A WEB-BASED RENTAL PROPERTY MANAGEMENT SYSTEM FOR ORETETI APARTMENT

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An Information Systems Project Proposal Submitted to the Faculty of Information Technology in partial fulfillment of the requirements for the award of a Degree in Business Information Technology

I declare that this proposal has not been submitted to any other University for the award of a Degree in Business Information Technology.

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Abstract

The rental property is a property from which the owner receives payment from the occupants known as tenants for using the property. It may be either residential or commercial. Residential property is where people live while commercial property is for business purposes. Investors need to be aware of the current market trends and what the tenants want. Management of these rental properties can be difficult at times. The landlord is tasked with offering a great property for rent, search for tenant, repair and maintain the apartment, collect rent, and do marketing, among others. Some landlords also own multiple rental property businesses across the country. Thus, it is not easy to manage the rental property properly and efficiently either through the owner or agent companies. However, just like any other business, it needs publicity, so that it gets more tenant applications to increase the revenue. Some Landlords for a very long time have delegated some of their duties to agents whose main attention is focused on collecting rent. This project, therefore, proposes a rental property management system to market and advertise rental property. Advertisement starts before the current tenant moves out when they serve a notice. The proposal expounds more on the challenges in the sector, works that have been done before regarding the challenges being faced and how the project proposes to reduce the challenges facing rental property management. The system will be a web-based application that can be accessed through desktop devices and through user mobile phones. Tools that may be used in the development of the web-based system will be sublime text or Atom that will be the IDE to be used. Languages that will be applicable in this IDE is HTML, PHP, and JavaScript. This is so because they can be easily implemented in the said IDEs. The DBMS to be used for the system will be MySQL. This is preferred because it is easy to use as compared to oracle.

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List of Abbreviations

HTML Hypertext Markup Language

IDE Integrated Development Environment

MySQL My Structured Query Language

PHP Hypertext Preprocessor

XAMPP Cross Platform Apache Maria DB PHP and Perl

1.0 Introduction

1.1Background

The urban population all round the world has led to the increase in demand for housing units(Baum-Snow & Ferreira, 2015). Governments around the globe get involved heavily in housing markets, and most have various policies to pursue multiple goals. In most parts of the

world, people desire to own a home while others prefer renting. However, every country has its own specific approach to solve housing demand. For instance, in the united states the government intervenes in a rental market by making sure its tenants access affordable housing.

There is a need for every government to encourage and support the development of rental market, especially where most urban residents are tenants as is the case with many countries. Savings and Credit Cooperative Organizations in Kenya for instance, have illustrated the potential for deposit-based lending to deliver housing finance for many of the country's underserved prospective borrowers (Feather & Meme, 2019).The authors also state that this will be of significance since it helps overcome the housing finance sector underdevelopment which is too often experienced in the developing world. However, several challenges such as, lack of affordable rental homes and insufficient construction of housing units to meet the demand of the increasing population remains a challenge.

In a research done in Nairobi by strategic approaches and delivery of affordable housing in Nairobi city in Kenya simply means that part of the society whose revenue is below the average income. As a developing country, most of the Kenyan population are not able to purchase homes at market price. Therefore, most of them live in towns and about one billion live in slums, which will double by 2030. There is an increase in rural, urban migration in major cities at a pace that is much quicker than they can be consumed and managed. This, therefore, leaves most people in many emerging towns with none or few choices but living in slums. However, it is very difficult to address housing challenges because it is a task that requires a lot of investment and social entrepreneurship. Some of these challenges include, poor management and marketing, wrong tenant who do not want to pay rent on time and low numbers of tenants in the premises which affect revenue generation for property owners. This study aims at conducting a research to review on existing rental property management systems to develop a rental property marketing system. This will enable property owners/landlords and management to promote and advertise their rental apartments to the public to create awareness to potential customers on available services, while at the same time they can generate revenue to boost their businesses.

Oreteti apartment is a rental apartment business located at ongata rongai, near the shopping center. It is managed by the caretaker who runs the management on behalf of the landlord. Almost three quarter of the rental apartment is unoccupied. Sometimes people walk in asking for apartment to

rent and sometimes takes a long time before someone asks for a rental house. However, unless one walks in asking for a vacant house, there is no other way to know if such apartments exist.

1.2 Research problem

Sometimes when one needs a house to rent, it becomes a challenge because, most of these houses are under the management of caretakers and agents who sometimes may not be trusted. Walking around from one estate to another asking for an available house to rent can also be hectic for various reasons. Some agents also charge a fee for finding you a house; hence, it becomes so hard to easily get one, according to one's choice and preference. Oreteti apartment is faced with a problem of publicity on its services including poor and untimely communication with potential tenants/customers. Unless one walks around or ask someone about available apartments to rent in its neighborhood, it is difficult for one to know if Oreteti apartment exists. Keeping track of vacant houses as well as those on notice to become vacant in future by customers is not easy. Also, customer feedback after service not available for future reference or service improvement.

Some of the agents also still use manual systems which makes the entire process complicated in managing such properties. Therefore, there is a need for a better way of handling this problem more efficiently to promote services at Orereti apartments. This project will develop a web application to help advertise and market the rental property online to create awareness and its publicity. This will in turn facilitate an increase in revenue for the business towards better returns on investment.

1.3 General objectives

The purpose of this project is to develop a web-based system that would help the management of Orereti apartments to advertise and market their rental services online. This should inform the potential customers/tenants about the type and size house/room available, price and those on notice to be vacated soon.

1.4 Specific objectives

i) To analyze the challenges facing management of rental properties

II) To review existing rental property management systems.

iii) To design and develop a web-based system to help advertise and market Oreteti apartments.

iv) To test the new system

1.5 justification

Most of the Kenyan urban residents are tenants, who may need vacant rental houses that exist in a certain residential area. Therefore, there is need for a rental property to advertise and market their business. How you market your business matters a lot in the present world. The rental apartment may be successful or not depending on how you invest in the market. This project aims at providing communication channel between a tenant and landlord in an efficient and effective way through advertising and marketing.

The web application system will assist tenants to search for available houses and houses that have given out notice. The system will provide the details of the Oreteti rental apartment such as tenant portal, gallery, house vacancy tracking. The web application system will also be of great help to rental managers and house investors as it would enable them to reach out to their target market more easily through advertisements that would be available in the website. This will build a good relationship between the management and the market. The system should be developed and implemented as it would help solve the problems associated with searching for a new house to rent, save the time and money spent to look for suitable apartments by tenants which would not have otherwise been incurred had there been an online platform.

1.6 Project scope and limitations

The project will mainly focus on advertising and marketing the rental property apartment. This will create public awareness. The landlord should also engage with potential customers easily, potential tenant will be able to register, view the gallery of the entire apartment, also view vacant houses and also those houses that have given notice on when to vacate the premises. The customer can also apply for tenancy. The project will also review existing works in the industry regarding rental property business marketing. However, this project is limited to the advertisement and marketing of Oreteti rental apartment. Given the time for the completion of this project, time constraint will be a limitation.

