

Home Rental Management System

HERALD COLLEGE, KATHMANDU | BSC(HONS) COMPUTER SCIENCE

Name: Amit Babu Khatri

Student ID: 2358569

Supervisor: Johan Tandukar

Reader: Aatiz Ghimire



UNIVERSITY PARTNER



INTRODUCTION

- Introducing a user-centric home rental platform for a seamless and convenient experience in searching, selecting, and securing rental properties.
- Streamlining the rental process with automated features to enhance user efficiency and satisfaction.
- Integrating Khalti as an online payment service to facilitate secure and convenient transactions within the home rental system.



LITERATURE REVIEW

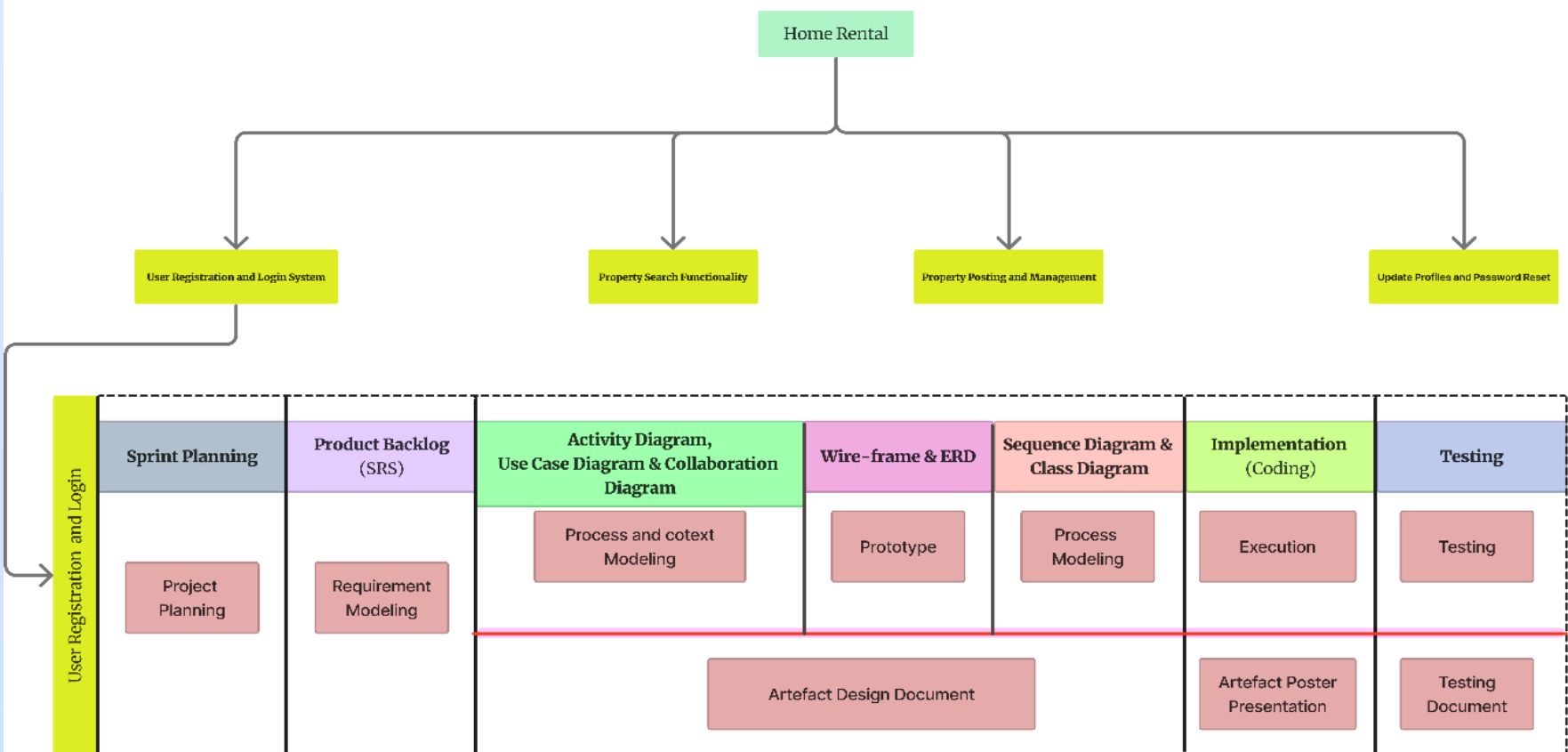
Authors	Country	Purpose	Type of source	Summery point
Waralak Chongdarakul, Nikorn Rongbutrsri, Punnarumol Temdee	Chiang Rai, Thailand	To address the needs of individual property seekers	Conference paper	This research introduces a customized real estate management system to meet the specific needs of individual property seekers, addressing shortcomings in existing platforms. Developed through user interviews, the system facilitates storage, navigation, and sharing of properties, with high user satisfaction indicated by Technology Acceptance Model evaluation.
