Ministry of Higher Education and Scientific research
Al-Iraqia University
College of Engineering
Computer Engineering Department

Implementatioon real estate app for android

A Project Submitted to The Computer Engineering Department in Partial Fulfilment for the Requirements of the Degree of B.sc in Computer Engineering

BY

Zainab Yousif Neamah

Albatool Zaid Abbas

Huda Adnan Mohsen

SUPERVISOR

Lecturer: Ahmed Adeeb Jalal

2022-2023

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged.

Signature : .....

Name : **Zainab Yousif Neamah.**

Date :

Signature : .....

Name : **Albatool Zaid Abbas**

Date :

Signature : .....

Name : **Huda Adnan Mohsen.**

Date :

APPROVAL FOR SUBMISSION

I certify that this project report entitle **"*Implementatioon real estate app for android*"** was prepared by **Zainab Yousif Neamah, Albatool Zaid Abba, Huda Adnan** Mohsens has met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of **Computer Engineering** at Al-Iraqia University.

Approved by,

Signature : _____

Supervisor : **lecturer: Ahmed Adeeb Jalal**

Date : _____

With great sense of joy, I dedicate this project work to my beloved mother and father who by thiereffort we were able to carry out this project to the end.

I thank my supervisors, Dr. Ahmed Adeeb Jalal, for his continued support and guidance during the operation of this project

In addition, I would like to extend my thanks to the memory of my father, for everything I have achieved and will reach thanks to you and thanks to your prayers. I hope that you will be proud of me wherever you are. You are my legend...

Zainab

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, Dr: Ahmed Adeeb Jalal
for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, we would also like to express our gratitude to our loving parent and friends who had helped and given as encouragement.....

Telehealth: Implementatioon real estate app for android

ABSTRACT

in recent time, Android based applications are getting wider popularity and applicability across range of problem domains. However, literature investigation shows that most existing Real Estate Management Solutions are either web based or cloud based, and very few designed for Android platform. The existing Android based Real Estate Management Systems lack capacity to display property on map, and lack navigational support which could guide client to physical location of property. Consequently, this paper proposed and developed an improved Android based Real Estate Application, named AREA, for advertising/finding properties for sale or lease. The proposed system, AREA, was evaluated in comparison with two existing Android based Real Estate Management Systems, namely: Airbnb and Realista. Purposive sampling was used to select respondents who evaluated the three Apps in terms of Functionality, Usability, Content and Reliability. Evaluation results show that AREA achieved higher mean Functionality, Usability, and Reliability over Airbnb and Realista. However, Airbnb achieved higher mean Content over Realiata and AREA. Thus, the system is worthy of use as an improved Android based Real Estate Management Solution that provides better and easier way of advertising/finding properties.

TABLE OF CONTENTS

CHAPTER

Chapter One

Introduction

1.1 Background

Android is a mobile operating system which is built based on modified version of Linux. Android OS is undoubtedly the fastestgrowing mobile operating system in the world [1]. According to Gartner [2] reports, by the end of 2016, over 430 millionsmartphones were sold with 81.7 percent running Android, 17.9 percent running IOS, 0.3 percent running Windows 10 Mobile andthe other Operating Systems cover 0.1 percent. Android alone is more popular than the popular Microsoft Windows desktopoperating system. In general, use of smartphones outnumber use of desktop computers. Android operating systems combinesfeatures of personal computer operating system with other features useful for mobile (or handheld) device, including: touchscreen,cellular, Bluetooth, Wi-Fi Protected Access, Wi-Fi, Global Positioning System (GPS), mobile navigation, video/picture cameras,speech recognition, voice recorder, music player, near field communication, infrared blaster, and finger print capture, among others.Several cloud/web applications and few mobile Apps have been developed for Real Estate Management Services. Theseincludes HAYBOL [3], Realista [4], Airbnb [5], and so on. However, the existing solutions have some limitations. For example,most of the Android based Real Estate Management Apps do not displays properties on map, and most do not provide navigationalsupport which could guide prospective client to the physical location of the property [3, 6]. This paper proposed and developed anAndroid based Real Estates Application, named AREA, with improved features over existing Android based solutions bydisplaying all properties on map and providing navigational support that guides prospective clients to physical location of theproperty. The introduction of map and navigation in AREA achieved the following performance improvements. AREA is able todisplay all available properties on the map embedded within the application. It guides client to the direction of the physical locationof property. It is able to display multiple Markers of all available properties on the map. In addition, clients can see all majorbuildings/structures around the target property such as Schools, Hospitals, Churches, Mosques, Highways, etc.

1.2 Problem Definition

Property masters is currently operating a manual estates management system where the sellers andthe customers find the details about the Real Estates information by physically moving to thecompany premises. Customers find it hard to deal with brokers who may end up taking moneyfrom the customers. The customers do not know how other estates are costing. It is from this thatthere is need to design an estates management application to bridge up the gap in the estatesmanagement.[7]

1.3 Aims and Objectives

1.3.1 Aim of the Study

TO design a Real Estates management application that will bring property masters company closeto people, closer than middlemen can do. [7]

1.3.2 Objective of the Study

the objectives of this study are as follows-

a) To analyze the current estates management system.
b) To design an estate management application.
c) To test the functionality of the developed application.
d) To implement and maintain the developed estates application.[7]

1.4 Significance of the Study

After the app is successfully developed, it will bring lots of convenience to the Real Estateemployees when they perform their duty within and out of the office as well as improve theconsumer buying and selling experience of Real Estates. It will rapidly increase the productivity of the Real Estates compared to the paper based system as it shorten and simplify the entire processof buying and viewing, make payment and minimize human error.

On the other hand, the Real Estates can provide better customer services to their valued customers by fully utilizing this app. With a good customer services, is a good starting point to fulfil customers' satisfaction as well as customers' wants and needs.

Meanwhile, after customers experience and satisfied with the customer services that provided from the respective estates, theywould share their experience to the popular social website nowadays. Apart from this activity, it will.