Chapter 2: Literature review

2.1 Introduction

This chapter focuses on reviewing rental property management situation, especially in Nairobi county. This is a very important sector in the economy of Kenya. Housing is one of the basic needs of human beings, hence the need to provide adequate and decent housing units. (Nguluma & Magina, 2019). The chapter will also focus on reviewing challenges and existing rental property management systems to inform the development of the solution to the research problem.

2.2 Current situation

In Kenya, both the urban population and the number of towns have increased enormously over the last 35 years. Development of rental houses enables the country to meet the increasing housing demand that comes with the rise in population especially in the urban cities like Nairobi, Kisumu, and Mombasa. Housing production has not been consistent in their national development plans meet the high demand. There is also a low rate of home ownership in Kenya, because of the high population density. The World Bank estimated the urban population in Kenya to be about 11.36 million in 2016. Thus, increasing the demand that leads to increase in price. (Kenya Bankers Association, 2015)

Most of the low-income households, cannot afford to buy, mortgage, or build their own homes, hence most of them prefer rental housing. The rental property management sector is a complex one involving many actors. The rights of tenants are poorly respected, especially in informal settlements, for instance, in the Kenyan Kibera and mathare slums. The environmental standards are also low in these settlements.

The house price is affected by the number of bedrooms, bathrooms, floors, the location, house type and domestic servant quarters if present, proximal to a mall, balcony, garden, and separate dining room, among others(Ungayi, 2019)

Caretakers and agents are employed by landlords to act as intermediaries between them and the tenant/customers. They are responsible for the maintenance of the premises, collect rent, solve rent disputes, ensure cleanliness of the rental property, and sometimes evict tenants in case of a rental default. (Mwau et al., 2020)

Currently, oreteti apartments is managed by the caretaker, who rents the apartments, receive rent, handle complaints and solves any issues that may arise from the apartments on behalf of the landlord. This creates conflicts of interests sometimes since the caretaker may choose to pursue his own interest fast before that of the landlord.

2.3 Challenges experienced.

Keeping and recording all data manually is very difficult. Most landlords/property managers use the manual system in storing and maintaining their property and customers' data, which may lead to distortion and loss of some data.

Data security is not guaranteed as data is recorded on paper. Data may easily get damaged. There is also no database to store information. Data is stored in books/files. Lack of these important requirements makes management of the rental property very difficult. (Bertino, 2016)

Some tenants default on rent, Sani and Gbadegesin (2015) analyzed the causes of rent default in Kaduna metropolis in Nigeria. Some of the reasons identified were, failure of landlords to repair their properties as the main cause, among other factors. Some landlords/landladies were found to be not flexible in policy on rent collection. When the rent is due, the observation made was that, almost all the tenants of urban rental housing become difficult when it is time to pay their rent, hence some end up not paying at all. Sometimes communication between both parties is not sufficient.

According to Gitonga (2016), rental property responsiveness to the market needs is also still a challenge. Marketing and advertising, financial constraints, destruction of property by tenants, tribalism, and insecurity are also other challenges.

Currently, just like any other rental business, oreteti apartments is faced with some of the challenges described above if not all. It is managed by the caretaker; he faces a lot of difficulties running the activities in the apartments. The major problem being lack of a way of creating awareness to the customers of the existence of oreteti apartments in the area. Others include late rent payment, handling complaints, manual record keeping of information and communication breakdown with the landlords and its tenants.

2.3.0 Existing property management systems

2.3.1 Baraza property management system

Baraza Property is a web application that assists landlords and agents in the management of their rental property. The system manages the rent collection, property, accounts, key property details, property records, maintenance schedules and tracking of property insurance details. The features of this system are rent module, property details module. Agent fees and commission, accounting module, tenant module and service fee module. The rental management system is beneficial to the business as it increases its productivity and profit, enabled by automated business processes.

The business is also able to make informed decisions, which can improve decision-making on its project overviews and management. The Baraza property management system also manages business information of the property. Lastly, satisfaction of clients' needs through rental property maintenance and service order management.

However, the system does not have a marketing module where the public can view and get to know more about Baraza rental property.

Rental income tax is not also charged to landlords automatically. This therefore makes the system less suitable since the Kenyan economy requires the payment and filling of tax, for instance the residential rental income tax. (Ministry of Finance, 2015).

Customer complaints are not taken care of in this system**.** This is very important for any business because tenants/customers could get dissatisfied in some way with the services offered by the management but lack a way to address them to the management. There should be a module to remedy the issue the customer/tenant faces. Either way, customer feedback is very useful in a variety of ways like the business can get to understand customer needs better, rectify mistakes, and build customer loyalty(Lee et al., 2015) .

2.3.2 kodisher property management software

Kodisher is a property management software that helps manage rental properties. It is designed to work for both rental property landlords and agencies. It enables clients to easily manage and store tenant information, rent payment, financial transactions, and landlord accounts. Landowners/managers can also prove their gross rent collection and be able to pay his tax and file returns. It is an easy to use and affordable web application solution. However, in this system, there is no decision-making module that includes rental property owner/manager and tenant to be

involved in activities and tasks involving the planning, organizing directing and controlling with respect to the property being managed.

Customer feedback and testimonials of former tenants is not available on the website. This may help potential customers/tenants who may need to know about their past experiences as tenants.

There is no proper advertisement of kodisher property in the system that exposes the rental property to the public

The insurance cover of the property, the rental property system has not described how the insurance details of the property is managed.

2.3.3 Tolet digital agency

Tolet Online property management software is a cloud-based property management software that allows landlords, property managers, agents to easily manage their rental property in Kenya and in the African market. The features include Management of Property, finance, rent, maintenance, and training and support of its staff and customers/tenants. Benefits of Tolet digital agency are, property owners track occupied and vacant units, record, and store tenant detail, monitor insurance, rent payment through various payment options, and create invoices. Landlords and agents can send bulk notices or group emails for rent reminders. Also, maintenance alerts, site visits or any other news that needs to be shared with all tenants.

However, the system does not guarantee the security of the tenant. There is no portal where one can access security services in case of any danger. Rental income tax is not considered. Paying and filing of tax is very important and therefore the system should charge landlords automatically. This therefore makes the system less suitable for the market.

In conclusion, there are so many expectations in the rental property market. However, the study on this rental property management systems establishes that it is sometimes difficult to really meet all the expectations of the property owners and tenants/customers, and therefore there is need for other developers to solve other problems that are not covered, thus, rental property management systems should use various strategies to improve and meet the increasing

expectations of the property owners and tenants/customer on the existing rental property management system. This is of benefit to the property owner, management, and tenants.

2.6. Addressing existing gaps

The project proposes to develop a web application to enable the landlord market and advertise their rental apartments online to reduce the amount of search time. It should also give the services that both landlord and tenant/customer want and should have a friendly user interface. Marketing will expose the rental apartment to more tenants, available house units, type and rent deposit. It will also offer the general description, location, address, and amenities of the apartments.