Monica Kalbande, Shushanto Sarkar, Shweta Farkase, Prateek Verma	Coimbatore , India	To identify and address current limitations in current house rental management systems proposing a technologically advanced smart system with automated workflows and smart features to enhance efficiency and communication for landlords, agents, and tenants	Conference paper	This resource explores the need for an advanced house rental management system to replace time Consuming manual processes it reviews innovative solution, such as a mobile cloud-based system and smart locks, highlighting their benefits.
Rong Yu, Zhenqi Wang, Conghui Zhang, Shaopeng Guan	Chongqing, China	To eliminate middlemen, reduce costs, and enhance privacy through smart contracts and homomorphic encryption.	Conference paper	The research paper proposes a blockchain-based platform for housing rentals to overcome issues in the traditional system. It aims to eliminate middlemen, reduce costs, and enhance trust and privacy.
Kirti Rathore, Aleena Syed, Rahul Patel	M.p, India	To address issues of affordability and manual processes by streamlining tasks such as inquiries, property searches, listings, and status updates.	Article	This research paper tackles the prevailing challenges within India's rental housing market, where a significant portion, exceeding 30% of households, opts for rented accommodations. The study sheds light on issues such as the unaffordability of rental housing for low-income groups and notable regional disparities in occupancy rates. To address these concerns, the researchers propose the development of a web-based rental house management system.