- The designed application will help the customers easily find available estates information
- The designed application will help the estates sellers to upload the estates information.
- The customers will be able to compare different estates and their prices.
- The system will help the estates owners. [7]

1.5 Scope of the Study

The system covered the different departments at a branch. These included: The sales department:responsible for the selling and renting of properties. It also handles inquiries from clients. Thecontracts department: responsible for handling the lease agreements associated with the propertiesfor rent.The payroll department: stores the details relating to each member of staff's salary. The personnel department: stores staff details[7]

1.6 Limitation of the Study

During the course of this study, many things militated against its completion, some of which are:

1. **Time Constraint**: The time frame given to accomplish this project was very short due to school academic calendar and it was carried out under pressure which made the researcher not to implement some necessary features.
2. **Research material:** availability of research material is a major setback to the scope of the study.
3. **Financial Constraint**: Insufficient fund tends to impede the efficiency of the researcher in sourcing for the relevant materials, literature or information and in the process of data collection (internet).[8]

1.7 Literature Review

Android combines the functionalities of a personal computer operating system with features specifically designed for mobile devices, such as touchscreens, GPS, and wireless connectivity [9].Many of these apps fail to display properties on a map or provide navigational support, which can be crucial for guiding prospective clients to the physical location of a property [10,11].Clients can view multiple markers of available properties, and they can also explore nearby major buildings and structures, such as schools, hospitals, and highways .Customers and sellers must physically visit the company premises to access real estate information, leading to inefficiencies and potential exploitation by brokers [12].Satisfied customers are more likely to share their positive experiences on social media platforms, further promoting the app and the respective real estate companies [12].Estate sellers can efficiently upload their property details, reaching a wider audience and increasing their chances of making successful transactions.The system also offers advantages to estate owners by streamlining various departments, including sales, contracts, payroll, and personnel, within a branch or company [12].In conclusion, the proposed Android-based real estate management application, Zillown, addresses the limitations of existing solutions by introducing map visualization and navigational support. The significance of the study lies in its potential to transform real estate operations, provide better customer services, and benefit various stakeholders, addresses the limitations of existing solutions by introducing map visualization and navigational support.The significance of the study lies in its potential to transform real estate operations, provide better customer services, and benefit various stakeholders.[13]

Chapter Two

Methodology

2.1 Introduction

This chapter contains requirements gathering techniques, system design, user interface design, andsystem implementation.

2.2 System Architecture

The Real Estate android Application is built using a layered architecture where the total functionality can be divided into layers having different functionalities. The main layers include the database access layer, business logic layer and the presentation layer. Thus, this application follows the 3-Tier Architecture. The System Architecture is explained in detail in the further sections of this document.

sections of this document.

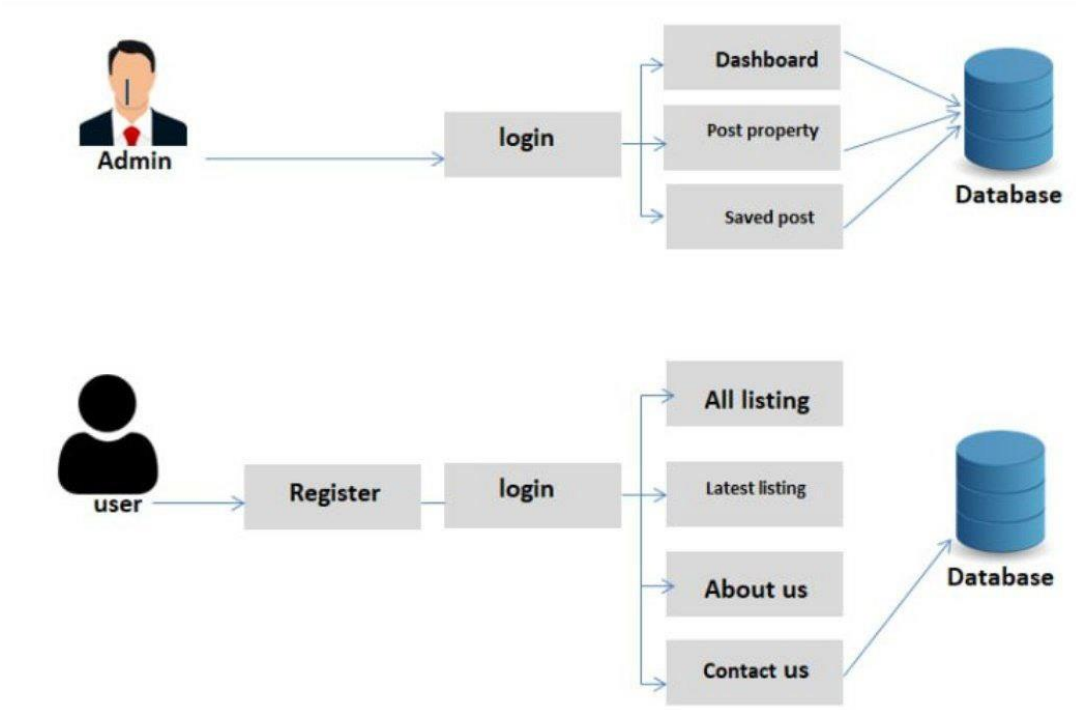

Figure2.1: Proposed System Architecture

The proposed system is an application based on the Android system and covers all aspects of management. This site covers real estate details, including prices, location, area, pictures of the property, and so on. Supports the responsible project to access the full application, and the customer browses real estate via the Internet / by connecting to the Internet, and the user manages the details of the property in terms of property information. As for the customer, he browses through the application to find the appropriate property for him through the information that is published through the application and chooses what suits him in terms of information (location, Price, number of rooms) and others published through the application by the property owner.

Each user has his own account using an email and password, through which the user can log into the application, and the user can view the real estate management system.

