ID, Name, Title, Phone Number, and Email. Service entity that has the attributes Service ID, Service Name, Description, Duration, and Price. Order Entity (Booking) which has the attributes Order ID, Order Date, Service Date, Total Price, and Payment Status. Entity Order Detail (Booking Detail) which has the attributes Order Detail ID, Order ID, Service ID, and Service Amount. Payment Method Entity that has the attributes of Payment Method ID and Payment Method Name. Payment Entity (Payment) that has the attributes of Payment ID, Order ID, Payment Method ID, and Payment Amount.

The ERD has several relationships including the relationship between Customers and Orders (Customer-Booking) which shows that one Customer can make many Orders, the relationship between Employees and Orders (Employee-Booking) which shows that one Employee can serve many Orders, the relationship between Service and Service-Booking Detail indicating that one Service can be selected in many Order Details, relationship between Order and Booking Detail indicating that one Order can have many Order Details and relationship between Order and Payment (Booking-Payment) indicating that one Order can have many Payments.

The implementation of an information system for ordering spa and reflexology services that has been designed using ERD, is carried out using the React JS framework. This framework was chosen because React JS is one of the popular frameworks for developing web applications, which prioritizes performance and ease of development (Munawar, 2018). In this implementation, the developer builds the user interface of the application using React JS. The components in the interface are built in a modular and reusable structure, making it easier to develop and maintain applications in the future.

System testing on the design of Spa and Reflexology Service Ordering Information Systems aims to determine

whether the system that has been created can run well and meet user needs. System testing is carried out using several test methods, including:

#### *Testing Units*

Unit testing is carried out on each component or module contained in the system to ensure that the component or module can run properly and according to its function.

#### *Integration Testing*

Integration testing is carried out to ensure that all components or modules in the system can integrate properly and relate to each other as needed.

System Testing: System testing is carried out to ensure that all functions and features in the system can run properly and according to user requirements.

#### *Acceptance Testing*

Acceptance testing is performed by users or clients to ensure that the system meets their needs and expectations.

System testing is also carried out using previously prepared data and scenarios. The data used in the test is data that is similar to the data that will be used in the actual system, while the test scenarios cover various situations and conditions that may occur in the use of the system. The results of testing this system are expected to provide sufficient information to determine the reliability, performance, and suitability of the system to user needs. If there are problems or errors in the system, repairs or improvements will be made so that the system can run better and meet user needs properly.

After the information system for ordering spa and reflexology services has been tested, the next step is to perform system maintenance. System maintenance is an activity carried out to keep the system running well and continuously being improved according to user needs (Dwijayani, 2014). System maintenance can be carried out through several actions, such as monitoring the system periodically to ensure no problems arise, repairing or upgrading if problems are found, and updating the system according to technological developments and user needs (Hartono & Tjakrawala, 2022). In addition, training can also be provided to employees who are responsible for using this system so that they can optimize the use of the system and avoid mistakes in its use. This can also help improve efficiency in system use. In carrying out system maintenance, it is also important to pay attention to system security so that user data is maintained. The use of firewalls and antivirus software are some of the actions that can be taken to maintain system security. In addition, it is also necessary to periodically back up data to minimize losses due to loss of data or damage to the system (Sari et al, 2020). By carrying out good system maintenance, it is hoped that the information system for ordering spa and reflexology services can run well and provide optimal benefits for users.

### IV. CONCLUSIONS

Based on research conducted on information systems for ordering spa and reflexology services, it can be concluded that this system can help increase efficiency and convenience in ordering spa and reflexology services. Information systems for

ordering spa and reflexology services can speed up the ordering and payment process, reduce errors in data recording, and make it easy for customers to choose the desired service. In addition, this system also allows management to monitor employee performance and see trends in service requests from customers.

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