e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

PROPERTY RENTAL MANAGEMENT SYSTEM

Riya Garg*1

*1Department Of School Of Computing Graphic Era Hill University,
Dehradun, Uttarakhand, India.

ABSTRACT

This research paper presents the developmentof a property rental administration project using the Salesforce platform. The project aims to provide a comprehensive solution for managing rental properties, tenants, and payments through a centralized platform. The project leverages the Salesforce platform's robust features, including custom objects, fields, and workflows, to automateand streamline various administrative tasks.

The paper discusses the key functionalities of the project, including tenant onboarding, property management, rent collection, and reporting. The project's architecture and design are also presented, highlighting the integration of various Salesforce features, such as Apex classes, triggers, and visual force pages. The paper also describes the project'stesting and deployment process and provides insights into theproject's performance and scalability.

The research paper concludes that the property rental administration project on Salesforce provides an efficient and effective solution for managing rental properties. The project's automation capabilities streamline administrative tasks, reducing the workload for property managers and providing a better experience for tenants. The project's use ofthe Salesforce platform also provides a scalable andcustomizable solution that can be tailored to the specific needs of different property management companies.

I. INTRODUCTION

The property rental industry has witnessed a significant transformation over the years, with the advent of modern technology. Salesforce, being one of the leading customer relationship management(CRM) platforms, has played a crucial role in the evolution of this industry. The platform provides an array of features and tools to streamline property rental admin tasks, including tenant management, property listings, and lease management.

In this research paper, we aim to explore the development ofa property rental admin project using Salesforce as the primary platform. The project aims to provide property managers with an intuitive and user-friendly interface to manage their rental properties efficiently. The proposed solution will be developed using Salesforce's powerful suite of tools, including Salesforce Lightning, Apex, and Visualforce.

The primary focus of this project is to simplify the management of rental properties for property managers. The proposed solution will enable property managers to manage tenant records, track rental payments, maintain property listings, and generate financial reports, among other critical tasks. Additionally, the proposed solution will provide a seamless integration with other Salesforce modules, such as Sales and Marketing, to provide a comprehensive view of therental property business.

This research paper will explore the technical and functional requirements of the proposed solution, including the data model, user interface design, and integration with other Salesforce modules. The paper will also provide an overview of the development process, including the software development life cycle (SDLC) methodology used and the development tools employed.

Overall, this research paper aims to provide a detailed insightinto the development of a property rental admin project in Salesforce. The proposed solution is expected to help property managers streamline their rental property management tasks, leading to improved efficiency, reduced costs, and increased profitability.

II. LITERATURE REVIEW

The purpose of this literature review is to explore the various research articles and studies related to property rental administration and the use of Salesforce as a tool for managing property rentals. The review aims to identify the current trends, challenges, and benefits of property rental administration and how Salesforce can be used as an effectivesolution to overcome these challenges.

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

Trends in Property Rental Administration:

According to a report by Deloitte, the real estate industry is undergoing a significant transformation due to the increasing adoption of digital technologies. Property rental administration is no exception to this trend, as property managers and landlords are turning to digital tools to streamline their operations and improve their overall efficiency. This trend is driven by the need for faster and moreaccurate rental payments, improved tenant experience, and the ability to manage rental properties remotely.

Challenges in Property Rental Administration:

One of the main challenges faced by property managers and landlords is the complexity of managing multiple properties,tenants, and rental payments. In addition, the lack of transparency in the rental process can lead to disputes between landlords and tenants. Other challenges include the time-consuming nature of manual record-keeping, difficulty in tracking rental payments, and the risk of errors and fraud.

Benefits of Salesforce in Property Rental Administration:

Salesforce is a cloud-based customer relationship management (CRM) platform that offers a range of tools and features for managing property rentals. Salesforce enables property managers to automate many of their manual tasks, such as record-keeping, tenant screening, and rental payments. This automation leads to faster processing times, reduced errors, and improved transparency in the rental process.