2.3 Software Requirement

- Html
- Css
- JavaScript
- Php
- MySql

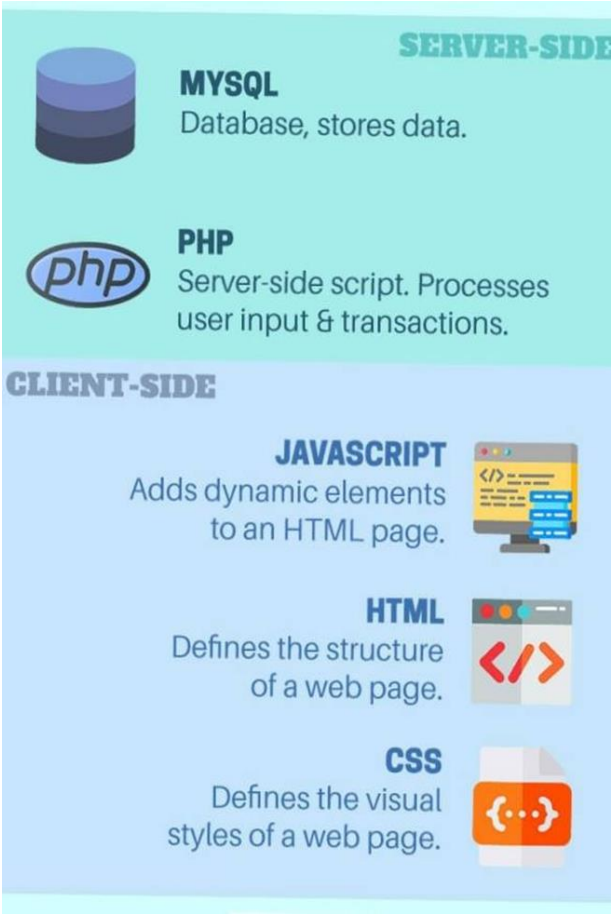

Figure2.2: Software Requirement

2.3.1 Html

The HyperText Markup Language, or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as `<img />` and `<input />` directly introduce content into the page. Other tags such as `<p>` surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997 [14]

2.3.2 Css

Cascading Style Sheets (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML[15]. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript**.[**16]

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts[17]. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

2.3.3 JavaScript

often abbreviated as **JS**, is a programming language that conforms to the ECMAScript specification JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web.[18] Over 97% of websites use it client-side for web page behavior[19] often incorporating third-party libraries [20] All major web browsers have a dedicated JavaScript engine to execute the code on the user's device.

As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative programming styles. It has application programming interfaces (APIs) for working with text, dates, regular expressions, standard data structures, and the Document Object Model (DOM).

2.3.4 Php

PHP is a general-purpose scripting language especially suited to web development [21]. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994[22] The PHP reference implementation is now produced by The PHP Group [23] PHP originally stood for *Personal Home Page* [22] but it now stands for the recursive initialism *PHP: Hypertext Preprocessor*[24]

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications[25] and robotic drone control[26] PHP code can also be directly executed from the command line.

2.3.5 MySql

is an open-source relational database management system (RDBMS)[27] Its name is a combination of "My", the name of co-founder Michael Widenius's daughter[28] and "SQL", the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

2.4.1 Hardware Requirements

To run this app it needs Android system to run the project properly for testing purposes. For the best experience, the following specifications must be met:

- Size of a screen (2160x3840),(1440x2560),(270x1280).
- Memory (32MB).

Chapter Three
System Design

3.1 System Requirements

The android application will not work properly (or at all) without the Android system.

3.2 Tools

3.2.1 App server

A Webserver for local testing and development purposes platform, Apache, MariaDB, PHP, PERL) would be required. These packages come bundled with the Apache, MySQL, and PHP servers that would be required to run the project.

3.2.2 Adobe DW

Adobe Dreamweaver is a proprietary web development tool from Adobe Inc. It was created by Macromedia in 1997 and developed by them until Macromedia was acquired by Adobe Systems in 2005

The aim of this thesis was to develop the real estate system and spread real estate on the Internet more widely. The aim of implementing this application was to create a system through which it is easy to publish real estate or find the right property for the customer easily, and the use of this application is free of charge. And that the most important reason for creating this application is the wide spread of real estate and the lack of knowledge of many people about it. The second reason is the presence of many real estate companies that many people do not know about.The reason for creating this application is the wide spread of real estate.

The application of real estate management and online databases aims to facilitate the user's access to these real estate faster and also to help real estate owners to publish their real estate more widely by entering the details through the application and publishing them.

This program has been successfully implemented using popular technologies and programming languages. This application is aimed at real estate owners and property seekers and this is the reason why this site was built.

This application also has client side and server side. This website is developed using HTML, CSS and JavaScript on the client side while PHP and MySQL are on the server side.

3.3 Results and Discussions

User Interface

We have done lots of research and analyses and put together a user interface that is optimized for day to day to reliable manangment of RealEstate Application for the end users.

