Review: Journal of Multidisciplinary in Social Sciences

Volume 03 No 01 January 2026
E ISSN : 3031-6375
https://lenteranusa.id/

Creating the Leyndell RPG Game Using the Godot Engine

Ira Windarti[1*], Sari Noorlima Yanti[2]
[1,2]Universitas Gunadarma
Email : irawindarti@staff.gunadarma.ac.id

Received : 02-01-2026 Revised : 18-01-2026 Accepted : 27-01-2026

Abstract
This research aims to design and build Leyndell-RPG games along with web-based game distribution websites that are able to support the process of digital game information, transactions, and distribution. The development method used is Waterfall which includes the stages of needs analysis, design, implementation, testing, and maintenance. Games are developed using the Godot Engine, while distribution websites are built with Next.js, TypeScript, and MySQL databases. System testing is carried out using the black box testing method on user, admin, and browser compatibility. The test results show that all the main features of the user and admin systems run according to the needs designed, and the website is well accessible on the Google Chrome and Microsoft Edge browsers. Thus, the Leyndell–RPG game distribution website was declared successful and was able to provide effective support for users and developers in the digital game distribution process.

Keywords: RPG Games, Godot Engine, Game Distribution Websites, Next.js, Waterfall Method, Black Box Testing

Introduction

As an active gamer and often buys games digitally, I realize that the distribution and transaction process in gaming platforms plays an important role in user comfort. It's not uncommon for me to come across platforms with distribution systems that aren't optimal, such as slow payment processing, problematic download access, or errors in transaction logging.

These problems prompted the emergence of the idea of designing a more efficient, stable, and structured game distribution system. This kind of platform should be able to be a link between developers and players, where players can buy and download games easily, and developers can spread their work digitally with the support of a trustworthy system.

The rapid development of the game industry is also one of the reasons for the importance of developing digital distribution platforms. According to Jecky (2024), digital transformation has encouraged almost all community activities to be more practical, including in the entertainment sector. Games are no longer simply considered a form of recreation, but have become part of the lifestyle and even economic opportunities for some people.

With the advent of a variety of game sales models whether fully paid or supplemental-based—the need for a distribution system that supports transactions and file management has

Review: Journal of Multidisciplinary in Social Sciences

Volume 03 No 01 January 2026
E ISSN : 3031-6375
https://lenteranusa.id/

become critical. The designed platform must be able to ensure that the purchase process runs smoothly, as well as provide direct and secure access to game files.

From an Information Systems perspective, this challenge is an opportunity to build a web-based system that not only supports game distribution, but also regulates transactions, access to downloads, and provides data for developers. With an integrated and reliable system, this platform is expected to be able to provide real benefits for users and game developers.

Method

This research uses the Waterfall software development method which consists of the stages of needs analysis, design, implementation, testing, and maintenance. In the analysis stage, the functional and non-functional needs of the Leyndell–RPG desktop game distribution system were identified based on a study of similar platforms and user experiences. The design stage includes designing navigation structures, modeling systems using UML (use case, activity, and class diagram), designing MySQL databases, and designing website interfaces and game assets. The implementation is carried out by developing games using Godot Engine and distribution websites using Next.js, TypeScript, and MySQL as databases. System testing is carried out using the Black Box Testing method to ensure that all functions are running according to the designed needs. The maintenance stage is carried out to deal with system errors and adjustments in case of changes in needs or system upgrades in the future.

Results and Discussion

Pengujian Sistem User

Table 1. User System Testing

No.	Trial	Expected Results	Test Results	Conclusion
1	**Home**	Can display the main page	Home Page Featured	Successful
2	**About the Game**	Can display About pages	About Games Page Displayed	Successful
3	**Game Features**	Can display game features page	Game Features Page Displayed	Successful
4	**Preview**	Can display preview pages	Preview Page Displayed	Successful
5	**Send a Message**	Can display send messages	Send Message Displayed	Successful
		Can Send Messages	Send a message is doable	
6	**Login**	Can display login pages	Login page displayed	Successful
		Can Log In	Login Can Be Done	
7	**Signup**	Can display signup pages	Signup Page Displayed	Successful
		Can Signup	Signup Can Be Done	
8	**Payment Process**	Can display payment pages	Payment Page Displayed	Successful
		Can Make Payments	Payment Methods Shown	
		Can display price details	Price Details Shown	
		Can display payment	Payment Methods Shown	

		methods		
9	**Checkout**	Can display the Checkout page	Checkout Page Displayed	Successful
		Can display order details	Order Details Displayed	
		Can display QR codes	QR Code Displayed	
		Can display virtual accounts	Virtual Account Displayed	