Salesforce also offers real-time analytics and reporting, which allows property managers to gain insights into their rental properties' performance. This information can be used to make data-driven decisions, such as adjusting rental prices or marketing properties more effectively.

III. METHODOLOGY

The term methodology means the technique and procedure adopted by conducting a research study. It outlines how datawill be collected and the tools for collecting data, system methodology, the proposed system input and output, users and systems development tools.

Define the Object Model: First, you need to define the datamodel for the rental admin project. This will include creatingcustom objects such as Property, Tenant, Lease, and Payment.You can also leverage the standard objects like Account, Contact, and Opportunity for your project.

Create Relationships: Once you have defined the data model, you need to create relationships between the custom and standard objects. For example, the Property object can have a lookup relationship with the Account object, the Leaseobject can have a lookup relationship with the Tenant object,and so on.

Create Workflows: Next, you need to create workflows toautomate various processes. For example, you can create a workflow to send an email notification to the property ownerwhen a lease agreement is signed or to send a payment reminder to the tenant when their rent is due.

Create Reports and Dashboards: Reports and dashboards are essential for tracking the progress of your rental admin project. You can create reports to track the number of properties rented, the amount of rent collected, and the number of lease agreements signed. Dashboards can help you visualize this data and make informed decisions.

Integrate with Other Systems: Finally, you can integrate your rental admin project with other systems such as accounting software or property management software. This will enable you to streamline your rental admin processes andimprove efficiency.

By following this method, you can create a comprehensive property rental admin project in Salesforce that will help youmanage your rental properties more efficiently.

IV. SYSTEM ANALYSIS

INTRODUCTION

The system objectives outlined during the feasibility study served as the basis from which the work of system design wasinitiated. Much of the activities involved at this stage were oftechnical nature requiring a certain degree of experience in designing systems sound knowledge of computer related technology and through understanding of computers available in the market and the various facilities provided by the vendors. Nevertheless, a system could not be designed inisolation without the active involvement of the user. The user

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

had a vital role to play at this stage too. Data collected duringfeasibility study was utilized systematically during the system design. Designing a system is a creative process which calls for logical as well as lateral thinking Logical approach involves systematic moves towards the end product keeping in mind the capabilities of the personnel and the equipment ateach design making step.

EXISTING SYSTEM

Currently the most property managers manage property and tenants details on papers. Once customers finds a vacant house, they can call or email manager of the houses indicatingthe size of the house they would like rented to them. The property manager can email them back giving them all the details about the house they are requesting.

The details include:

- Rent per month
- Deposit paid
- Terms and conditions to follow acceptance

PROBLEMS OF EXISTING SYSTEM

With the current system recording the details of variousactivities of user is completely manual and entails a lot of paperwork. Each house has a file that contains the house: number, size, rent per month, expected deposit, occupant and status. Rent payment table contains tenants: first name, last name, Phone number, date of payment, amount and balance if any. The existing system only provides text based interfacewhich is not as user friendly as Graphical user interface. Sincethe system is implemented manually, the response is very slow. The transactions are not secure as papers may get lost or damaged. Hence, there is need of reformation of the system with more advantages and flexibility. The system eliminates most of the limitations of the existing system.

V. REQUIREMENTS ANALYSIS

Requirement analysis involved defining customer needs and objectives in the context of planned customer use, environments and identified system characteristics to determine requirements for system functions.

User Requirements

It entailed user involvement and statements of facts and assumptions that define the expectations of the system in terms of mission objectives, environment, constraints and measures of effectiveness and suitability. Basically the users:

A system that improves on the efficiency of information storage and retrieval.

A system that is easy to learn and use.

A system that is fast in processing transactions.

A system that is flexible, safe and convenient.

Functional Requirements

This is a necessary task, action or activity that was accomplished. The proposed system is able to:

Allow administrator to add a houses, tenant and defaulters details.

Allow the administrator to delete houses, tenants and defaulters details.

Allow the administrator to search data in the database.