The advertisement will entice willing tenants/customers to rent by providing beautiful pictures, property portals and providing feedback from the existing customers on their experiences as tenants in the apartment. It also seeks to provide timely communication between the landlord and tenant/customer. This project is meant to satisfy the needs of potential tenants and rental property owners. The system will allow the user to search for a vacant house and any other information. It is designed and developed in such a way that it tries to overcome all the prescribed problem. The system being an online system will give accurate information regarding the property which helps to view all the information directly from anywhere. The system allows for efficient tracking of expected vacant houses by unit, tenant, and based on a date range.

Chapter3:0 System Development Methodology

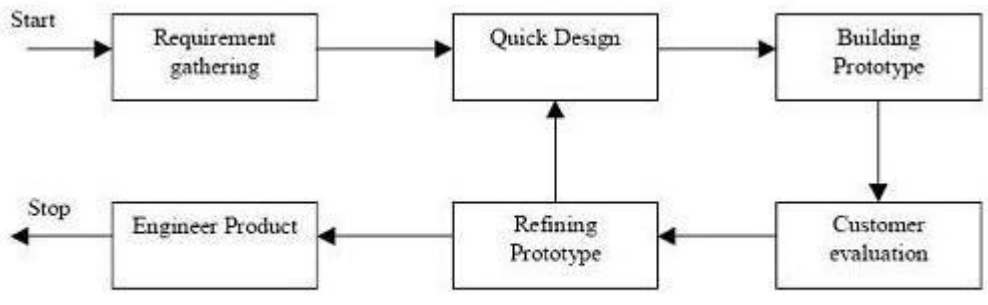
3.1: System methodology.

Methodology is a series of steps to perform and deliverables to produce. System methodology is a technique and procedure used to develop projects. Software prototyping will be used in this project. This is a working model of software with limited functionality (Isaias & Issa, 2015) . The methodology enables one to understand the customer requirements at the beginning of development and on the other hand, the customer will be able to evaluate the developer's proposal and can try them out before the developer implements the decision. This therefore creates a rough version of systems quickly and grow it into the final system with repetitive refinement. Design options are thrown away but learning from them is factored into the final design. Users can work with the prototype quickly and can also give feedback to identify changes and refine real requirements.

The main disadvantage of software prototyping is that there is an obvious risk of failure since the first version of the type is also the final version, but this can be overcome by identifying potential problems and missing functionalities before they can cause interruptions. However, this methodology is preferred because the system is a web application where end users interact with the system with minimal training. There are several types of software prototyping. An evolutionary and throwaway prototype, among others. Throw away prototyping uses very little efforts with minimum requirements analysis to build a prototype (Isaias & Issa, 2015),while in the evolutionary prototyping the well understood requirements are included in the system methodology and the requirements are added at the time when they are understood. In this case, evolutionary prototyping will be used.

3.2 Evolutionary prototyping model

In this model, a prototype is built during the requirements phase by developers. It is evaluated by end users who then gives feedback on whether they are satisfied with the prototype or not. The developers refine the prototype further regarding the customer feedback. This model involves developing a project plan, creating a high-level paper model which can be used as a source for requirements specification. The system designers are expected to build the algorithm functions, user interface and the database. The good thing with this model is that the designer cannot design the prototype without demonstrating to the user this therefore assists the user to get an opportunity to evaluate the system problems and suggests for improvements. The processes involved in this model include planning, requirements analysis, design, building prototype, customer evaluation, refining prototype, and engineer product. The process is repeated until the user is satisfied.



Prototyping Model

Figure3.2 evolutionary prototyping model(Isaias & Issa, 2015)

3.2.1 Requirements analysis and specification

This is the determination of exact customer requirements and expectations for a new or any modified product based on the requirements collected. Requirement gathering entails collecting all relevant information about the software to be developed. The feasibility study is conducted to determine if the project should be undertaken or not, considering the values and objectives of the organization. However, the developers then arrange the customers requirement in order of importance, in case of any ambiguity, they can discuss with the stakeholders. Requirements are divided into functional requirements and non-functional requirements. Functional requirements generally describe what the system must do. Nonfunctional requirements are the characteristics that address operational and technical requirements. Data collection is done through the following methods.

Interviews: This is where questions are asked to the users/tenants who interact with the current or new system and anyone involved in the system. Both open ended and closed ended questions will be asked to obtain valuable data based on various individuals and the way the different way they interact with, or view, the system.

Observation: Observation analyses and observes potential clients of the proposed system. It may also observe the user themselves. User observation is helpful in assisting the analyst by getting a full grasp of how the user interacts with the system, firsthand. When the objective is to improve a task, the analyst can involve as many participants as possible to represent a larger population.

3.2.2 Prototype Design

In this process, prototyping, design involves gathering ideas on how the system should be designed. Based on the ideas collected the sketching and analysis is done using diagrams, documentation of ideas, implementing ideas, testing, evaluating, and refining the ideas on how to design the system. The diagrams sketched analyzed include, use case diagram, entity relationship diagram and data flow diagram. Deliverable of this system is an information system that is fully

implemented. This diagram assists the designer to fully understand the requirements and detect errors in the system.

3.2.3 Customer valuation

The proposed system is presented to the customer to ensure that the concept matches the requirements of the customer. This helps to find out the strengths and weaknesses, suggestions, and comments from the customer. This should also inform which kind of customers the business should target.

3.2.4 Prototype Building

Coding of the system takes place during this phase. For this project, the programming languages that will be used are PHP, JavaScript, CSS, and HTML. PHP is preferred because it is supported by many web servers, it is secure and supports major databases. HTML is supported on almost all browsers; it is easy to understand and is user-friendly. CSS (Cascading Style Sheets) is ideal for decorating the web pages. JavaScript can easily be integrated in HTML. On the other hand, XAMMP will be used for the database creation and storage because it is an open-source web server and user friendly. The deliverable of this phase is the first prototype.

3.2.5 Prototype Testing

The functionality of the prototype is checked during this phase. The aim is to find errors and improve some functionalities of the system if any. The prototypes will be tested using the function testing method. This method aims to examine the functions of the system and design a series of input that will test the functions. The deliverable of this stage is a functional prototype.

3.3 justification of methodology

The evolutionary prototyping model emphasizes in user interaction. This method involves the customer seeing the system requirements as they are being gathered. He or she can make suggestions depending on the kind of the system they want. Therefore, the developers usually get the feedback from the customer which help them in the proper design of the system. The other advantages of this model include, accommodation of unexpected requirements, the addition of more functionalities and finally the interaction with the model.

3.4 Functional requirements.

This is the system requirements that explain what the system can do and what it cannot do and how the system behaves. They create a framework that allows the clients to influence and control cost, allow the right technology to be used and creating a link between what is wanted and what will be created. It is also a description of the services that the software must offer. It describes a software system or its component. A function is nothing but inputs to the software system, its behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform.

Some of the functional requirements are as follows,

3.4.1 Authentication

The users must enter their user details and password to access the system. This will ensure the security of the system since you cannot access the system without login credentials.

3.4.2 Administrative

The system administrator manages the system; tenants, record and updates the system information.
Admin to add, edit, update, and delete an apartment.

3.5 nonfunctional requirements

This is the system requirements that essentially specify how the system should behave and the constraint upon the system behavior. Why this requirement?