Table 1 shows the results of user system testing on the Leyndell–RPG game distribution website which was carried out using the black box testing method. Based on the test results, all the main features that can be accessed by users, such as the homepage, information about the game, game features, previews, sending messages, login, signup, payment process, and checkout, have run according to the expected function. Each page is displayed well, and the entire process of user interaction from sending messages, to authenticating accounts, to payment transactions and displaying order details can be done without any problems. Thus, it can be concluded that the user system has functioned optimally and is ready to be used by the user according to the designed needs.

Pengujian Sistem User

Table 2. Testing the Admin System

No.	Trial	Expected Results	Test Results	Conclusion
1	Login Admin	Can display admin login page	Login page displayed	Successful
		Admin Login Can	Login Can Be Done	
2	Dashboard	Can display admin dashboard page	Admin Dashboard Page Displayed	Successful
		Can show recent activity	Recent Activity Shown	
		Can display transaction charts	Transaction Chart Displayed	
		Can display total revenue	Total Revenue Displayed	
3	Transactions	Can display transaction pages	Transaction Page Displayed	Successful
		Can display transaction data	Transaction Data Displayed	
4	Edit Transaction Status	Can Edit Transaction Status	Edit transaction status can be done	Successful
5	Game Information	Can display game information pages	Game Information Page Displayed	Successful
		Can display game information data	Game Information Data Displayed	

6	Edit Game Information	Can Edit Game Information	Edit Game Information Can Be Done	Successful
7	Data User	Can display User Data Table	User Data Table Displayed	Successful
		Can display user data	User Data Can Be Displayed	
8	Message User	Can display user message pages	User Message Displayed	Successful
		Can send messages to users	Sending User Messages Can Be Done	
		Can display user message data	User Message Data Displayed	

Table 2 shows the results of testing the admin system on the Leyndell–RPG game distribution website which was carried out using the black box testing method. The test results show that all functions available to admins, from admin login, dashboard, transaction management, transaction status editing, game information management, to user data management and user messages, have run according to the expected results. The admin dashboard manages to accurately display the latest activity, transaction graphs, and total revenue. In addition, admins can also manage transaction data, update game information, and communicate with users without any problems. Based on these results, it can be concluded that the admin system has functioned well and supported the website management process effectively and efficiently.

Pengujian Browser

Table 3. Browser Testing

Browser	Versions	Expected Results	Test Results	Conclusion
Google chrome	138.0.7204.169	Can display the Website well	The website is accessible and displayed well	Successful
Microsoft Edge	138.0.3351.109	Can display the Website well	The website is accessible and displayed well	Successful

Table 3 shows the results of the compatibility testing of the Leyndell–RPG game distribution website on several browsers, namely Google Chrome and Microsoft Edge. Testing is done to ensure that the website is accessible and displayed properly in commonly used browsers. Based on the test results, the website successfully displayed well on Google Chrome version 138.0.7204.169 and Microsoft Edge version 138.0.3351.109 without any display or function problems. Thus, it can be concluded that the website has a good level of compatibility and is able to run optimally on various modern browsers.

Maintenance

At this stage, maintenance is carried out as a follow-up step after the website has been successfully implemented and tested. This process aims to ensure that the system remains stable and able to adapt to the needs of users who may continue to evolve. Maintenance includes performance monitoring, bug fixes, feature updates, and system adjustments to user feedback.

