PODCAST ROOM RESERVATION APPLICATION USING EXTREME PROGRAMMING METHOD

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Abstract—*In the era of globalization, information technology has become crucial in enhancing the productivity of information processing across various industries. Data management ensures smooth operations and informed decision-making. Podcasts have emerged as significant mediums for information consumption and entertainment, with an increasing number of listeners seeking high-quality content. Producing quality podcasts requires adequate facilities such as advanced recording equipment and acoustically suitable studio spaces. Development methodologies like Extreme Programming emphasize improving functionality and technical implementation. Reservations for podcast studios play a crucial role in scheduling recordings, with online booking systems enabling easy and efficient reservations, albeit requiring intensive individualized services. The capability of reservation systems to provide quick, accurate, and precise information can influence customer experiences and purchasing decisions. The integration of information technology and online reservations is key to optimizing podcast production and distribution, enhancing operational efficiency for service providers, while providing a satisfying experience for listeners. Although the system has yet to be fully implemented, it is designed to streamline booking processes and reduce manual intervention, which is anticipated to lead to significant improvements in both operational efficiency and customer satisfaction.*

Keywords: *extreme programming, information technology, podcast, recording, reservation.*

Intisari—*Di era globalisasi, teknologi informasi menjadi sangat penting dalam meningkatkan produktivitas pemrosesan informasi di berbagai industri. Manajemen information memastikan kelancaran operasional dan pengambilan keputusan yang terinformasi. Podcast telah muncul sebagai media signifikan untuk konsumsi informasi dan hiburan, dengan semakin banyak pendengar yang mencari konten berkualitas tinggi. Produksi podcast berkualitas membutuhkan fasilitas memadai seperti peralatan rekaman canggih dan ruang studio yang sesuai secara akustik. Metodologi pengembangan seperti Extreme Programming menekankan peningkatan fungsionalitas dan implementasi teknis. Reservasi untuk studio podcast memainkan peran penting dalam penjadwalan perekaman, dengan sistem pemesanan online yang memungkinkan reservasi mudah dan efisien, meskipun memerlukan layanan individual yang intensif. Kemampuan sistem reservasi untuk menyediakan informasi yang cepat, akurat, dan tepat dapat mempengaruhi pengalaman pelanggan dan keputusan pembelian. Integrasi teknologi informasi dan reservasi online menjadi kunci untuk mengoptimalkan produksi dan distribusi podcast, meningkatkan efisiensi operasional bagi penyedia layanan, sambil memberikan pengalaman yang memuaskan bagi pendengar. Meskipun sistem ini belum sepenuhnya diimplementasikan, sistem ini dirancang untuk menyederhanakan proses pemesanan dan mengurangi intervensi manual, yang diharapkan dapat menghasilkan peningkatan signifikan dalam efisiensi operasional dan kepuasan pelanggan.*

Kata Kunci: *extreme programming, teknologi informasi, podcast, rekaman, reservasi, reservasi,*

INTRODUCTION

The advancement of science and technology has increased in line with the era of globalization that is relevant (Mahayuni, Triyuni, Astawa, & Budiarta, 2023). The utilization of information technology greatly assists various industries today in improving information processing to be more accurate, labor-saving, and fast. Data management has also become one of the key aspects of

information systems. The use of information technology not only speeds up and simplifies processes but also enhances the company's competitiveness. (Lee, Aprilia, Dinata, Fernando, & Andry, 2024). In the context of podcasts, web-based booking technology can significantly simplify the studio reservation process. As discussed by (Oktaviani, Subono, & Adi Prasetyo, 2024), an efficient and automated reservation system can optimize podcast studio management, reduce the time spent on manual interactions, and enhance customer satisfaction.

Podcasts have become an important part of information and entertainment consumption (Scriven, 2022). A podcast is an audio broadcast that can be accessed and downloaded through online applications using a smartphone, laptop, and computer (Saragih, Marpaung, & Saragih, 2022). With a significant increase in the number of listeners, many individuals and companies are interested in creating their own podcasts as a means of sharing information, entertainment, and marketing. However, producing high-quality podcasts requires adequate facilities, including advanced recording equipment and a quiet studio space with good acoustics. Similarly, the effectiveness of Hotel Sakura's reservation system plays a crucial role in meeting the needs of its customers. The current system, which is semi-manual, requires guests to visit the hotel in person to inquire about room availability, services, and pricing. This approach is not only time-consuming but also inconvenient for customers who prefer to access this information online at any time. As a result, the current system is inadequate in catering to the demands of modern, tech-savvy users who expect instant access to information and seamless booking experiences.

The development method used is Extreme Programming (XP), as this method emphasizes improving functional requirements and technical implementation (Dylen, Lee, & Geasela, 2024). Reservations refer to the scheduling, timing, and planning of visits to the podcast studio for the recording process. The online booking system is part of the distribution channel that allows customers to book studio sessions easily, efficiently, and cost-effectively through these facilities (Falihah, Siti, Kusdi, & Andriani, 2021).