They help communicate the scalability requirements, characteristics being assigned and delivered. It also measures what the investment is going to deliver and how far into the future can the application be expected to go on in terms of meet. This requirement is as follows.

3.5.1 Usability requirement.

The system should be user friendly, efficient for the frequent user, ease of learning and easily understandable.

3.5.2 Reliability requirement.

The system should allow users to view information on the site, accurately performs registration, and member validation.

3.5.3 Data integrity requirement.

Accuracy and consistency of data stored in a database is ensured. All data must be correct, errors must be checked, and validation performed.

3.5.4 Security requirement.

The users log in to the system using their unique identification number and password. This ensures that only authorized personnel can access the system.

3.5 Proposed module and architecture

3.5.1 User Module

This is a module that will allow users to update their information.

3.5.2 Administrative Module

This is the module which will ensure the tenant will be able to view the rental property easily.

3.5.3 Security Module

This is done by creating a secure connection that will transport the information to the encrypted database where it would not be retrieved easily. The passwords should be hashed to ensure that it cannot be deciphered.

3.6 System development tools and techniques

3.6.1 HTML

The language is used to develop the interface where the users would be able to enter details and access the different web pages to facilitate making registration and enabling the users to interact with the system.

3.6.2 PHP

The programing language is used to ensure that different users on the system would be able to login successfully and led to different web pages according to their user specifications. In addition to that, the language facilitated the fetching of stored data onto the various web pages as specified by the users.

3.6.3 JavaScript

This is the programming language that is used in the creation of the modules.

3.6.4 MySQL

This tool is used to come up with the database which stores the information and retrieve the subsequent information when it is required.

3.6.5 IDE

The actual coding involves the use of sublime text which would host the different languages on the same platform.

3.7 Case Studies

Marketing to potential tenants/customers has always posed a challenge to property owners and managers. Markets continue to evolve and meeting the changing needs of tenants can often require a lot of creativity. The proposed project aims to understand the market and develop an effective website to help landowners/managers market and advertise their rental business. Rental property management system for oreteti apartments; is an online system that promotes Oreteti apartments by advertising vacant houses and those that will be vacant in the future to the public. This will also include managing landlord and tenant information, rent management, house vacancy tracking, adding gallery, adding rooms, identity agreement, and task management. A user can log in as tenants, or landlord, search for a vacant house, checks the type, rent to be paid, terms and condition and can view a video walk-through of the apartment. When the landlord logs in, he can see his profile, which houses are occupied and which are vacant, they can also add houses with their respective pictures, see amount of rent collected and view tenants' information on his houses.

Chapter 4: System design and analysis

We are going to cover more on the system itself and what the system seeks to achieve. It will also cover all the direct and indirect interactions with the system and the different entities and what is affected by these interactions with the system.

4.1Functional requirements

The system should allow tenants to sign in.

The system should allow tenant log in.

The system should allow tenants to view oreteti apartments services.

The system should allow tenants to view vacant apartments.

The system should allow tenants to add, edit and delete their details.

The system should allow the admin to view, add, edit, and delete tenants' details.

4.2 Nonfunctional requirements

Usability The system should be easy to use.

Performance The system should be adequately fast.

Supportability The system should be device friendly.

Reliability The system should provide security for users and their details.

Performance The system should be adequately fast.

4.3 System design diagrams

4.3.1Use case.