Allow the administrator to edit data in the database

Hardware Requirements

i) Processor 2.0 Ghz processor speed.

ii) Memory 2GB RAM

iii) Visual Display Unit 800*600 colors 4.4,4

Software Requirements

Operating System- windows 7

Microsoft Office Power point- Used during presentation

Microsoft visual basic 6V.

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

VI. SYSTEM DESIGN

DESIGN PHASES

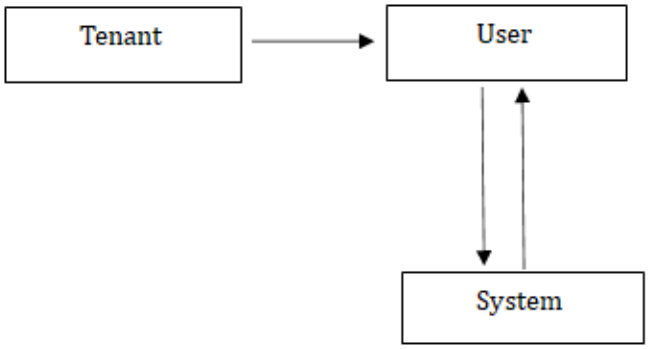
The user's requirements document was analyzed for better understanding of what was required of the system. Ways of implementing these requirements were analyzed. Physical modules of the system were designed and identifying of the operating environment in which they were to work on. The system was a visual basic system/application. The database was updated each time the administrator; add, deletes or deletes data on the system.

It's only the administrator who has access to the system to view or make changes when necessary. The system was designed to allow the administrator to view, edit, delete and add data to the database. Each time a customer comes, he/she is registered in the tenant registration table of the database with other relevant details about the tenant.

System design involved transforming the software requirements into an architecture that described its top-level structure and identified the software components and developed a detailed design for each software components. For each requirement, a set of one or more design elements was produced.

Conceptual Design

Conceptual design was the very first phase of design in whichdrawings or solid models were the dominant tools and products. The conceptual design phase provided a descriptionof the proposed system in terms of a set of integrated ideas and concepts about what it was to do, behave and look like, that was understandable by the users in the manner intended.



Database Design

The general theme behind a database is to handle informationas an integrated whole. A database is a collection of interrelated data stored with minimum redundancy to serve the users quickly and effectively. After designing input and output, the analyst must concentrate on database design or how data should be organized around user requirement. The general objective is to make information access, easy, quick and flexible for other users.

Tables Used :

Table 1. Property

S No.	Field Name	Field Types	Default Values / Required	Remarks
1	ID	Auto Number	1	
2	Name	Text	Required	
3	Type	Picklist	Room,House, Shop, Bungalow	
4	Lease Period	Number		

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

5	Address	Text Area(Long)		
6	Description	Text Area(Long)		
7	State	Picklist		Controlling Field which will control the data presentation of City field below.
8	City	Picklist		Dependent Field, which will be dependent on the State fieldto show data.
9	Zip Code	Number		

Table 2. Maintenance

S No.	Field Name	Field Types	Default Values /Required	Remarks
1	ID	Auto Number	1	
2	Start Date	Date		Will alwaystake inputs from today.
3	End Date	Date		Will alwaystake input the date from Start Date.
4	Workers	Lookup relation with Work Type Group Member		
5	Cost	Currency		
6	Status	Picklist	Under process/ Completed/ Queued	
7	Type	Picklist	Electricity/ Water	

Table 3. Rent

S No.	Field Name	Field Types	Default Values / Required	Remarks
1	ID	Auto Number	1	
2	Tenant ID	Master Detail with Contact		
3	PropertyID	Master Detail with Property		
4	Last Payment Date	Formula		
5	Rent Date	Formula		Will calculate the date to pay the rent.
6	Amount	Formula		
7	Status	Picklist	Paid, Unpaid	

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

Table 4. Lease

S No.	Field Name	Field Types	Default Values / Required	Remarks
1	ID	Auto Number	1	
2	PropertyType	Lookup with Property Object		
3	Tenant ID	Lookupwith ContactObject		
4	PaymentType	Picklist	Monthly, Quarterly, Yearly	
5	Rent to bePaid (in months)	Currency		
6	Lease StartDate	Date		Will alwaystake inputs from the day after today.
7	Lease EndDate	Date		Will alwaystake input the date after 6 months of Start Date.