Customers can book services by visiting the office in person or through social media platforms such as WhatsApp or Instagram. This approach requires individual service, which takes a significant amount of time and attention (Ardabili & Fachrie, 2024). Booking or reservation is not a new idea (Syafitri & Sancoko, 2023). The ability of a reservation system to provide information and data quickly, accurately, and precisely can support

delivering information and making decisions for customers (Aldisa, 2024). XP is particularly well-suited to this project due to its iterative and customer-centric approach. It emphasizes frequent, small releases, allowing the development team to deliver an early working version of the reservation system.

This enables real-time user feedback, ensuring that the application evolves to meet actual needs. Pair programming and collective ownership practices within XP ensure high code quality and rapid problem resolution, essential for features like booking schedules and real-time availability checks. Test-Driven Development (TDD) further enhances the system's reliability by ensuring that code is rigorously tested before implementation. Continuous customer involvement is another key aspect of XP, allowing the development team to closely align the product with user expectations and industry demands. Compared to other methodologies, XP's adaptability to changing requirements, focus on high-quality output, and faster time to market make it an ideal choice for developing a podcast reservation system in a dynamic and competitive environment.

In this research, a podcast studio booking website is offered as a solution to address various issues in the podcast studio reservation system. The website aims to provide customers with more accurate and precise information about the studio, including availability, facilities, and rental prices, accessible directly through a digital platform. This approach eliminates the need for direct communication with studio management, thereby reducing the demand for individual service, which often consumes significant time and attention from the management staff. With this website, customers can access information about availability, facilities, and rental prices directly through a digital platform, without needing to communicate directly with the studio management.

The booking website is designed to reduce the need for individual service, which often consumes time and requires significant attention from the management staff. Overall, this podcast studio booking website is designed not only to facilitate customers in accessing information and making reservations but also to improve the overall productivity of studio management. Previous research conducted by (Oktaviani et al., 2024) developed the backend for a homestay reservation application using the Laravel framework and applied the Agile methodology. In software development, the Agile approach emphasizes iteration, where requirements and solutions evolve through structured team collaboration. One of the Agile approaches used is Extreme Programming (XP), which is particularly suited for systems with

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uncertain or frequently changing requirements. This research demonstrates that using Laravel in conjunction with Agile and XP methods can enhance flexibility and adaptability in software system development, providing a solid foundation for similar research and system development.

MATERIALS AND METHODS

The XP method was introduced in the 1990s and completed after several years. This method is a branch of Agile programming that focuses on coding as the primary activity (Fenardi & Lee, 2023). Extreme Programming (XP) is a systematic software development approach known for being predictable, quick, efficient, low-risk, and adaptable(Wicaksono, Shadiq, Ismiyana Putri, & Sayekti, 2023).The primary focus of XP is to produce high-quality software and ensure customer satisfaction by responding to changing requirements at each stage of development. XP believes that the ultimate goal of every development project is to produce high-quality code that can be executed and maintained (Afshari & Gandomani, 2022). Changes in requirements can be easily managed because XP has adaptive, lightweight, and iterative characteristics, even in the later stages of development (Akhtar, Bakhtawar, & Akhtar, 2022). Extreme programming is an iterative methodology that results in a fully functional system. By the end of this process, testing, analysis, design, and coding are all finalized (Narahaba & Lee, 2024).
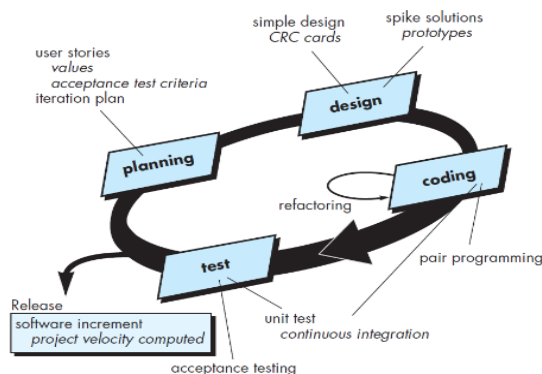
Source : (Mahardika, Khoiri, & 'Amin, 2023)
Figure 1. XP Stages