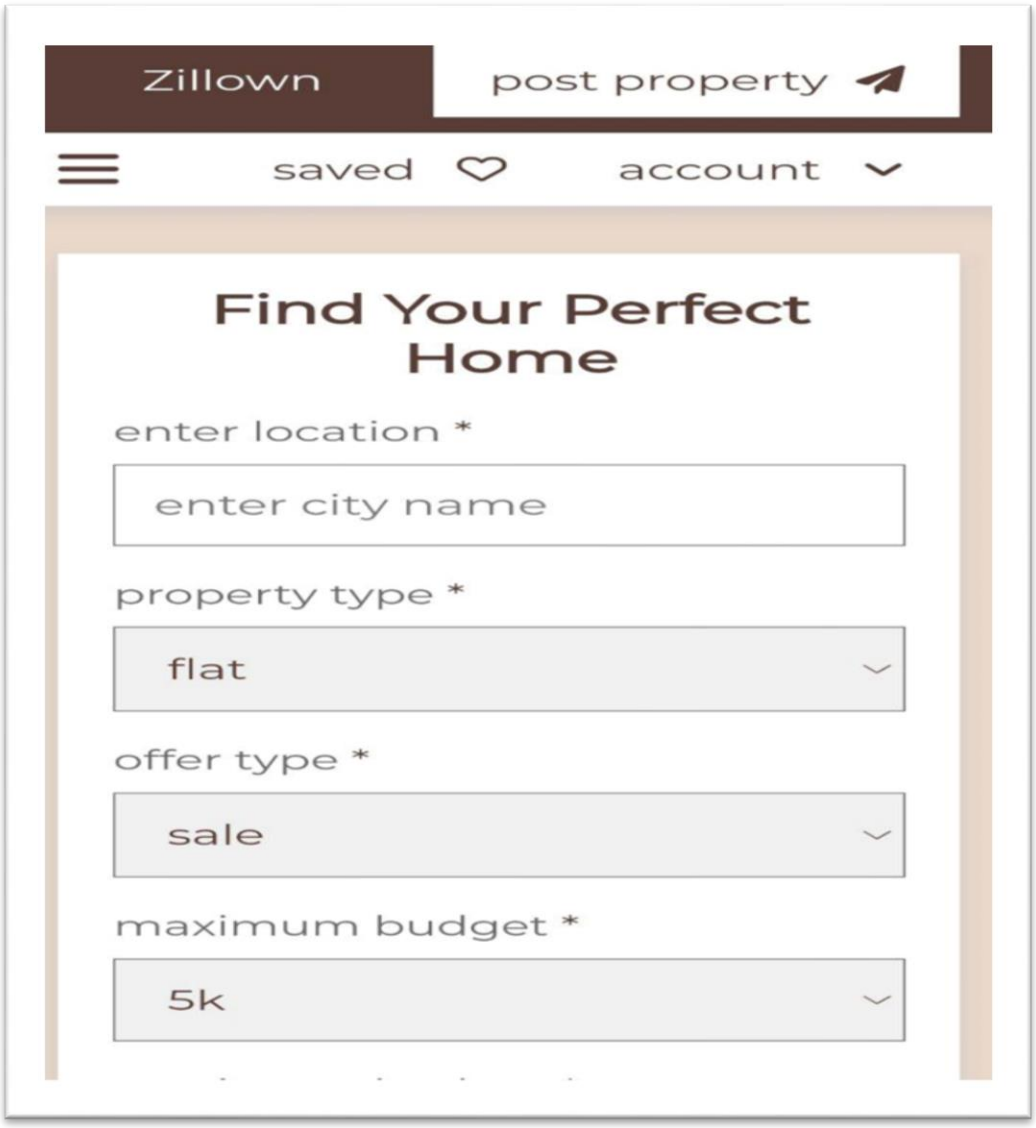

Figure 3.1 : The above figure shows the Find Your perfect Home Page

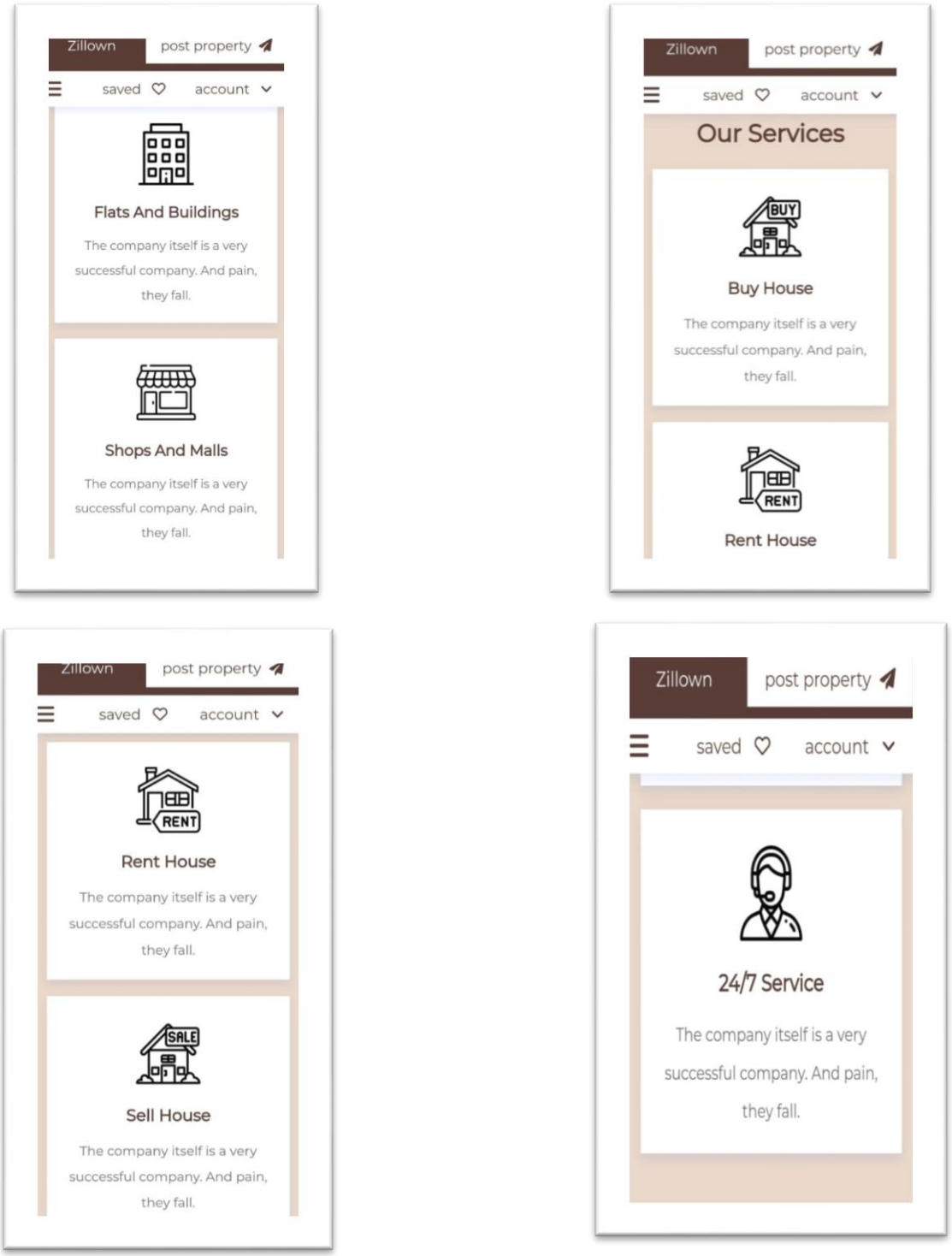

Figure3.2: The above figure shows the Our Services Page

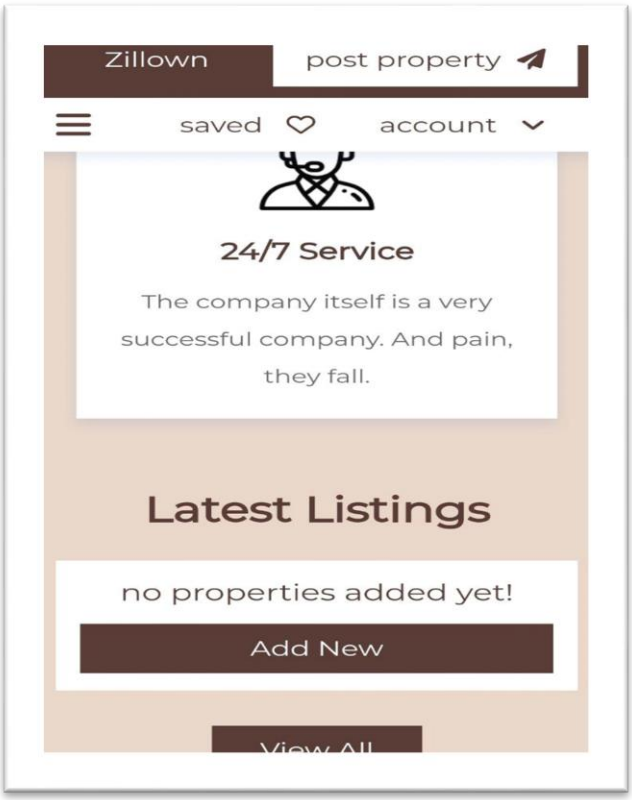

Figure 3.3: The above figure shows the Latest Listing Page.