ACADEMIC QUESTIONS

- How would you implement effective search and filtering options to help users find suitable rental properties efficiently?
- Explore the ethical considerations and data privacy measures that need to be integrated into the system, ensuring the security of both property owner's and renters' information.

FDD DIAGRAM

FDD- Functional Decomposition Diagram



Each Subsystem(Artefact) will have same work iteratively.

Testing

Testing Type	Aspect	Outcome	Status
Functional Testing	User Registration and Login	Users can register, log in, reset password, and manage their accounts.	Completed
	Property Listing Management	Property owners can list, update, and delete rental properties.	Completed
	Booking and Reservation	Tenants can view available properties and make booking/reservation requests.	Completed
	Payment Integration	Users can make secure rental payments through integrated payment gateways.	Completed
Security Testing	Data Encryption and Privacy	All user data and transactions are securely encrypted and protected.	Completed
Usability Testing	Interface and Navigation	The platform is user-friendly and easy to navigate with clear layouts.	Completed
Compatibility Testing	Multi-Device Responsiveness	The system works across devices (desktop, tablet, mobile) with consistent UI.	Completed
User Acceptance Testing	Tenant & Owner Satisfaction	Positive feedback from users on ease of use, functionality, and features.	Completed

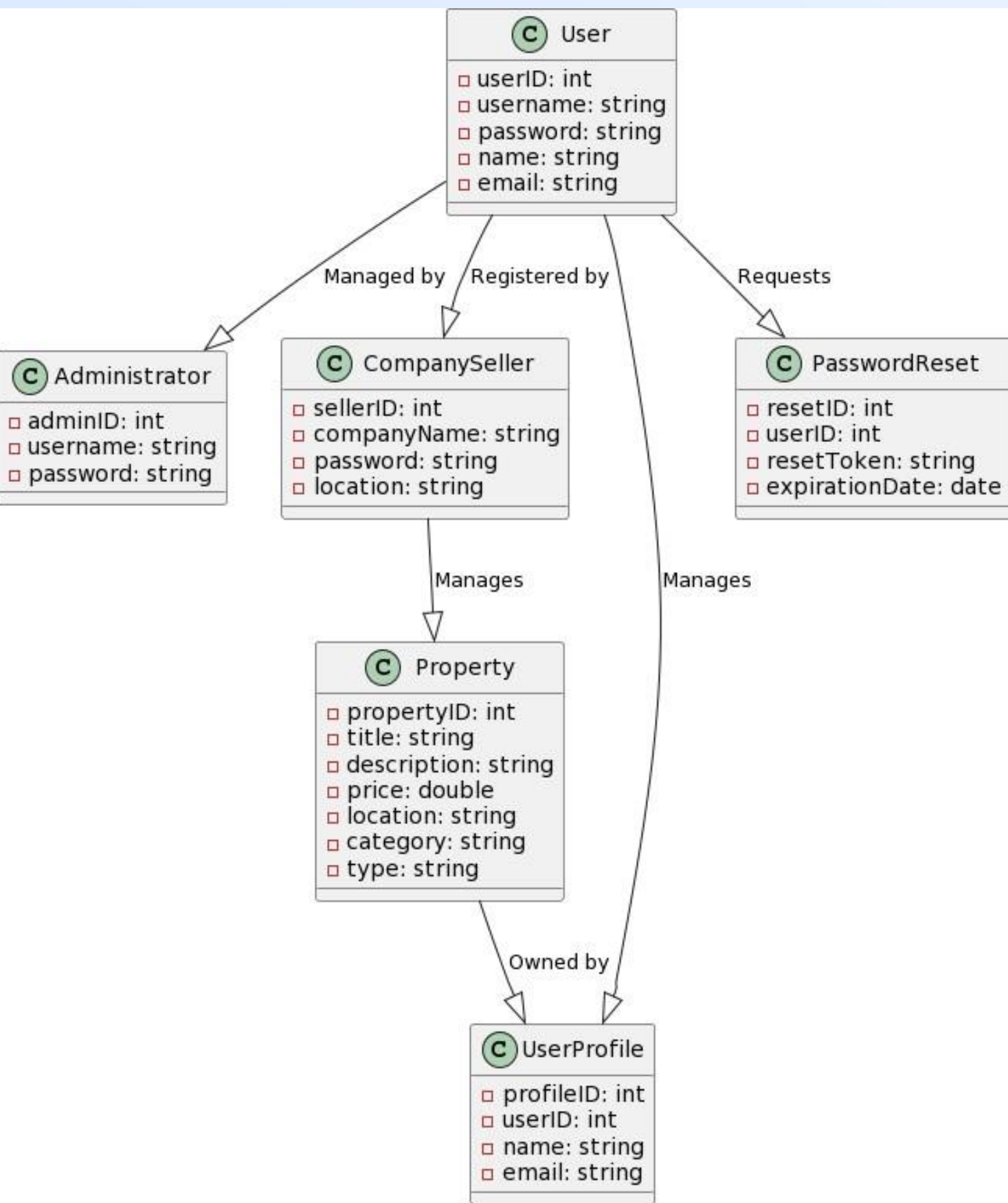
AIMS

- To reduce the amount of paperwork and administrative burdens by streamlining and accelerating the renting process.
- To reduce the price of conventional paperwork and procedures.
- To give tenants a simple way to look for and select appropriate rental properties.