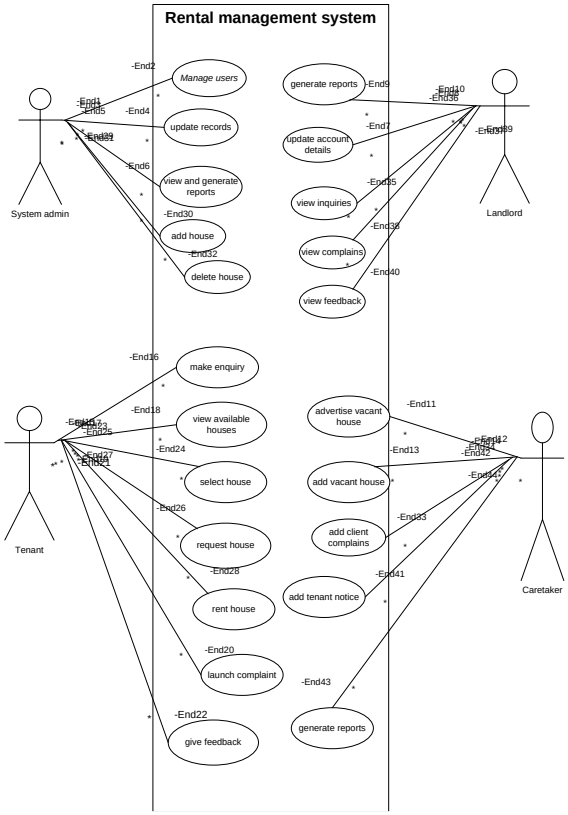


Figure 4.1 use case diagram

4.3.2 Context diagram

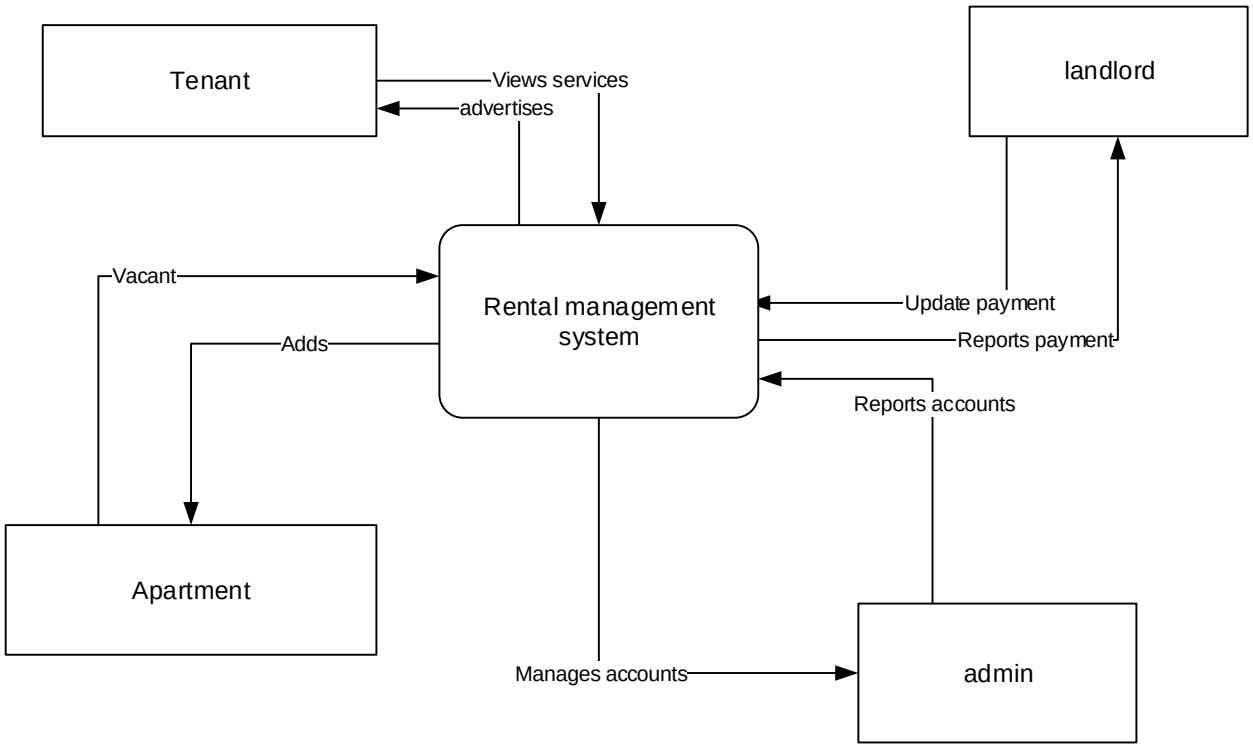


Figure 4.2context diagram

4.3.3Data flow diagram

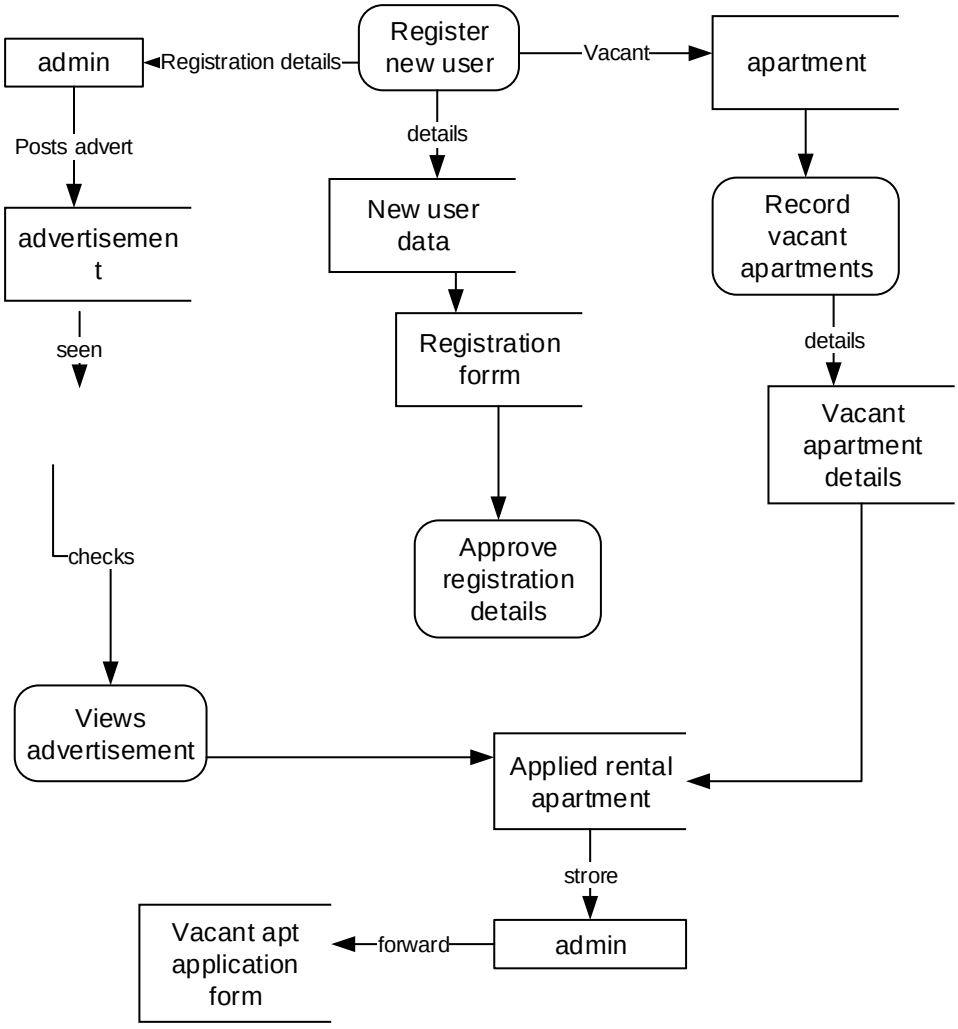


Figure 4.3 Data flow diagram

4.3.4Entity relationship diagram

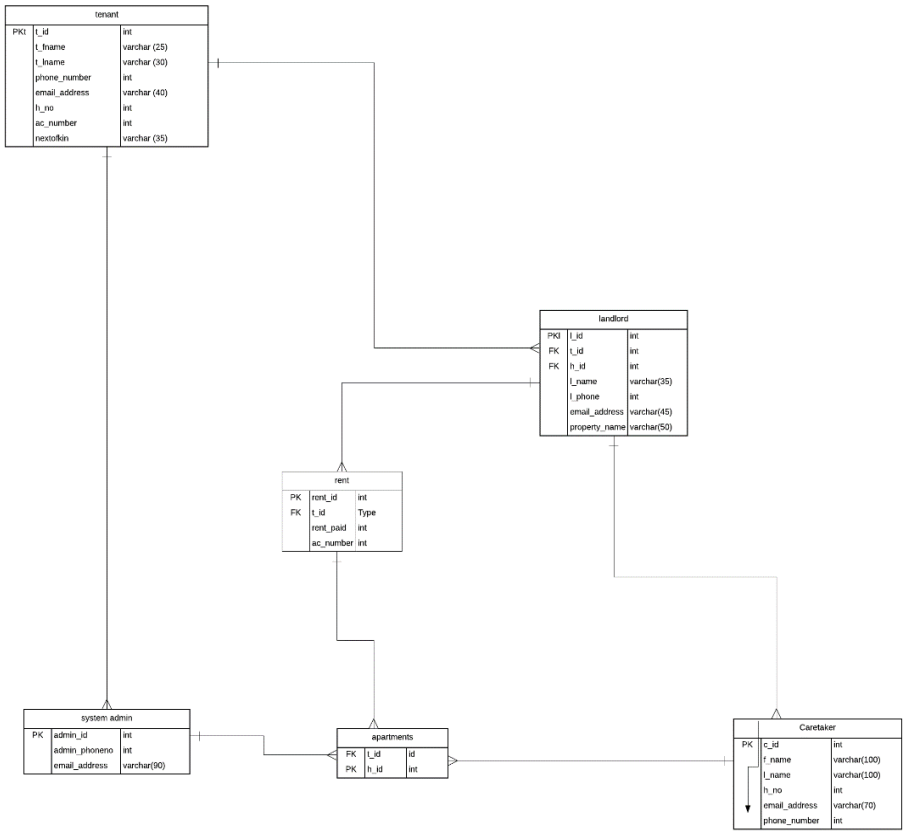


figure 4.4 Entity relationship diagram

4.3.5 Database schema

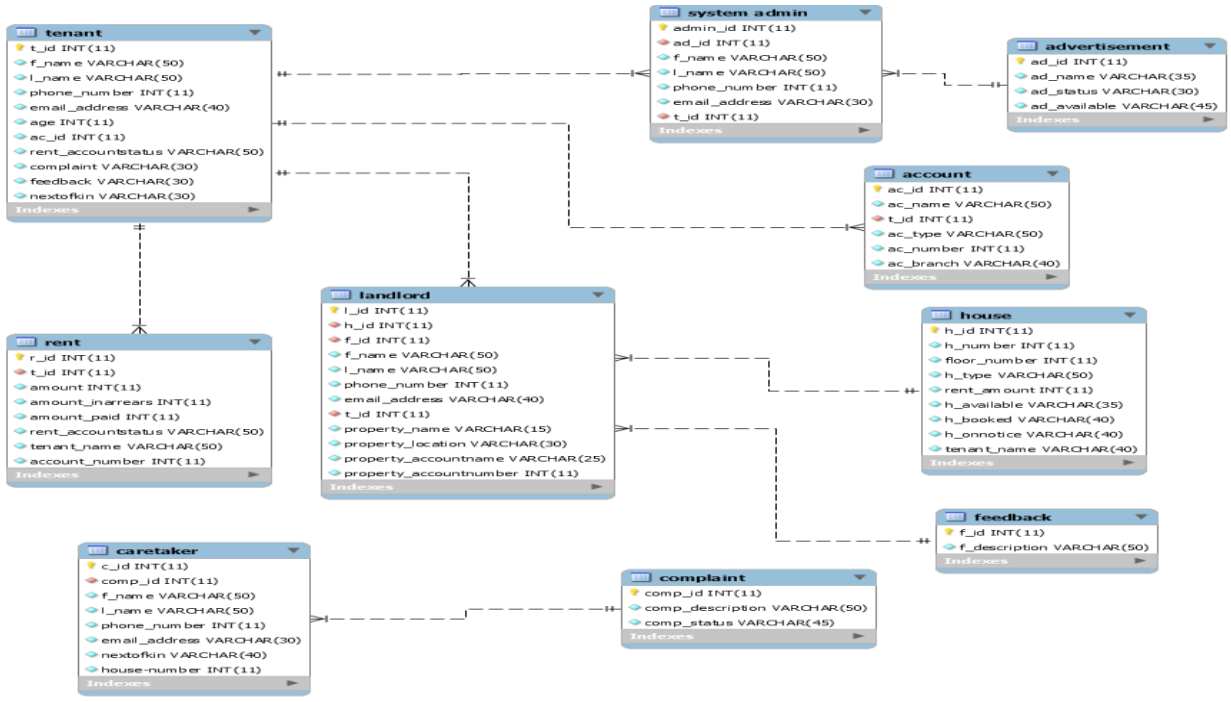


Figure 4.5 database schema

Chapter 5 System testing

5.1 Testable requirements.

System testing is the level software testing where testing of whole software product to identify errors. This makes the user aware of the system actual functionality. If the software is working well as expected by the user, different tests are done during the testing as well as the delivery process. The different types of testing include:

Unit testing: this is the testing of an individual unit to determine whether each of the unit is functional.

Integration testing- this is the combination of individual program to be test as a group. This is done to find out interface defects between the functions.

System testing- Is the testing of a program. The purpose being verification of the system functional, technical, and business requirements.

Acceptance testing- this is where the system was tested to determine if the system was ready to be released.

5.2 Test results

	Inspection check	Pre-condition	Test data	Priority level
T1	The system should validate login input and allow users to change their passwords	Does the system validate login input? Does it allow the users to change their passwords?	The user must be registered in the system	High priority level
T2	The system should allow the new tenants to register into the system.	Does the system allow new tenants to register successfully into the system?	User details	High priority level
T3	The system should allow a user to move from one section to another.	Does the system provide easy navigation for the user?	The sections in the system should be interconnected	High priority level
T4	The system should allow the user to view vacant apartment	Does the system allow the user to view vacant apartment successfully	Tenant username and password	High priority level
T5	The system should display details depending on user status.	Does the system display data depend on user status?	The user should sign in as a user or admin	High priority level
T6	The system should allow users to view, add, edit, and delete data.	Does the system add, edit, and delete data?	The user should sign in with the username and password	High priority level
T7	The system should display data in a satisfactory manner	Does the system display the data in a satisfactory manner?	The system should connect to the database	High priority level

Chapter 6: Conclusion and recommendation.

