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| Capstone Project Document |

**Real Estate Website Management**

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| **<SWR302\_EstateLux>** | |
| **Group Members** | Ha Pham Cuong  Ha Van Quang  Nguyen Thanh Long  Hoang Duc Truong  Nguyen Trong Duy An |
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MINISTRY OF EDUCATION AND TRAINING

- Hanoi, <Spring Semester>/<2021> -

**Acknowledgement**

Foremost, we would like to express our sincere gratitude to our supervisor: Mr. Pham Ngoc Ha for the continuous support of our project development, for his patience, motivation, enthusiasm and immense knowledge. His guidance helped us in all the time of this project. We could not have imagined having a better advisor and mentor for our project. Besides our supervisor, we would like to thank all of our friends who listen to projects and give more suggestions for us, our teammates who have done their best to make to complete the Applying Real Estate Website Management project.

In addition, we would also like to thanks the instructors at FPT University for all the classes. The instructors have used the experiences and enthusiasm to give us during this period of four years to get here today.

Last but not least, we would like to thank FPT University for giving us this precious opportunity to constantly study and improve ourselves. What we learned through this project will be the basis for us to work well after graduation.

**Definition and Acronyms**

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| **Acronym** | **Definition** |
| BA | Business Analysis |
| BR | Business Rule |
| ERD | Entity Relationship Diagram |
| GUI | Graphical User Interface |
| PM | Project Manager |
| SDD | Software Design Description |
| SPM P | Software Project Management Plan |
| SRS | Software Requirement Specification |
| UAT | User Acceptance Test |
| UC | Use Case |
| API | Application Program Interface |
| IOT | Internet of things |

1. **Project Introduction**
   1. **Overview**
   2. Project Information

* Project name: **Real Estate Website Management**
* Project code: **Gas-Meter**
* Project group name: **SWR302\_EstateLux**
* Product type: Software Project Management Plan, Website and Mobile Application.
  1. Project Team

1. Supervisor

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1. Team Members

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## Product Background

2021 is considered a promising year for the real estate market with the supply continuing to increase strongly, housing prices are forecasted to increase by 10-15%. Bright market forecasts are a lever for businesses to confidently set big plans for the coming period. In the context of strong supply, real estate businesses have taken advantage of opportunities to promote, brand, and make business plans in 2021. That's why our team wants to build and develop real estate websites to have Can help businesses promote business activities, introduce project proposals to customers, carry out branding Marketing, reach customers anytime, anywhere, is an information channel that helps you easily call call for investment.

## Existing Systems

* 1. Mobile application

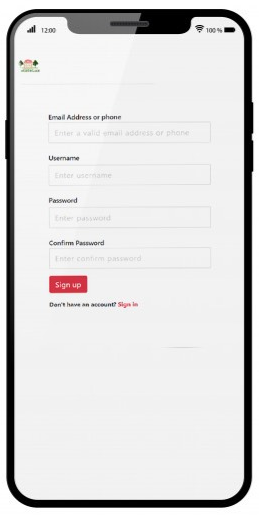
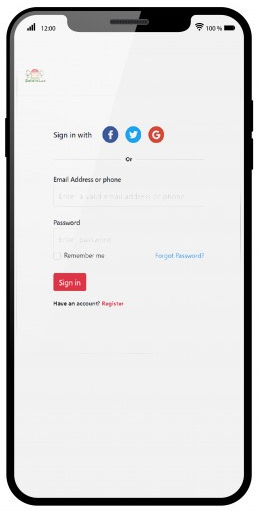
This software can be downloaded on Google Play, in the future we can develop on the App Store. Mobile application to be used by gas store customers. If the user is a new user, they can register for an account through the app and login. From the application:

+ Regarding the seller:

• Users can promote apartments, condominiums, premises for sale or lease on EstateLux by registering an account and managing, tracking their real estate status, fixing or deleting their apartments on the spot. Next on the app.

