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## **Project Proposal: RentSmart – A Home Renting Web Application**

### **1. Project Title**

**RentSmart: A Simple Home Renting Web Application**

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### **2. Problem Statement (with Background)**

In many cities, finding rental homes and apartments is still a frustrating process. People often depend on social media posts or local advertisements that are unverified or outdated. This makes it difficult for tenants to find suitable housing and for landlords to reach interested renters easily.

The main issue is the **lack of a simple and centralized web platform** for listing, searching, and renting homes. A dedicated system would make this process more organized, reliable, and transparent.

This project aims to solve that problem by developing a straightforward home renting web app that connects landlords and tenants directly.

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### **3. Project Goal and Objectives**

#### **Goal:**

To design and develop a responsive web application that allows landlords and tenants to list, search, rent, and sell residential homes and apartments.

#### **Objectives:**

1. To develop a working web application using **PHP, MySQL, HTML, CSS, and JavaScript**.
  2. To allow **landlords** to register and post property listings with descriptions and images.
  3. To allow **tenants** to browse, search, and send booking inquiries.
  4. To provide a **basic admin panel** for managing listings and users.
  5. To ensure the system is **responsive and easy to use** across different devices.
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#### **4. Scope of the Project**

##### **In Scope:**

- User registration and login for landlords, tenants, and admin
- Property listing, search, and filter functions
- Booking inquiry form
- Basic admin dashboard for managing content
- Responsive design using HTML, CSS, and JavaScript

##### **Out of Scope:**

- Payment integration or online transactions
  - Mobile app version
  - Real-time chat system
  - Advanced recommendation algorithms
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#### **5. Significance of the Project and SDLC Model to be Used**

##### **Significance:**

It provides hands-on experience in **full-stack web development** and demonstrates how software engineering principles are applied in real-life systems.

RentSmart will serve as a **practical learning project** that strengthens our understanding of requirement analysis, system design, database management, and teamwork in software projects.

## **SDLC Model: Rapid Application Development (RAD)**

We selected the **Rapid Application Development (RAD)** model because it allows fast prototyping, user feedback, and quick improvement. It's suitable for student projects with short development timelines and limited resources.

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## **6. Methodology and SDLC Phases**

<b>SDLC Phase</b>	<b>Description</b>	<b>Tools / Techniques</b>	<b>Team Roles</b>
<b>Requirement Gathering</b>	Identify main system requirements through group brainstorming and small surveys of potential users.	Google Forms, Discussion Notes	Project Manager & Analyst
<b>System Design</b>	Create wireframes and ER diagrams; plan database tables and page layout.	Figma, Draw.io, MySQL Workbench	System Designer & Database Admin
<b>Implementation (Coding)</b>	Build frontend using HTML, CSS, and JavaScript. Backend with PHP and MySQL database for storage.	Visual Studio Code, XAMPP	Developers
<b>Testing</b>	Test all modules (login, listing, search, inquiry) for functionality and errors.	Manual Testing, Browser Debug Tools	Testers
<b>Deployment</b>	Deploy locally using XAMPP for demo and optionally online via 000webhost for presentation.	XAMPP, GitHub, 000webhost	Deployment Lead
<b>Maintenance</b>	Make small improvements, fix errors, and refine design after testing and feedback.	Git for version control	All Members

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## **7. Project Schedule**

<b>Date Range</b>	<b>Phase / Task</b>	<b>Expected Output</b>
Oct 21 – Oct 24	Proposal Preparation	Completed proposal

Date Range	Phase / Task	Expected Output
Oct 25 – Oct 31	Requirement Gathering & Planning	Requirements document
Nov 1 – Nov 7	System Design	ER diagram, UI mockups
Nov 8 – Nov 20	Implementation	Working prototype
Nov 21 – Nov 27	Testing & Debugging	Stable version of RentSmart
Nov 28 – Dec 4	Deployment & Documentation	Hosted web app and report
Dec 5 – Dec 6	Presentation	Final demo and slides

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## 8. References

- W3Schools. (2024). *PHP and MySQL Web Development Tutorials*. Retrieved from <https://www.w3schools.com/php>
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