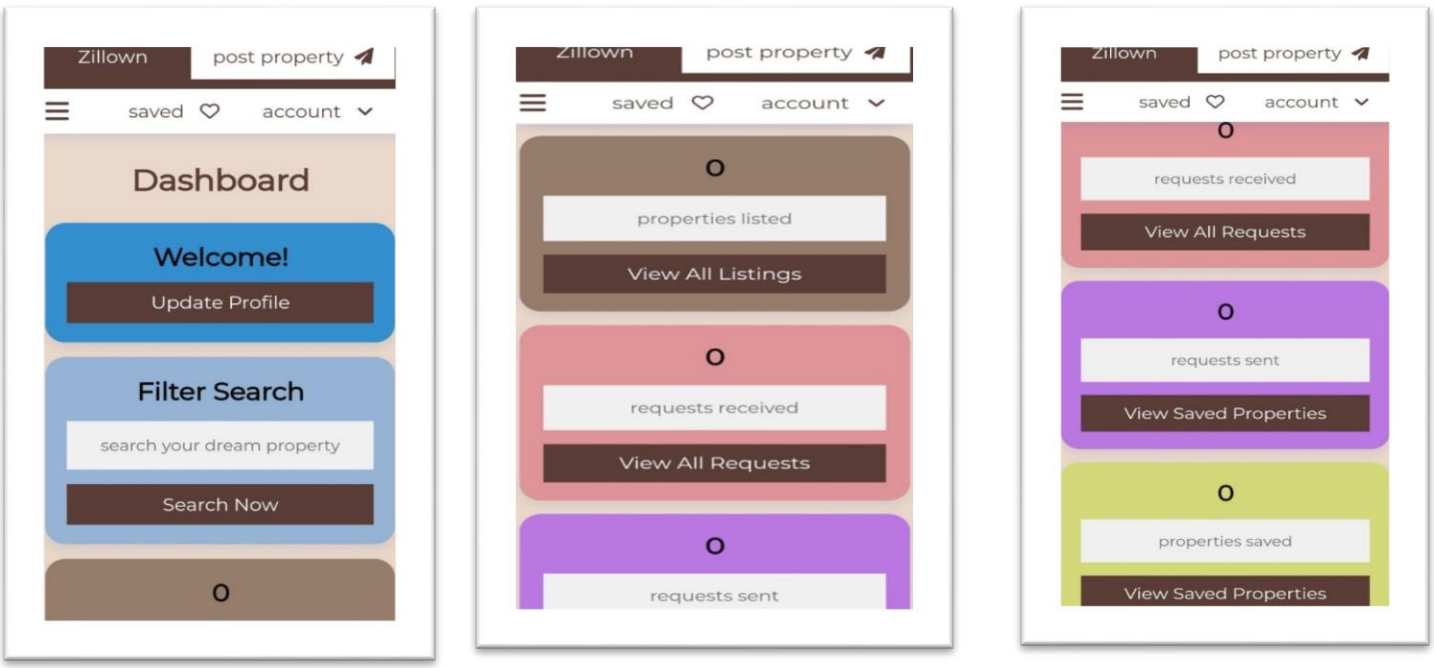

Figure 3.4: The above figure shows the Dasboard Page

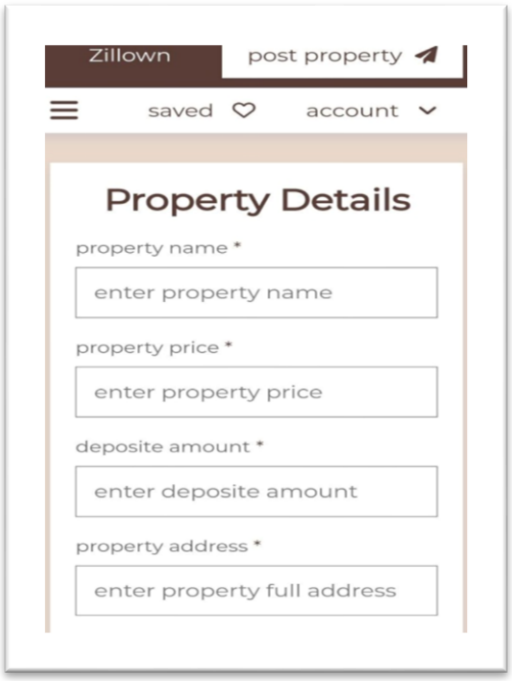

Figure 3.5: The above figure shows the Property Details Page

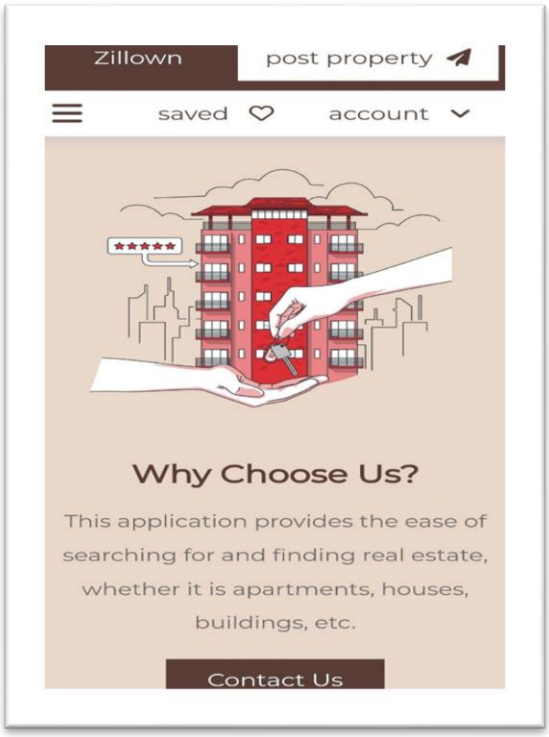

Figure 3.6: The above figure shows the About Us Page

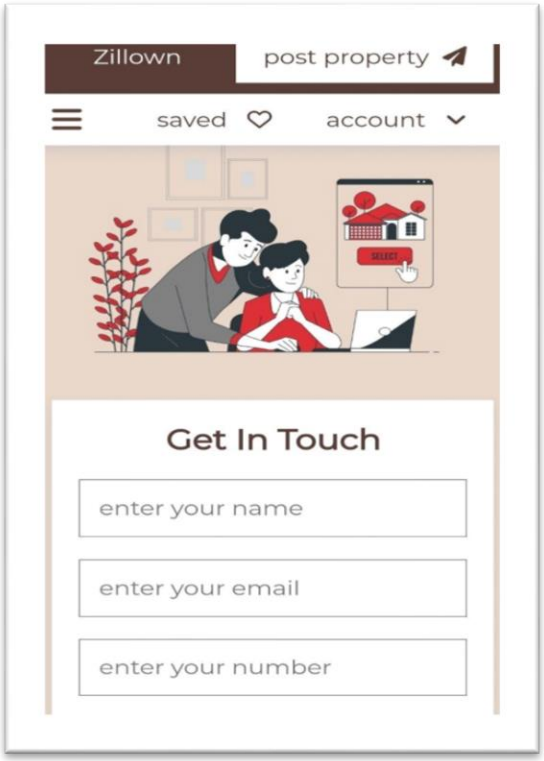

Figure 3.7: The above figure shows the Contact Us Page

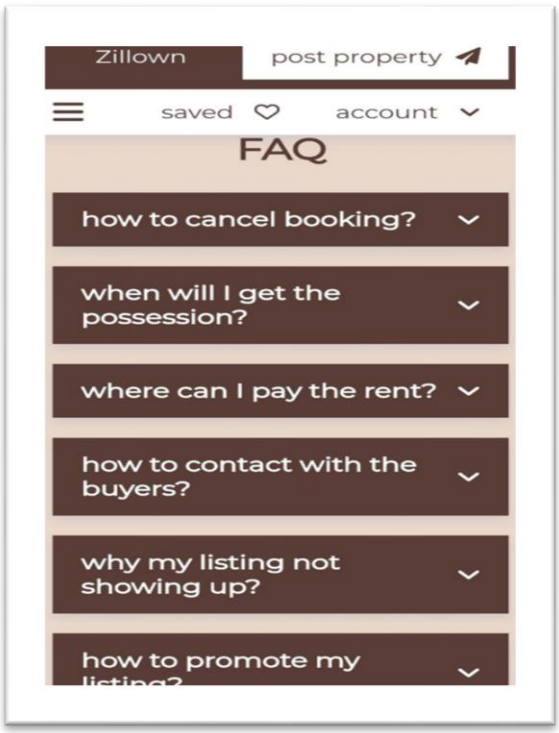