This chapter summarizes the objectives of the system as stated earlier, system conclusion and recommendation.

6.1 Summary of the Objectives.

As mentioned before this section will entail an analysis of the developed system and scrutinization of the system as well. The developed system as of its completion can be used by the two main actors of the system in this case having two modules of the system. That is the tenant module and the landlord module who have their different tabs and functionalities depending on who is who. On the side of the tenant module he can login into the system after being registered by the administrator and being issued with a password that they are going to use logging in to the system with their email address as well. The customer is also able to make apply for a vacant apartment using the form that is readily available in the system.

The rental management system has implemented most of the objectives stated earlier in chapter one of this documentation. The system has enabled tenants to view vacant apartments. The project developed has been of benefit to several users, for instance the users can capture information, update, view, add and delete data stored in the database. The management can also generate the reports easily and maximize their competence and service quality.

The problem encountered:

There was a challenge when collecting data since there are few books written on the project's topic. However, the system developed has some limitations. The system is only supported by the Microsoft windows and is always connected to the internet.

6.2 Conclusions

The aim of rental management system for oreteti apartments was to enable landlords manage marketing of the apartment in a convenient, fair, and timely manner. However, there is still a lot to be done in the IT department. This system has not achieved all that it had intended and more hence there is need for further research on most effective ways of managing rental property business.

6.3 Recommendations

To make the system more secure there could be the use of sessions that times out a user after a long inactivity period and prompts them to login again and get back to their task that they had

earlier started. This will greatly facilitate the authentication process for the system and avoid future attacks by hackers into the system.

To make available technology effective in the rental property management sector, it is recommended that the management should keep updating the software and hardware requirements of the system. The users should also be trained on how to enter data correctly in the database. They should also be updated on the current trends in the ever-evolving technology. This computerized system will replace some of the jobs that are to be done by agents, caretakers, and landlords of such properties. Therefore, they should get accustomed to the modern technology.