There are several stages in XP that are typically followed during the development process :
1. Planning this stage involves selecting and planning the features to be developed during the next iteration in a detailed and systematic manner. The process includes identifying user needs, prioritizing features based on added value and business requirements, and scheduling development activities to ensure that each feature is completed on time and meets the desired quality standards. Thorough and detailed planning in this stage is crucial for guiding the development team toward achieving project goals effectively.
2. Design during this stage, designs are developed for the features to be implemented, ensuring that the designs meet the needs and goals of the users. The design process includes creating wireframes, activity diagrams, and use cases to visualize the appearance and interaction of the planned features. Detailed design specifications are created to guide development during the implementation phase, ensuring that each feature developed aligns with the overall vision and goals of the project.
3. Coding this is the stage where developers write code to implement the features that have been planned and designed previously. In this phase, developers work based on the provided design documentation, using appropriate programming languages and technologies to realize the desired functionality and interfaces.
4. Testing after coding, the code is tested to ensure that it functions as expected and meets the established quality standards. In the testing process, methods such as black-box testing are used. Black-box testing evaluates the software's functionality based on its operations, including ensuring that input and output data are as expected and maintaining the accuracy of stored information. It focuses on testing the system's functionality by analyzing a range of input conditions that cover all functional requirements of the program. (Febryansyah, 2023).

During the development and evaluation of the application, various data sources and collection methods were utilized:
a) **Heuristic Evaluation:** The development team or UX experts can perform an evaluation based on well-established design principles, such as the usability heuristics developed by Jakob Nielsen. This evaluation focuses on identifying potential issues in the user interface and overall user experience without involving direct end-user feedback.
b) **Cognitive Walkthrough:** In this method, developers or UX experts simulate usage scenarios to assess whether new users can complete specific tasks without difficulty. This helps identify any challenges or confusion that users might encounter.
c) **Internal Testing:** Involve team members or colleagues in internal testing, where they are asked to use the application and provide feedback. Although they are not end-users, this

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testing can offer early insights into usability and performance issues.

d) **Beta Testing:** If feasible, releasing an alpha or beta version of the application to a small group of selected users can be an effective way to gather early feedback before full-scale publication.

e) **Testing Results**: Results from black-box testing provided data on the functionality and performance of the application. This included detailed reports on the outcomes of various test scenarios, which were used to refine and improve the system.

During the development and evaluation of the application, various data sources and collection methods were employed to assess its success. User feedback and surveys were collected after each iteration to gain insights into user satisfaction, usability, and feature effectiveness. This feedback was instrumental in identifying areas for improvement and guiding the planning and design of subsequent iterations. Additionally, testing results were obtained from black-box testing, which provided detailed reports on the application's functionality and performance. These reports included outcomes from various test scenarios and were used to refine and enhance the system. By analyzing both user feedback and testing results, the development team was able to make data-driven decisions, ensuring the application met user needs and maintained high-quality standards.

The XP method emphasizes short iterations. Each iteration includes a cycle of planning, design, coding, and testing to ensure continuous development and adaptation to changing requirements. This approach allows the development team to create applications that are more responsive and of higher quality, in line with business and user needs. The iteration process is shown in Table 1.

Tabel 1. Work Activity Schedule

Activity	March 2024				April 2024				May 2024			
	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4	W 1	W 2	W 3	W 4
Planning	■				■				■			
Design		■				■				■		
Coding			■				■				■	
Testing				■				■				■

Source: (Research Results, 2024)

RESULTS AND DISCUSSION

1.Problem Identification

Based on the findings from the observations and interviews conducted, the current issues can be identified as follows:

a) The manual booking process tends to be time-consuming and less efficient, as it requires direct communication between the renter and studio staff.

b) Customer service may be limited because staff have to spend a lot of time answering questions and managing reservations manually.

In addressing the existing issues, we can divide the needs analysis into two main aspects: functional and non-functional requirements. Functional requirement analysis:

a) The system must allow users to log in using a registered username and password.

b) Users should be able to view details of each studio, including photos, descriptions, available facilities, and reviews from other users.

c) Users should be able to view their booking history, including booking details, payment status, and usage status.

Non-Functional Requirement Analysis:

a) Navigation on the website should be simple and logical.

b) The website must be responsive and accessible quickly across various devices and network conditions.

2.Usecase Diagram
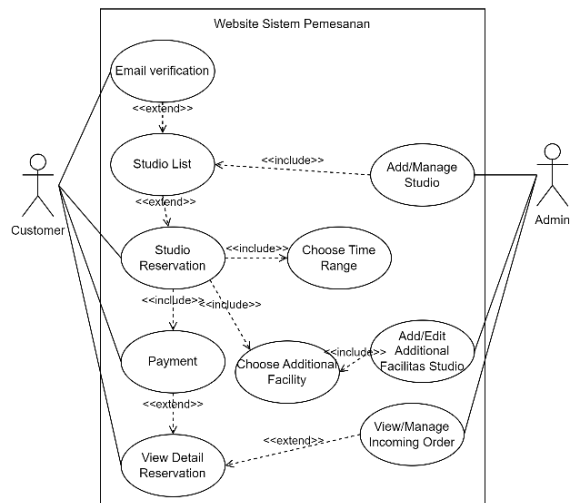
Source: (Research Results, 2024)
Figure 2. *Use Case* Diagram

A use case diagram illustrates how users interact with the system being developed, highlighting the relationships between the users and the system's various components (Salbiyath, Daning, & Sulistyowati, 2022). This diagram helps visualize the system's functionality from the end user's perspective, showing how various actors interact with the system to achieve specific goals.