+ On the buyer side:

• User can search, view all information apartments, apartments, premises, on the app (area, location, sale price, rental or sale status).

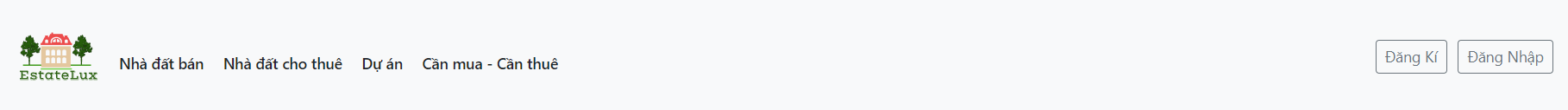
* Use EstateLux App with iphone 12

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| ***Advantages*** | ***Disadvantages*** |
| GUI is user-friendly, suppost language: VietNamese. | Available IOS and Android |
| Freeware, public on Google Play and Appstore | Need internet to take notification |
| Handy, simple, easy to use anytime, anywhere |  |

* 1. Web application

This software is published publicly on the Internet and it is free software. It covers the business aspects of a real estate company and based on the needs of the current real estate market such as: helping the business to promote its business, introducing project proposals to guests. branding, promoting the brand, reaching customers anytime, anywhere, is an information channel that helps you easily call for investment, moreover this software can help buyers easily find a house or share. Your fish needs nahan. This software only supports remote access and all data is stored on the server. The server uses Database-as-a-Service (MySQL), bringing many benefits such as Security, High availability, and less configuration. It is a good choice and an example we consider using MySQL.

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| ***Advantages*** | ***Disadvantages*** |
| GUI is user-friendly, support language: Vietnamese | Only support remote access (Web), (Mobile App) no support for offline use (Desktop apps) |
| There is always an employee flow the website 24/7 | Only support via hotline, facebook not via zalo, etc… |
| As long as the internet is available, it can be accessed at all times. | Low security, easy to attack by hackers |



Graphical user interface

Description automatically generated Graphical user interface, text, application

Description automatically generated

* 1. Backend system

Backend system is made base on Spring MVC. Using hibernate, JPA connect to MySQL database, support security.

Frontend system is made base MVC and use another library and with HTML , CSS , Javascript

## Business Opportunity

Today, the real estate market in Vietnam is being paid attention to by investors and businesses, and buyers' demand has also increased over the past few years.

However, the interaction problem between sellers, businesses and buyers is still difficult. For businesses, the sellers they need to promote their real estate to the buyers. So to solve this problem, we decided to develop the EstateLux project.

## Software Product Vision

With the Applying IOT for managing household gas cylinder system (Gas-Meter), we aim to optimize the operational structure of managing gas cylinder for each customer, both versions of the software brings the best result and experience to our customer. Specifically, in the Web Application version, the software assists management functions of gas cylinder which are currently using by customers for admin from head to toe while the Mobile Application version provides to the customers the ability of knowing the situation of his/her current gas so that he/she could contact the store when there is any problem. The system supports both the stores and the customers of the stores in terms of managing problem with gas cylinder.

## Project Scope & Limitations

Gas-Meter is not system give me information about gas cylinder, temperature environment, warning when there is fire or explosion on the phone has a web-based management system that helps the gas- store operate easily and flexibly.

6.1 Major Features

* Mobile application:
  + Role: User
    - Allows users to view and change personal information
    - Allows users to monitor device information such as: gas concentration, remaining gas, ambient temperature, and device battery
    - Send notification for user.
* Web application:
  + Role: Store
    - Allows Store to manage list user information that belongs to your store
    - Allows Store to manage list contract information that belongs to your store
    - Allows Store to manage list broken device information that belongs to your store
    - Allows Store to view map show location of devices and it’s status
  + Role: Admin
    - Allows Admin to manage list store.
    - Allows Admin to manage list user information in each store
    - Allows Admin to manage list contract information in each store
    - Allows Admin to manage list all broken device information
    - Allows Admin to view map show location of devices and it’s status