7.0 References

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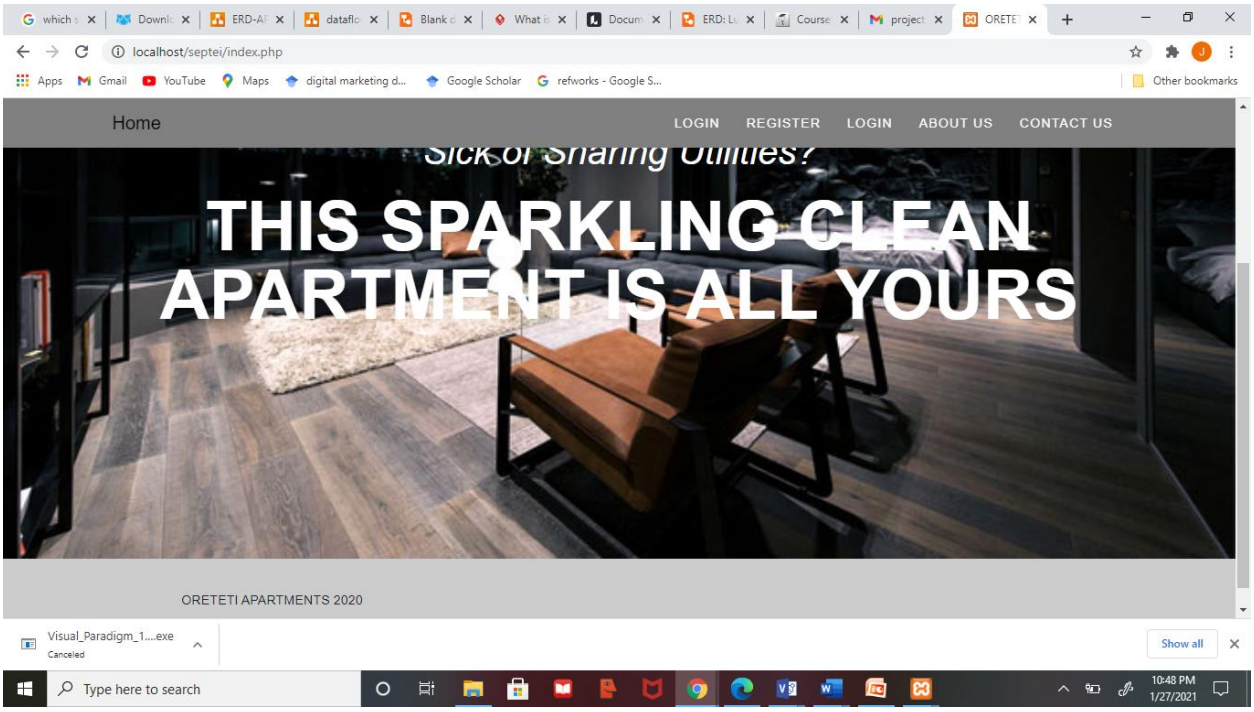