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Figure 2 is the diagram of the use case for the podcast studio booking system website, which includes two actors: Customer and Admin. The Admin actor can manage studios, manage user accounts, and manage bookings. The Customer actor can make reservations, subsequently make payments, and then view their booking information.

3. Activity Diagram

The login activity diagram provides a visual overview of the steps involved in the login process on the podcast studio booking website. This diagram outlines the steps that occur during the login process, including login data validation.
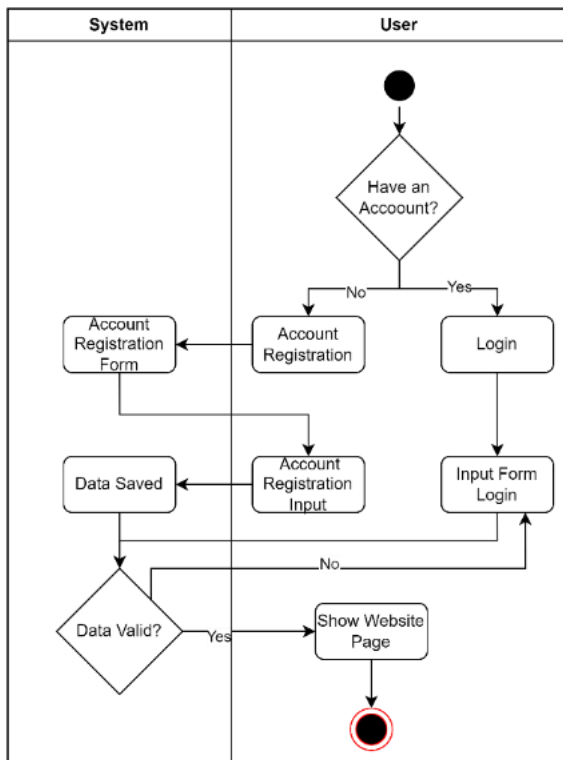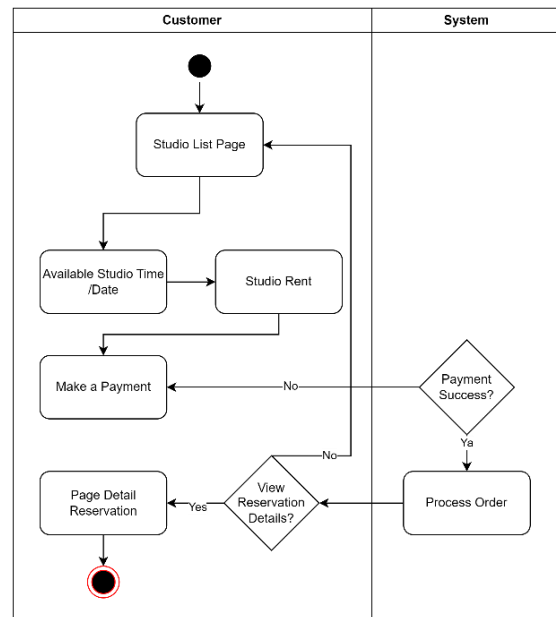
Source: (Research Results, 2024)
Figure 3. *Activity* Diagram *Login/Register*

In Figure 3, the login process flow can be seen. The diagram shows two main flows: registration for new users and login for existing users. Each step involves interactions between the user and the system, with the system displaying forms, storing and validating data, and redirecting users to the appropriate website page.

The activity diagram for podcast studio reservation begins when the user opens the studio page on the booking website. This diagram includes the main steps in the podcast studio reservation process, from the user opening the studio page to the confirmation of the booking.

In Figure 4, The diagram presents the studio booking process from the user's standpoint.

Initially, the user navigates to the studio list page to browse all available studios for rental. On this page, the user selects a suitable time and date for the desired studio and proceeds with the rental. Subsequently, the user is taken to the payment page to finalize the transaction. The system verifies the payment's success. If the payment goes through, the system confirms the user's booking. The user is then given the choice to review their reservation details. If they opt to do so, they are redirected to the reservation details page.

Source: (Research Results, 2024)
Figure 4. *Activity* Diagram Reservasi

4. Wireframe

In the process of designing the booking website, a wireframe is created first. This wireframe shows the basic structure and key elements that make up the pages for the podcast studio booking website design.