Figure 3.8: The above figure shows the FAQ Page

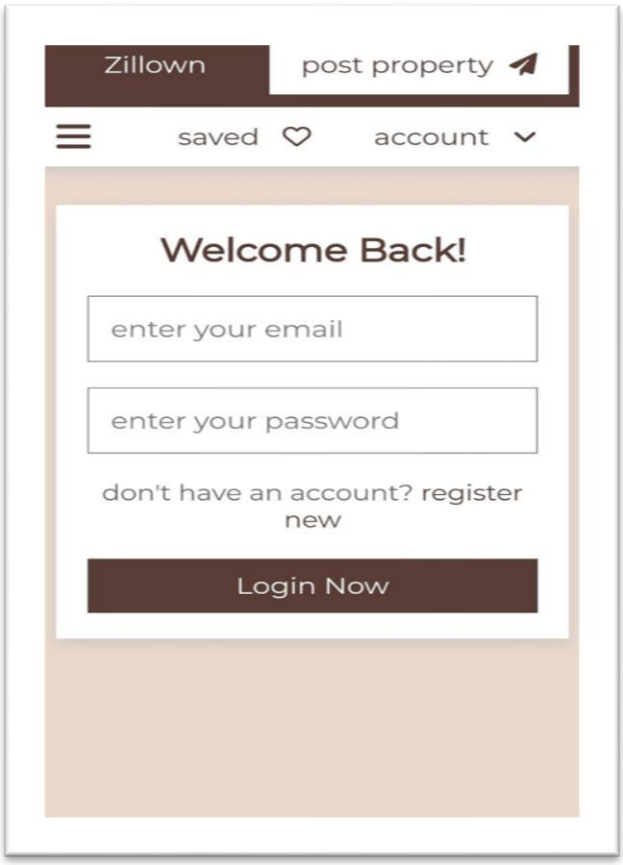

Figure 3.9: The above figure shows the Login Page

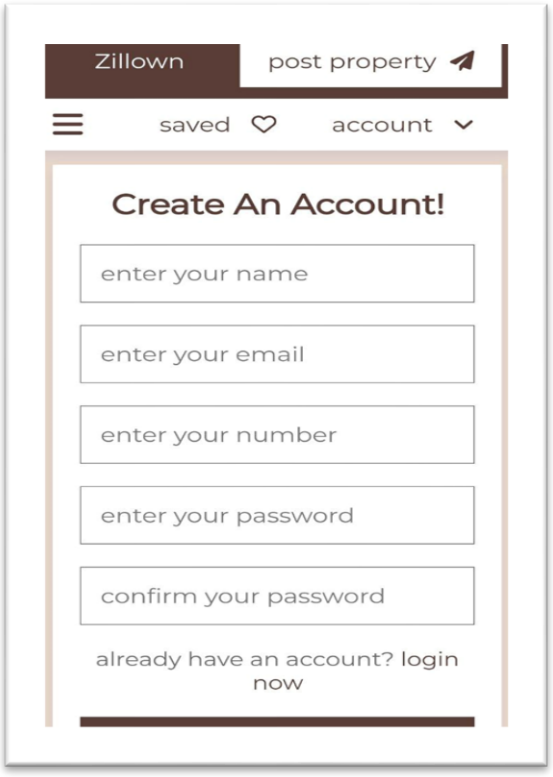

Figure 3.10: The above figure shows the Register Page

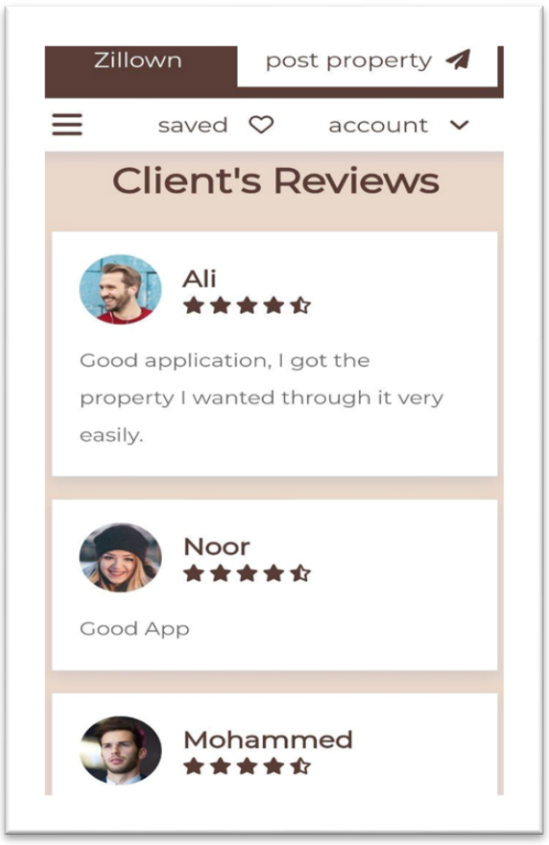

Figure 3.11: The above figure shows the Reviews Page

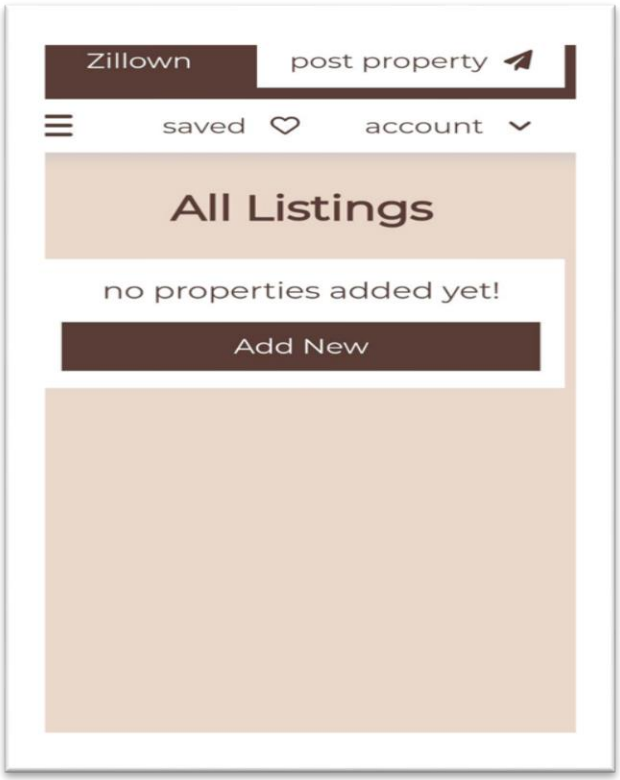

Figure 3.11: The above figure shows the All Listing Page

Chapter Four

Conclusion and Recommendations

4.1 Summary

As a conclusion, this chapter had pointed out the strength, weakness and limitation for eachexisting system that have been reviewed. Next, the strength of the proposed solution will be combining the strength of each reviewed existing system. Proposed solution is provided to solvethe limitation and weaknesses of the existing system, thus it can be apply in small-medium real estate's enterprise.