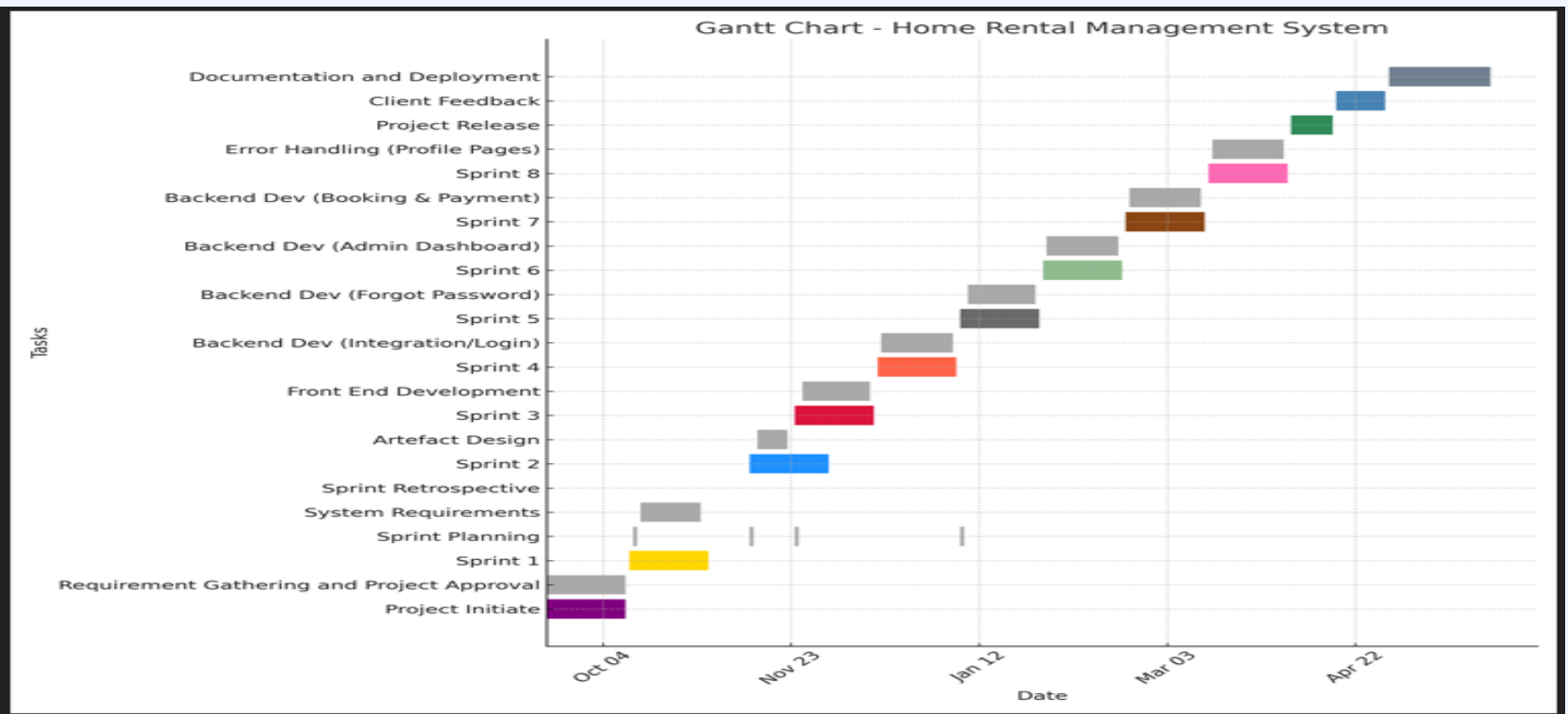
OBJECTIVE

- Digitize and streamline home rental procedures for an improved user experience.
- Simplify property searches and selection processes for renters based on needs and budget.
- Establish a comprehensive and accessible digital system for managing rental histories, minimizing misunderstandings.
- Reduce administrative time and costs for both landlords and tenants through simplified procedures.
- Enhance accuracy and prevent data loss by transitioning from paper-based to digital records.

CLASS DIAGRAM



GANTT CHART



TOOLS USED



CONCLUSION

The Home Rental System in Nepal has successfully achieved its goals of streamlining the rental process and digitizing manual procedures. The platform offers a comprehensive and user-centric experience, significantly reducing paperwork and administrative workloads. The system provides effective searching and filtering tools for tenants, emphasizing ease of use. Addressing academic concerns, robust data privacy measures, user permissions, and encryption protocols ensure the safety of personal information. Overall, the system marks a transformative shift in Nepal's housing rental market, showcasing the impact of technology in creating a more efficient, transparent, and secure leasing process.

Future Scope

- AI Based property recommendation system.
- Real time chat between owner and tenant.
- Push notification for new listings and updates.
- Multi Language and location based support/ dynamic mapping.