Creating wireframes for a podcast studio booking website starts with designing the login page. This page serves as the user's entry point to the website, and its wireframe should clearly outline the main components and layout. At the top, a simple header featuring the website's logo provides brand recognition and a welcoming visual. Below this, the central focus is on the login form, which includes fields for the username or email and password. This basic yet essential structure ensures that the login page is intuitive and user-friendly, providing clear navigation and functionality. The wireframe serves as a blueprint for the design, ensuring all key elements are included and positioned for optimal user experience. To successfully log in, users are required to enter a

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valid username and password. The wireframe of the Login Page, as depicted, is thoughtfully designed to ensure a straightforward and user-friendly experience. It includes the following elements:

a) **1 Rectangle:** This serves as the primary container for the login form, providing a clear visual boundary for the login interface.

b) **2 Text Fields:** These fields are designated for user input, where one is used for entering the username and the other for the password.

c) **2 Labels:** Each label is associated with a corresponding text field to guide users in providing the correct information. The labels typically indicate "Username" and "Password."

d) **1 Button:** This button is used to submit the login credentials for authentication. It is usually labeled "Log In" or "Sign In."

The design aims to ensure that users can easily navigate the login process and access the application's features without confusion or difficulty.
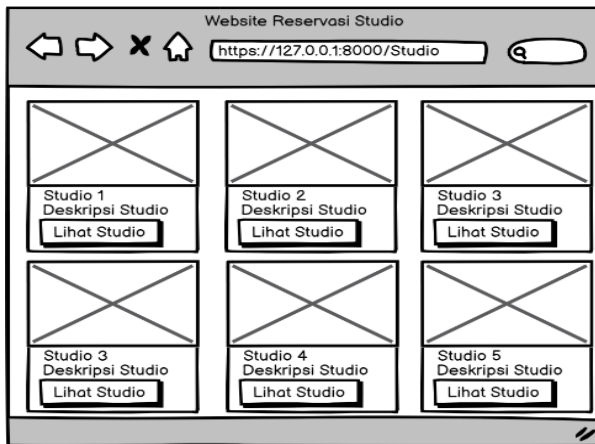
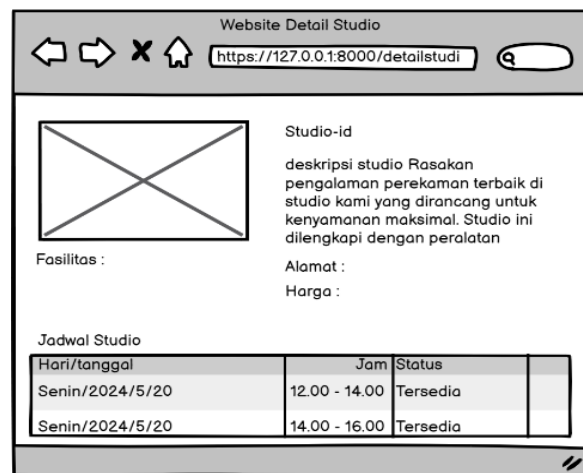Source: (Research Results, 2024)
Figure 6. Page Studio

Figure 6 displays the design of the studio page on the podcast studio booking website. On this page, users are presented with an overview of available studios, allowing them to select a studio of interest to view more detailed information. The wireframe for the Page Studio includes several key elements:

a) **6 Rectangles:** These rectangles are used to organize and structure different sections of the page. They may serve as containers for studio listings, navigation areas, or other content elements.

b) **12 Labels:** Labels are used to provide text-based information, such as studio names, descriptions, and other relevant details. They help users quickly identify and understand the content presented on the page.

c) **6 Buttons:** Each button allows users to interact with the page, such as selecting a studio for more details. These buttons are typically labeled with actions like "View Details" or "Select Studio."

d) **6 Images:** Images are used to visually represent each studio, offering users a glimpse of the studio's appearance and features. These images enhance the visual appeal of the page and help users make informed decisions.

The wireframe design ensures that users can efficiently browse through available studios, easily access detailed information, and make selections based on their preferences. The layout is intended to provide a clear and engaging user experience.

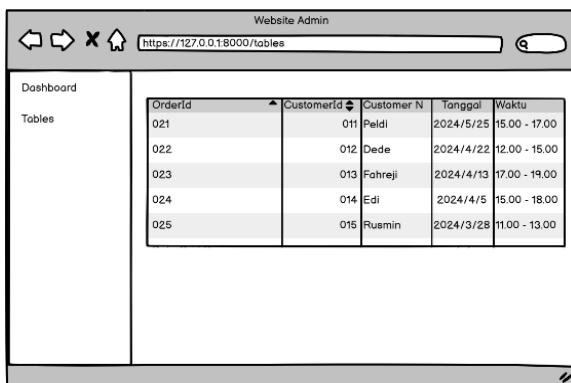Source: (Research Results, 2024)
Figure 7. Page Detail Studio

