ABSTRACT

The House Rental Management System is a comprehensive platform that streamlines the process of managing residential and commercial rental properties "where renters and landlords connect with ease". It enables property owners to list their available properties, track rent payments, manage tenant details, and handle maintenance requests. The system also allows tenants to view available properties, sign lease agreements, make payments online, and submit maintenance issues. By automating key tasks such as payment reminders, contract renewals, and property inspections, the system reduces administrative burden and enhances operational efficiency for both landlords and property managers. Additionally, it provides a secure and transparent environment for tenants to interact with landlords. This system is designed to optimize property management, improve tenant satisfaction, and ensure timely financial transactions for all parties involved.

TABLE OF CONTENTS

NO.	NAME	PAGE
		NO.
1	Acknowledgement	i
2	Abstract	ii
3	Table of Contents	iii
4	List of Figures	vi
5	List of Tables	vii

NO.	NAME	PAGE NO.
1	Introduction	1
	1.1 Introduction	2
	1.2 Aim and Objective of the work	2
	1.2.1 Aims of the House Rental Management System	2
	1.2.2 Objectives of the House Rental Management System	3
	1.3 Brief Literature Review	4
	1.4 Problem definition	5
	1.5 Plan of their work	5
2	Technology And Literature Review	7
	2.1 Tools and Technology	8
	2.1.1 Node.js with Express.js	8
	2.1.2 HTML, CSS, and JavaScript	8
	2.1.3 MongoDB Database	8
	2.2 Project Planning	9
	2.2.1 Project Development Approach	9
	2.2.2 Milestones and Deliverables	10
	2.2.3 Group Dependencies	11

	2.3 Project Scheduling	12
	2.4 Estimation	12
	2.4.1 Effort Estimation	12
	2.4.2 Cost Estimation	13
3	System Requirement of Study	14
	3.1 User Characteristic	15
	3.2 Software and Hardware Requirement	16
:	3.2.1 Software Requirements	16
	3.2.2 Hardware Requirements	17
	3.2.3 Functional Requirements	17
	3.2.4 Non-Functional Requirements	18
	3.3 Assumptions and Dependencies	18
	3.3.1 Assumptions	18
:	3.3.2 Dependencies	19
4	System Diagrams	21
	4.1 Study of Current System	22
	4.2 Modules and Functionality of Purposed System	22
	4.3 Feasibility Study	23
	4.3.1 Technical Feasibility	24
	4.3.2 Operational Feasibility	24
	4.3.3 Economic Feasibility	25
	4.4 Requirements Validation	25
	4.5 Class Diagram	27
•	4.6 Use Case Diagram	28
	4.7 Sequence Diagram	30
5	System Design	34
	5.1 Data Dictionary	35
	5.2 Entity Relation Diagram	37
	5.3 Data Flow Diagram	38

	5.3.1 Zero Level Diagram [Context Level]	38
	5.3.2 First Level Diagram	39
	5.3.3 Second Level Diagram	40
	5.4 Activity Diagram	41
	5.5 State Diagram	44
6	Result, Discussion and Conclusion	45
	6.1 Result	46
	6.2 Test Case	46
	6.2.1 Valid Test Case	46
	6.2.2 Non-Valid Test Case	47
:	6.3 Snapshots	48
	6.3.1 Home Page	48
	6.3.2 Details and Review	50
	6.3.3 Create New Listing	51
	6.3.4 Error Detection	52
	6.4 Discussion	53
	6.5 Conclusion	55
7	References	57
	7.1 References	58

LIST OF FIGURES

NO.	NAME	PAGE
		NO.
1	Gantt chart	12
2	Class Diagram	27
3	Use Case Diagram	28
4	Sequence Diagram (Admin)	31
5	Sequence Diagram (Tenant)	32
6	Sequence Diagram (Landlord)	33
7	ER Diagram	37
8	Data Flow Diagram [LEVEL – 0]	38
9	Data Flow Diagram [LEVEL – 1]	39
10	Data Flow Diagram [LEVEL – 2]	40
11	Activity Diagram	41
12	State Diagram	44
13	Valid Test Case	46
14	Non-Valid Test Case	47
15	Homepage	48
16	Details and Review	50
17	Create New Listing	51
18	Error Detection	52

LIST OF TABLE

NO.	NAME	PAGE NO.
1	Month 1: Milestones & Deliverables	10
2	Month 2-4: Milestones & Deliverables	10
3	Month 5 to 7: Milestones & Deliverables	10
4	Month 8: Milestones & Deliverables	11
5	COCOMO Parameters for Semi-Detached	13
6	Data Dictionary	35

1. INTRODUCTION

- Introduction
- Aims and Objective of the work
- Brief Literature Review
- Problem definition
- Plan of their work

1.1 Introduction

The **House Rental Management System** is an innovative digital platform designed to transform the way rental properties are managed. This system aims to improve the efficiency, accessibility, and transparency of property listings, tenant management, and lease agreements. By leveraging modern technology, the system automates various tasks, reducing manual errors and ensuring a seamless experience for both tenants and property managers. The primary goal of this system is to provide a user-friendly online platform where tenants can easily browse listings, register, submit rental applications, and track payment schedules. This convenience encourages more people to find suitable rental properties and fosters a quicker turnaround for property owners.

For property managers and landlords, the system offers comprehensive tools to manage tenant information, track rental payments, handle maintenance requests, and monitor lease agreements. This streamlines property management tasks, ensuring that rental properties are maintained effectively and that tenant relationships are managed professionally.

Transparency is a key feature of the House Rental Management System. The platform provides real-time updates on rental availability, lease status, and payment history, helping both tenants and landlords stay informed and aligned on rental terms. Additionally, the system generates detailed reports and analytics on tenant trends, payment history, and property occupancy rates, enabling property managers to make informed decisions and optimize property usage. By implementing this system, rental agencies and individual landlords can significantly improve service quality, ensure timely rent collection, and enhance the overall tenant experience.

1.2 Aims and Objective of the work

1.2.1 Aims of the House Rental Management System:

- **Simplify Property Management:** To streamline and simplify the management of rental properties, including listing, monitoring, and tracking rental payments, maintenance requests, and tenant interactions.
- Enhance Efficiency: To automate and optimize the administrative and operational tasks involved in renting out properties, reducing manual work for landlords and property managers.
- **Improve Communication:** To provide a seamless communication channel between landlords and tenants, enabling easy resolution of issues and inquiries.
- Ensure Transparency: To promote transparency between all parties by offering clear and easily accessible information about properties, terms, agreements, and payments.
- Reduce Operational Costs: To reduce operational overheads for landlords and property managers by minimizing the need for paperwork, phone calls, and face-to-face interactions.