VII. SOFTWARE INTERFACE OF

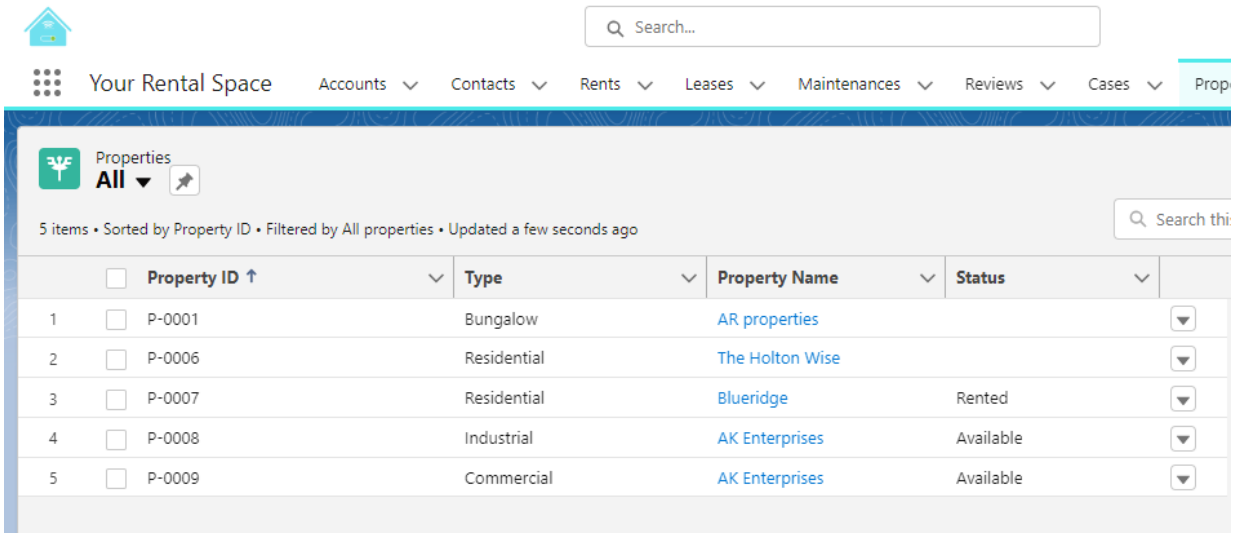


Figure 1: Properties

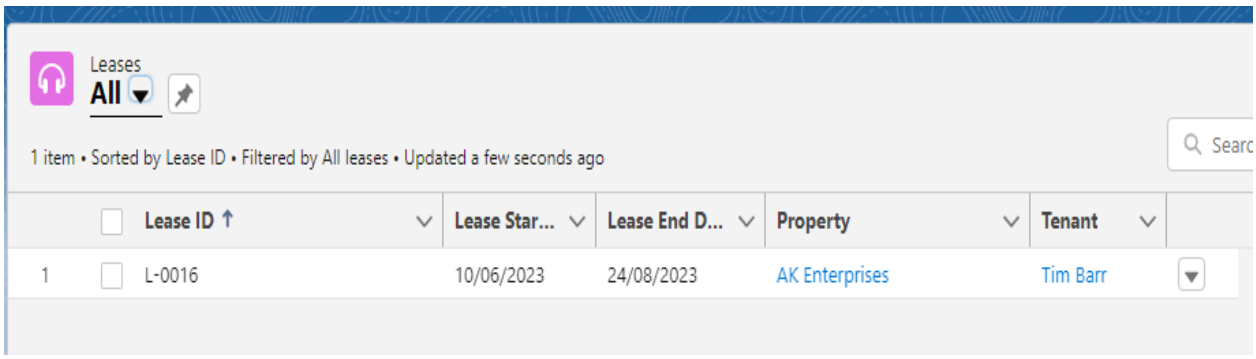


Figure 2: Lease

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:06/June-2023 Impact Factor- 7.868 www.irjmets.com