Figure 7 illustrates the design of the page displaying the detailed information of a studio on the podcast studio booking website. This page provides users with comprehensive details about a specific studio they are interested in. The wireframe for the Page Detail Studio is designed to present the following elements:

a) **1 Image:** The image prominently showcases the studio, providing a visual representation of its appearance and ambiance. This visual aid helps users get a clear sense of the studio's environment and setup.

b) **5 Labels:** These labels are used to highlight key pieces of information about the studio. They may include the studio's name, location, pricing details, available facilities, and any other relevant attributes. Labels are crucial for presenting clear and concise information to the users.

c) **1 Description:** This section provides a detailed narrative about the studio. It includes a thorough description of the studio's features, amenities, and overall appeal. The description helps users understand what to expect from

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the studio and why it may be a suitable choice for their needs.

d) **1 Grid View:** The grid view displays additional information or options related to the studio. This could include a calendar for selecting dates, available time slots, or a list of additional services and amenities. The grid view organizes this information in a structured manner, making it easy for users to navigate and make decisions.

Overall, the Page Detail Studio wireframe is designed to offer users a comprehensive view of the studio's details, helping them make informed decisions about their booking. The layout is structured to ensure that all essential information is easily accessible and presented in a user-friendly format.

Source: (Research Results, 2024)
Figure 8. Page *Order Record*

Figure 8 displays the design of the booking history page, which is an essential feature for managing and tracking podcast studio reservations. This page allows administrators to view and manage all recorded reservations. The wireframe for the **Admin History Page** includes the following components:

a) **2 Labels:** These labels are used to provide contextual information about the data displayed on the page. For example, they might be used to indicate headings such as "Reservation ID" and "Date of Booking" or "Customer Name" and "Status." These labels help users understand the type of information being presented and ensure clarity in the data displayed.

b) **1 Grid View:** The grid view organizes and displays a comprehensive list of all reservations made for the podcast studio. This structured layout allows administrators to efficiently review and manage booking details. The grid view might include columns for reservation details such as booking dates, customer names, studio information, and payment statuses. It is designed to facilitate

easy navigation and quick access to key reservation data.

The design of the Admin History Page is focused on providing a clear and organized overview of all reservations. This functionality is crucial for administrative tasks such as tracking booking history, managing customer requests, and ensuring smooth operation of the studio booking system. The layout ensures that administrators can easily access and interpret reservation data to maintain efficient studio management.

5.Creation Of Program Code

When users enter the login page, they will immediately see the title "Login," which provides context and sets the expectation for the page's function. They will then fill in the "Username" and "Password" fields, each of which has a placeholder for guidance, ensuring users understand what information is required. Additionally, a "Remember Me" checkbox is available for users who want to stay logged in on their device. This design choice enhances usability and streamlines the login process for all users, making it quick and intuitive to access their accounts. Users who do not have an account will need to register first. During the registration process, users will provide their basic information such as name, email address, and password. After completing the enlistment, clients will get a confirmation mail. This mail contains a interface or code that the client must utilize to confirm their account. This step is crucial to confirm the validity of the user's email address and activate their account. Once the account is verified, users can log in to the application using their username and password. After logging in, users will be directed to the home page of the application.
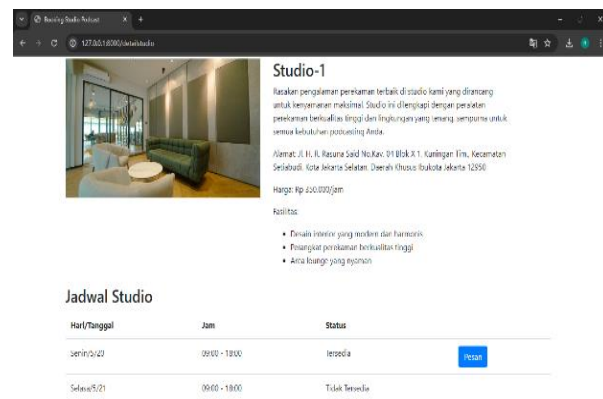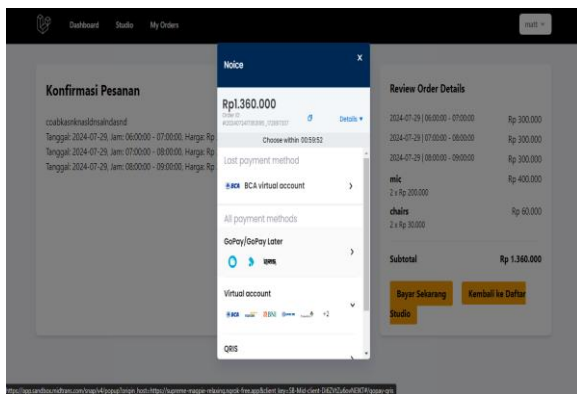

Source: (Research Results, 2024)
Figure 9. Page Detail Studio

From the home page, users can navigate to the studio listing page. On this page, they can view a comprehensive list of available studios. Each studio listing includes essential details such as studio

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images, descriptions, and available features. When users enter the studio selection page, they will immediately see the available studios. The list of studios is displayed in card format, with each card featuring a "View Studio" button to access more detailed information about the studio.