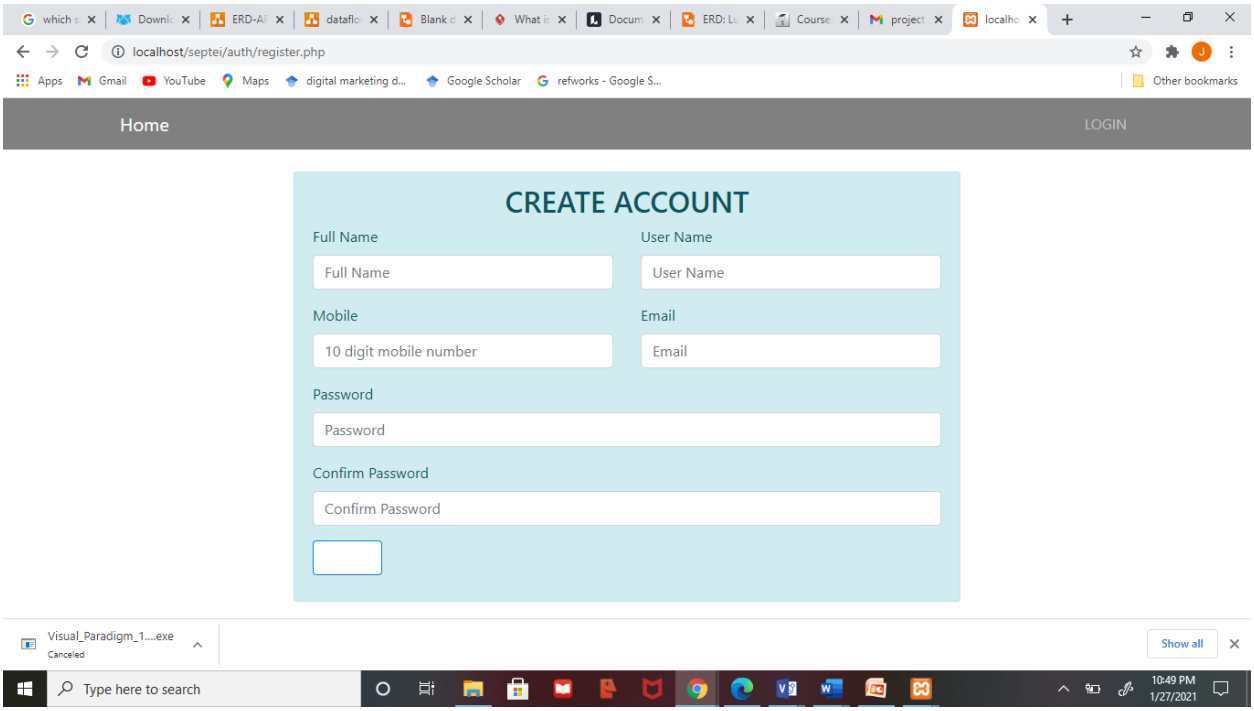
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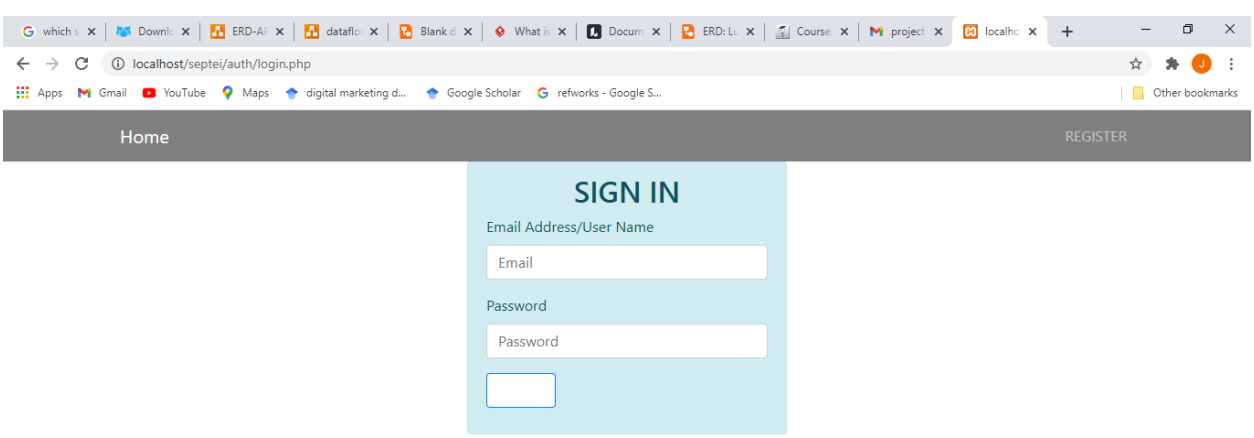
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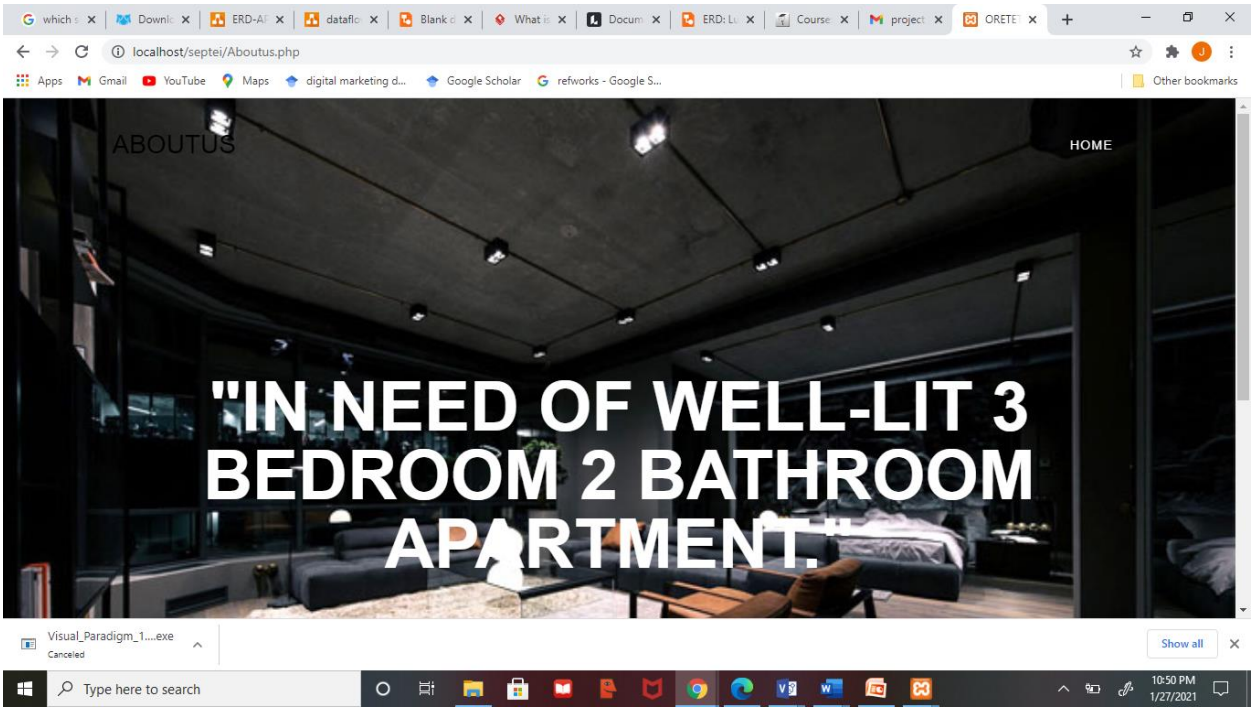
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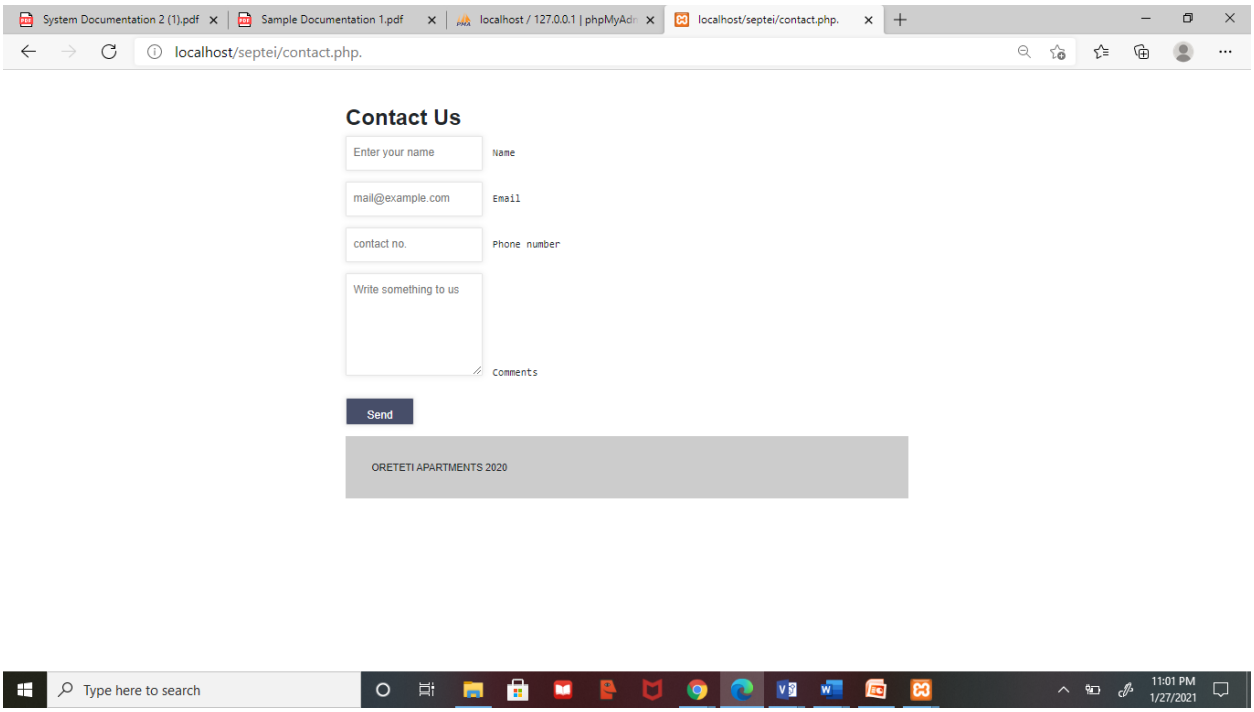
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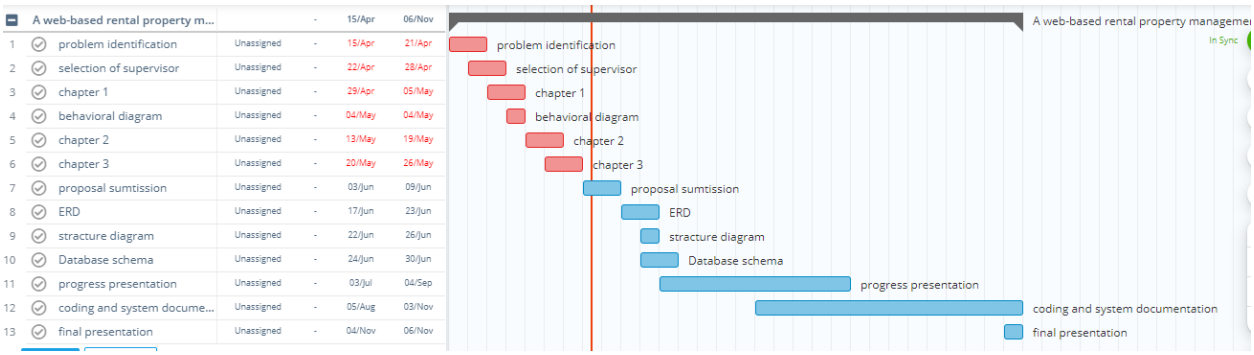
Appendix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