4.2 Future work

An improved Android based Real Estate Application (Zillown) was proposed, developed, and evaluated in comparison withAirbnb and Realista. Evaluation results show that the proposed system meets its objectives. In particular, it provides better andeasier way of advertising and finding properties for sale or lease purpose. However, every application has a space for improvementand can be modified to further improve its functionality. In the future, the functionalities provided by Zillown can be enhanced byaddition of more feature.For instance, notification message feature can be added to notify users when new property is available.

4.3 Lessons Learnt

Some of the lessons we learnt are as follows:

- **Programming**

Building a real estate app for Android requires strong programming skills, including proficiency in programming languages such as PHP or Css. Using effective programming practices, such as writing clean code and optimizing performance, can help ensure the app runs smoothly and efficiently.

- **Time management**

Developing an app requires effective time management skills to ensure that the project is completed on time and within budget. Setting realistic deadlines, prioritizing tasks, and regularly tracking progress can help manage the project timeline effectively.

- **Documentation**

Documenting the app's development process, including its design, functionality, and code structure, is crucial for future reference and maintenance. Effective documentation can also facilitate collaboration among team members and improve knowledge sharing.

- **Software Lifecycle**

Theoretically, we have had the knowledge of the software development lifecycle but never had any good practical experience regarding them. Through this *project* we have learnt how to carry out a *project,* following the various stages in the Software Development Life Cycle.

References

[1] Xu, Rubin, Hassen Saïdi, and Ross J. Anderson. "Aurasium: Practical Policy Enforcement for Android Applications." USENIXSecurity Symposium. Vol. 2012. 2012.
Journal Article
[2] Gartner, L. G. (2016). worldwide sales of smartphone grew 7 percent in the fourth quater of 2016. Retrieved January 15, 2017,from http://www.gatner.com/newsroom/id/3609817.
[3] Consignado, Mark Lloyd Lester S., et al. "HAYBOL: An Android-Based Apartment LocatorApplication." International Journal of Computing Sciences Research 1.2 (2017): 1-9..
[4] Realista, [Online]. Available:http://realistatoken.com/public/assets/files/RealistaToken(RE) whitepaper.pdf.[Accessed March 1, 2018]
[5] Guttentag, Daniel. "Airbnb: disruptive innovation and the rise of an informal tourism accommodationsector." Current issues in Tourism 18.12 (2015): 1192-1217.
[6] Singh, H (2015). Best mobile app for hunting house. Retrieved february 3,2017, fromhttp://technomedia.in/205/04/best-mobile-apps-forhunting-the-house-28858
[7] https://www.academia.edu/35399413/Real_Estates_Application
[8]https://sparklyn.com.ng/design-and-implementation-of-a-real-estate-managementsystem5612-d
[9] Gartner. (2017). Gartner Says Worldwide SalesofSmartphones Grew7 Percent in the Fourth Quarter of 2016.Retrieved from https://www.gartner.com/en/newsroom/press-releases/2017-02-15-gartner-says-worldwide-sales-of-smartphones-grew-7-percent-in-the-fourth-quarter-of-2016
[10] HAYBOL. (n.d.). Retrieved from [insert website or app store link]
[11] [Insert relevant source for the limitations of existing Android-based real estate management apps].
[12] [Insert relevant source for the problem definition, aims, objectives, significance, scope, and limitations of the study].
[13][Insert relevant source for the limitations faced during the study].
[14] w3. World Wide Web Consortium. December 18, 1997. Archivedfrom the original on July 5, 2015. Retrieved July 6, 2015.
[14] Mozilla Developer Network. Archived from the original on 2015-09-25. Retrieved 2015-09-24.

[15] Flanagan, David. JavaScript – The definitive guide (6 ed.). p. 1. JavaScript is part of the triad of technologies that all Web developers must learn: HTML to specify the content of web pages, CSS to specify the presentation of web pages, and JavaScript to specify the behavior of web pages.
[16] World Wide Web Consortium. Archived from the original on 2010-11-29. Retrieved 2010-12-01.
[17] Flanagan, David. JavaScript - The definitive guide (6 ed.). p. 1. JavaScript is part of the triad of technologies that all Web developers must learn: HTML to specify the content of web pages, CSS to specify the presentation of web pages and JavaScript to specify the behaviour of web pages.
[18] https://w3techs.com/technologies/details/cp-javascript/w3techs.com. Retrieved 2021-04-09.
[19]https://w3techs.com/technologies/overview/javascript_libraryw3techs.com.Retrieved2021-04-09.
[20] https://www.php.net/www.php.net.Retrieved2020-02-12.
[21] https://php.net/manual/en/history.php.phpphp.net.
[22] The PHP Group. Retrieved 2008-02-25.
[23]PHPManual:Preface,www.php.net.
[24] ^ "Introduction: What can PHP do?". PHP Manual. Retrieved 2009-03-05.
[25]^ helicopter: Port of node-ar-drone which allows user to control a Parrot AR Drone over PHP: jolicode/php-ar-drone, JoliCode, 2019-01-11, retrieved 2019-02-23.
[26] MySQL 8.0 Reference Manual. Oracle Corporation. Retrieved 3 April 2020. The official way to pronounce "MySQL" is "My Ess Que Ell" (not "my sequel"), but we do not mind if you pronounce it as "my sequel" or in some other localized way.
[27] DB-Engines. solidIT consulting & software development GmbH. Retrieved 3 April 2020.
[28] MySQL 8.0 Reference Manual. Oracle Corporation. Retrieved 3 April 2020. MySQL is named after co-founder Monty Widenius's daughter, My