When users enter the studio detail page, as shown in Figure 9, they will see the page title with the name of the selected studio, confirming that they are on the correct page. Users can then view the main image of the studio, providing a clear visualization of the space. Below the image, a detailed description provides comprehensive information about the studio's facilities and ambiance. At the bottom, information about the days, dates, and times available for the studio is displayed, and on the right side, there is a "Book" button for selecting available times. On the studio detail page, users can select their desired booking date and time slot. The page also displays available time slots and additional options, such as extra facilities or services, if applicable.

Source: (Research Results, 2024)
Figure 10.Payment Page

On this page in figure 10, users can make a payment after selecting a studio and making a reservation. After the payment is processed, users will receive an email with an invoice containing comprehensive details of their reservation, including studio information, booking dates, and payment confirmation.

Once the reservation details are confirmed, users can proceed to make the payment. The payment process includes selecting a payment method and completing the transaction. After the payment is successfully processed, users receive a confirmation email with a summary of their booking details, including the studio reserved, booking date, time, and any additional services or facilities selected.

6.Testing

Black-box testing plays a crucial role in ensuring that the application functions as expected

and meets user needs without requiring detailed knowledge of the internal code structure. This approach allows testers to validate the application's behavior from an end-user perspective, identifying any discrepancies or issues in functionality.

Tabel 2. BlackBox Testing Result

Modul Name	Tested Scenarios	Successful and Accurate	Failed or Inaccurate
Login	5	5	0
Admin	10	10	0
User	5	5	0
Total	20	20	0

Source: (Research Results, 2024)

The results of the black-box testing method indicate that the features in the podcast studio booking website function well and deliver results as expected. This testing approach has been used to evaluate the system's functionality from an external perspective, focusing on verifying that the application behaves as intended without requiring knowledge of its internal code structure. As detailed in Table 2, the black-box testing results confirm that the various features of the website such as studio selection, booking, payment processing, and email notifications perform correctly and meet the specified requirements. This validation ensures that users experience a smooth and reliable interaction with the booking system.

7.Discussion

In the case study conducted at PT. Mitra Karya Teguh Setia (Dhiwa, Irfannurroja, Pangestu, & Djutalov, 2023), The use of Extreme Programming (XP) in designing a web-based building materials booking application has shown several significant benefits. This research adopts the same approach by applying the XP method in the development of a web-based podcast studio booking application. The results indicate that applying the XP method provides many significant benefits. Active involvement from various stakeholders, including studio management and end users, ensures that the developed application meets their needs and expectations.

CONCLUSION

The design of the podcast studio booking website aims to simplify the process for users who wish to rent a studio for podcast recording needs. In this design, various important aspects have been considered to ensure that users have a satisfying, efficient, and enjoyable experience. It is hoped that this website will provide an excellent user experience, expedite the booking process, and support the overall business operations.

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Preliminary results from internal testing indicate that the website design is effective in simplifying the booking process. For example, usability tests demonstrated that the streamlined interface allows for easy navigation and quick access to essential features, such as studio availability and booking confirmation. Additionally, feedback from beta testers highlighted that the website's real-time availability updates and user-friendly design contribute to a more efficient reservation process.

While user feedback from actual usage is not yet available, these internal findings suggest that the website is well-positioned to deliver an excellent user experience upon launch. The design improvements and features incorporated into the website are expected to enhance user satisfaction and operational efficiency, aligning with the study's objectives of optimizing the reservation system and supporting overall business operations.

REFERENCE

Afshari, M., & Gandomani, T. J. (2022). A novel risk management model in the Scrum and extreme programming hybrid methodology. International Journal of Electrical and Computer Engineering, 12(3), 2911-2921. https://doi.org/10.11591/ijece.v12i3.

Akhtar, A., Bakhtawar, B., & Akhtar, S. (2022). Extreme Programming Vs Scrum: A Comparison Of Agile Models. *International Journal of Technology, Innovation and Management (IJTIM)*, *2*(2), 80-96 https://doi.org/10.54489/ijtim.v2i2.77

Aldisa, R. T. (2024). Hotel Reservation System Using Website Based Rapid Application Development (Rad) Method. In *International Journal of Society Reviews (INJOSER)* (Vol. 2) 851-855.