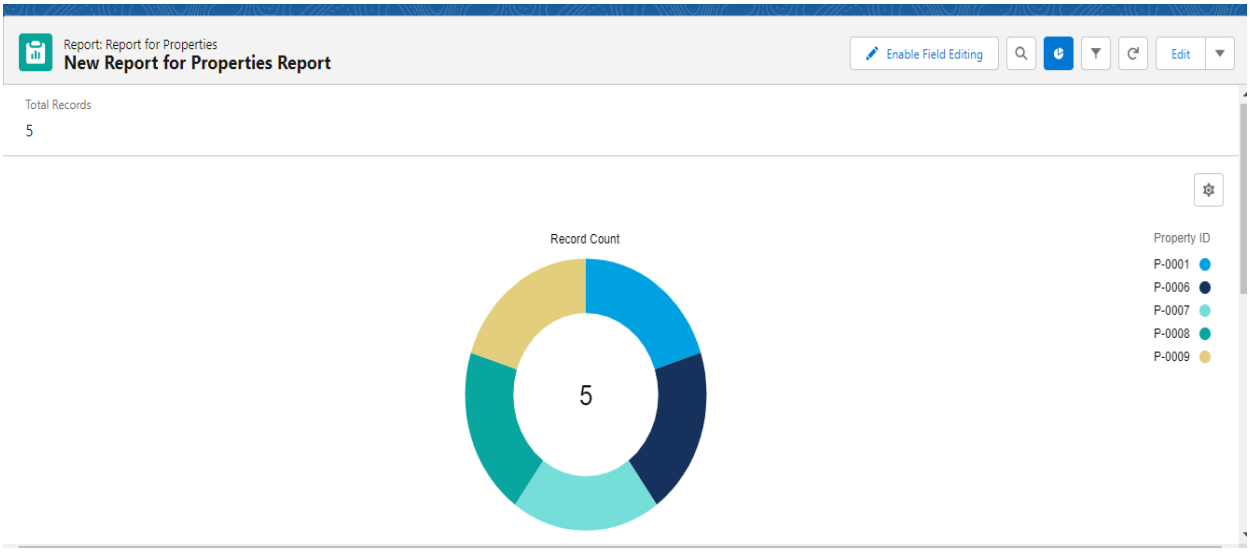


Figure 3: Report

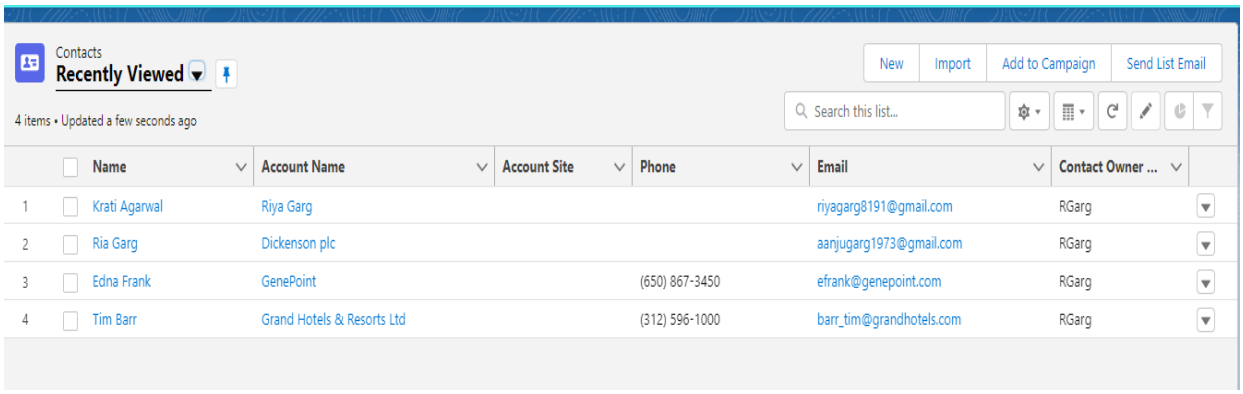


Figure 4: Contacts

VIII. CONCLUSION

The literature review indicates that the property rental administration is undergoing a significant transformation due to the increasing adoption of digital technologies. Salesforce is emerging as a popular tool for managing property rentals, as it offers a range of features that can streamline operations, improve efficiency, and enhance the tenant experience. Property managers who implement Salesforce can benefit from faster processing times, reduced errors, and improved transparency in the rental process. However, more research is needed to explore the long-term benefits of using Salesforce for property rental administration.

IX. FUTURE SCOPE

The property rental administration project in Salesforce is a robust platform that streamlines property management operations, such as lease agreements, tenant management, and maintenance management. The system is built on the Salesforce CRM platform, which is highly customizable and flexible, allowing for future enhancements and features. Here are some potential areas for future scope in a research paper on property rental admin project in Salesforce:

Integration with AI and Machine Learning:

Artificial Intelligence and Machine Learning technologies have the potential to transform property management by enabling the prediction of tenant behaviour, maintenance needs, and rent defaulters. Research on how AI and Machine Learning can be integrated into the rental admin project in Salesforce can provide insights into how the system can be further optimized.

Enhancements to the User Interface:

A user-friendly and intuitive user interface is crucial for any property management system. Research on how the rental admin project in Salesforce can be enhanced to provide a better user experience can identify areas

that require improvement, such as the design of dashboards, forms, and reports.

Blockchain Integration:

The integration of blockchain technology can enhance security, transparency, and immutability in property rental management. Research on how the rental admin project in Salesforce can be integrated with blockchain technology canprovide insights into how the system can be further optimizedfor security and trust.

IoT Integration:

The integration of Internet of Things (IoT) devices can provide real-time data on property conditions, tenant behaviour, and maintenance needs. Research on how the rental admin project in Salesforce can be integrated with IoT devices can provide insights into how the system can be further optimized for efficiency and cost savings.

Mobile App Development:

A mobile app can provide tenants and property managers withinstant access to property management operations such as rentpayments, maintenance requests, and lease agreements. Research on how the rental admin project in Salesforce can be integrated with a mobile app can provide insights into how the system can be further optimized for mobility and accessibility.

Overall, the property rental admin project in Salesforce has a vast potential for future enhancements and features. Research on these areas can provide valuable insights into how the system can be further optimized to meet the needs of property management professionals and tenants.

X. RECOMMENDATIONS

Our project is meant to satisfy the needs of rental houseowners. Several user-friendly interfaces have also been adopted. This package shall prove to be a powerful in satisfying all the requirements of the users. It is with utmost faith that I present this software to you hoping that it will solve your problems and encourage you to continue appreciating technology because it is meant to change and ease all our work that seems to be very difficult. I don't mean that my project is the best or that I have used the best technology available it just a simple and a humble venture that is easy to understand. However, I would encourageanyone who has the ability to advance it using advanced technologies so as to increase its capabilities.

XI. REFERENCES

[1] Ambrose, P. and Barlow, J. (1987), Housing Provision and House Building in Western Europe: Increasing Expenditure, Declining Output, Housing Markets and Policies under Fiscal Austerity, London, Greenwood Press.

[2] Cooper, M. (1998), Ideas to develop a literature review, vol. 3, page, 39.

[3] Erguden, S. (2001), Low cost housing policies and constraints in developing countries, International conferenceon spatial development for sustainable development, Nairobi.

[4] Goll and, A. (1996), Housing supply, profit and housing production: The case of the United Kingdom, Netherlands and Germany, Journal of Housing and the Built Environment,vol.11, no1.

[5] Hancock, T. (1998), Caveat partner: Reflection of Partnership with the private sector, Health promotion international, vol. 13, no 3

[6] Levin, K. (1999), Database Management Systems: How touse Relational Databases, vol. 2, no 4.