With this stage, it is hoped that the website will remain relevant and can provide a consistent and optimal user experience. In addition, maintenance is also an important part of the software lifecycle to ensure long-term service continuity.

Conclusions

Based on the stages that have been carried out in the "*Leyndell – RPG"* Game Creation project Using Godot Engine, a game distribution website based on Next.js and MySQL has been successfully developed and hosted at https://website-game-production-db55.up.railway.app/ address. This website is designed to facilitate the digital and efficient distribution of paid desktop games. The main features available include game information, registration, login, purchases, and game downloads for users, while admins can manage user data, transactions, and statistics through the dashboard. All functions have been tested using the black-box method and are running as expected. However, the system still has limitations, such as the new game content covering two levels. Therefore, further development is needed to enrich the content and improve the overall user experience.

References

Abdur Rochman, M. I. Hanafri, & A. Wandira. (n.d.). *Implementasi Website Profil SMK Kartini sebagai Media Promosi dan Informasi Berbasis Open Source*. STMIK Bina Sarana Global.

Agustin, T. (2021). *Pembuatan Game Komputer Fantasi Detektif*. Surabaya: Universitas Surabaya. Diakses dari https://journal.ubaya.ac.id/index.php/jimus/article/view/1162

Ajonye, G. O. (2024, August). *The history of storyboarding as a co-design methodology* [Preprint]. ResearchGate. https://doi.org/10.13140/RG.2.2.10502.38728

Ary, M. (2014). *Merancang & Membuat Website*. (Hasil dari Skripsi Penulis – Agustus 2010).

Handayani Akar, R. (2021). *Literature Review Jurnal Informatika*. Universitas Palangka Raya.

Padilah Zulfakar, D. (n.d.). *Metode Waterfall untuk Pengembangan Sistem Informasi*. Fakultas Teknik, Universitas Widyatama.

Putro, A. N. S., Alamin, Z., Mutmainah, S., Mu'min, M. A., Suryadi, D., Muflih, G. Z., Tristanti, N., Safitri, Y., & Fachri, F. (n.d.). *Pemrograman Web*.

Rasheed, Y., & Qamar, U. (2019). A model-driven approach for creating storyboards of web-based user interfaces. In *Proceedings of the 2019 International Conference on Computer, Communications, and Mechatronics Engineering* (pp. 1–6). ACM.

Rasheed, Y., & Qamar, U. (2019). A model-driven approach for creating storyboards of web-based user interfaces. In *Proceedings of the 2019 International Conference on Computer, Communications, and Mechatronics Engineering* (pp. 1–6). ACM.

Sahara, D., Putri, R. K., Syahidin, Y., & Gunawan, E. (2022). Penggunaan metode waterfall pada perancangan sistem informasi rekam medis sesuai standar akreditasi rumah sakit tahun 2022. Manajemen Informasi Kesehatan, Politeknik Piksi Ganesha.

Schäfer, L., & Becker, M. (2010). Using storyboards to integrate models and informal design knowledge. In *Model Driven Engineering Languages and Systems* (pp. 118–132). Springer.

Setiawati, L., Johan, R., Hadiapurwa, A., dkk. (2022). Studi Analisis *Website* Sistem Informasi Kearsipan Dinamis UPI dengan Metode Webqual. *Khazanah: Jurnal Pengembangan Kearsipan*, 15(1). https://doi.org/10.22146/khazanah.72775

Setiawati, P. (n.d.). *Analisa dan Perancangan Sistem Informasi Penyedia Lowongan Pekerjaan yang Direkomendasi Berdasarkan Standar Kompetensi Kerja Nasional Indonesia (SKKNI)*. Fakultas Ilmu Komputer, Universitas Esa Unggul.

Žavbi, R., & Vukašinović, N. (2014). A concept of academia-industry collaboration to facilitate the building of technical and professional competencies in new product development. *International Journal of Engineering Education*, 30(6), 1562–1578.

Žavbi, R., & Vukašinović, N. (2014). A concept of academia-industry collaboration to facilitate the building of technical and professional competencies in new product development. *International Journal of Engineering Education*, 30(6), 1562–1578.