Ardabili, M. Y., & Fachrie, M. (2024). Pengembangan Sistem Pemesanan Jasa Fotografi dengan Integrasi Payment Gateway Berbasis Android. *Jurnal Teknologi Dan Sistem Informasi Bisnis*, *6*(1), 54–64. https://doi.org/10.47233/jteksis.v6i1.1095

Dhiwa, G. P., Irfannurroja, M., Pangestu, Y. R., & Djutalov, R. (2023). Implementasi Metode Extreme Programming Pada Perancangan Aplikasi Pemesanan Bahan Bangunan Berbasis Web (Studi Kasus) Pt. Mitra Karya Teguh Setia. *JORAPI : Journal of Research and Publication Innovation*, *1*(3), 741-747.

Dylen, V., Lee, F. S., & Geasela, M. (2024). Aplikasi Inventaris Berbasis Website Pada Toko Naomi Wig Menggunakan Metode Extreme Programing. *Jurnal Teknologi Dan Sistem Informasi Bisnis-JTEKSIS*, *6*(2), 339-346. https://doi.org/10.47233/jteksis.v6i2.1214

Falihah, N., Siti, A. E., Kusdi, R., & Andriani, K. (2021). Online Reservation System and Online Customer Review: Its Impact on Brand Image, Trust and Hotel Booking Decision. *Business and Accounting Research (IJEBAR) Peer Reviewed-International Journal*, *5*(4), 409–425.

Febryansyah, R. (2023). *Penerapan Xp(Extreme Programing) Pada Aplikasi Sepeda Smp : Sistem Pembelajaran Daring Sekolah Menengah Pertama Berbasis Mobile. 3*(2), 1.

Fenardi, O., & Lee, F. S. (2023). Aplikasi Akademik Berbasis Website Menggunakan Metode Extreme Programming Pada SMAN1 Belinyu. *Jurnal Teknologi Dan Sistem Informasi Bisnis*, *5*(4), 440–447. https://doi.org/10.47233/jteksis.v5i4.843

Lee, F. S., Aprilia, K., Dinata, D. F., Fernando, W., & Andry, J. F. (2024). Aplikasi Pengelolaan Stok Bahan Baku dengan Metode Waterfall Pada Pabrik Plastik. *Jurnal Teknologi Dan Sistem Informasi Bisnis*, *6*(2), 258–265. https://doi.org/10.47233/jteksis.v6i2.1273

Mahardika, F., Khoiri, M., & 'Amin, M. Al. (2023). Implementasi Extreme Programing pada Sistem Informasi Penggajian untuk Peningkatan Pelayanan kepada Karyawan. *Hello World Jurnal Ilmu Komputer*, *2*(2), 74-84. https://doi.org/10.56211/helloworld.v2i2.274

Mahayuni, N. M., Triyuni, N. N., Astawa, I. K., & Budiarta, I. P. (2023). The Effectiveness of Travel Agent Contracts in Increasing The Number of Booking at The Café - International Buffet Restaurant. *International Journal of Travel, Hospitality and Events*, *2*(3), 211-226. https://doi.org/10.56743/ijothe.v2i3.299

Narahaba, M. A., & Lee, F. S. (2024). Inventory Application Design At Industrial Water Depo Using Extreme Programming Method. *Jurnal Techno Nusa Mandiri*, *21*(1), 58–66. https://doi.org/10.33480/techno.v21i1.4190

Oktaviani, D., Subono, & Adi Prasetyo, J. (2024). Pengembangan Backend Menggunakan Metodde Extreme Programming (XP) Pada Aplikasi Rerservasi Pesona Java Ijen Homestay. *Jurnal Informatika Dan Teknik Elektro Terapan*, *12*(3). https://doi.org/10.23960/jitet.v12i3.4913

Salbiyath, M., Daning, ;, & Sulistyowati, N. (2022). Website-Based Certificate Management Information System Design In Training And Consultant Division. *Techno Nusa Mandiri : Journal of Computing and Information Technology As an Accredited Journal Rank*,

19(1), 38-45. https://doi.org/10.33480/techno.v19i1.3059

Saragih, D., Marpaung, A., & Saragih, R. P. S. (2022). Influence of Podcast In Improving Students' Listening Skill of Senior High School. *International Journal Corner of Educational Research*, *1*(2), 57–68. https://doi.org/10.54012/ijcer.v1i2.81

Scriven, R. (2022). Making a podcast: Reflecting on creating a place-based podcast. *Area*, *54*(2), 260-267. https://doi.org/10.1111/area.12776

Syafitri, N., & Sancoko, S. D. (2023). Mobile-based Dental Clinic Application as an Optimal Reservation Control System. *International Journal of Computer Applications*, *185*(33). https://doi.org/10.5120/ijca2023923060

Wicaksono, H., Shadiq, J., Ismiyana Putri, D., & Sayekti, R. (2023). The Power Of Adaptability: Achieving Agility And Quality In Web Based Company Profiles Through Extreme Programming. *Jurnal Techno Nusa Mandiri*, *20*(1), 54–62. https://doi.org/10.33480/techno.v20i1.4219