**CHAPTER Ⅰ**

**INTRODUCTION**

**Background of the Study**

Fiesta Homes is still using a manual process of logging in and monitoring of visitors and residents whose leaving and entering the premises. Visitors are logging in through a log book with the use of pen which is time consuming if there are lots of visitor. Announcements and notices are posted in their bulletin board which will not reach all of the residents, only if the residents are leaving the premises and will take time to see what has been posted in the bulletin. The proposed system aims to aid the problem on this manual process in Fiesta Homes and will also contribute to the security and protection of the premises.

Security is a state of pledge guaranteed to people with their freedom from danger as well as taking precautionary measures to assure their safety. The development of lands into subdivisions is said to be one of the signs that the economy is surging fast and the people double in number. Subdivisions are dividing of lands to develop into residential areas, normally a plat divided into lots for the immediate building development. Subdivisions are one of those places that guarantee to provide both safety and security for the people living in them. Security is one of the best features that a subdivision could offer for its residents apart from their housing and prices. In the past few years, subdivisions have been one of the targets for burglary because of the stereotype that most owners have a higher status than those people living in the hood. Unwanted guests, lack of information dissemination, and poor security are just a few of the lists from the downside of living in a residential place with sloppy security. Tight security is highly needed during these times of pandemic, with this we decrease the possibility of transmission and increase the sense of security and trust of the residents. With the evolution of technology, security has taken a huge step into improvement. A gate pass system is an example of an upgrade in terms of providing security for people residing in a subdivision. Not only does a gate pass system assure the security and identification of the residents but some modified systems could also notify homeowners whether they were expecting guests. It also easily circulates important announcements and makes the process smoother, safe and paperless. Aside from the basic necessities, the researchers believe that the safety and security of the people come first, with this strong conviction and the recent crimes happening in our country, that result from such actions we firmly decided to come up with a system that would guarantee the residents their welfare.

**Objectives of the Study**

The primary purpose of this study is to design and develop a web and mobile based management system for Fiesta Homes Subdivision.

Specifically, this aims toprovide the following:

1. To design a web application system with the following features:
2. Using QR code when entering the premises to provide monitoring of the visitors whose entering the premises.
3. To develop a mobile application with the following features:
4. Push notification to the residence if someone will visit them.
5. Evaluation.
6. Use evaluation tools for the usability.

ISO for the usability.

McColls for the Quality.

**Significance of the Study**

This study is conducted to provide a Web and Mobile Based Management System that will solve the issues in security and time-consuming process of manual logging in and logging out.

Mainly, this will benefit to the following:

* Fiesta Homes Homeowners Association – To the FHHA, to be able to use the system in a time-saving manner.
* Residents of Fiesta Homes – To the residents of fiesta homes, to be able to use the mobile application that will show their QR code that serves as their gate pass and use the other functionalities like report issues and concerns and view the announcements and notices.
* Visitors – To the visitors, to be able to enter and leave the premises with ease provided with an intensive monitoring.
* Future Researchers – To the future researchers, to be able to improve the system in terms of security and add additional features in the system.

**Scope and Limitation of the Study**

The proposed system entitled Web and Mobile based Fiesta Homes Management System is designed and developed for the year 2021-2022 at Fiesta Homes Subdivision located in Barangay Sum-ag, Bacolod City.

The design and development of the proposed system shall compose of two distinct functionalities such as web-based system and mobile based system. The system function in web based is focus on managing the user registration – the admin and the residents, monitoring visitors and residents whose leaving and entering the premises using the QR code in the mobile application, announcements and notices, and the reports of the residents in regards with noise and other concerns. In registration, the user needs to input their full name, member of their family, house number, contact number, and their vehicle if they have because vehicle owners will be given a car pass sticker with QR code. The proposed system provides a search capability for the user to easily view the resident records and provides the functionality of sending push notification to the resident if someone has visited them. Visitors will be given a visitor pass. In mobile based, the QR code will be shown, announcements and notices will be shown also, push notification will be provided, and report issues in regards with noise and other concerns will be provided in the system also.

The limitation of the proposed system is based on the functional roles of the users to the system. There are two types of user in the proposed system and those are the admin who is responsible for the web-based system and the user who is going to use the mobile based. The admin, responsible of the web-based system, has the capability to register a new user, edit and update any changes from resident’s records as well as to delete records, and monitor the visitors. The user, who is going to use the mobile based, has the capability to log in from the mobile application and directly view the QR code as their gate pass, view announcements and notices, and report other issues or concerns.

The proposed system will use HTML, CSS, JavaScript and Android Converter for front end, PHP and AJAX for back end and MySQL as Database. The respondents of the study will be the residents of the Fiesta Homes and selected IT experts. The ISO/IEC 25010 Software Quality Standards for IT experts as standardized questionnaire and USE Questionnaire: Usefulness, Satisfaction, and Ease of use for users as standardized questionnaire will be used in gathering information.

**Definition of Terms**

For a better understanding of the readers, this includes the conceptual and operation definition of variables and other relevant terms used in the study that may have different meanings and interpretations in other fields.

**Management.** According to Harold Koontz and Heinz Weihrich (2010), the term refers as the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims.

Operationally, it is defined as the process of managing and maintaining a system by a group within a specified objective.

**Mobile-based.** According to ecommercewiki.org, the term is referred to as designed to run on smartphones and tablet computers, apps provide users with rich mobile content by deploying the handset's multiple native capabilities.

Operationally, it is defined as the mobile environment where the system will run.

**System.** According to padakuu.com, the term refers as an interrelated set of business procedures (or components) used within one business unit, working together for some purpose.

Operationally, it is defined as a set of process that contains various functionalities that correlates with each other, for the purpose of implementing in a target beneficiary.

**Web-based.** According to techopedia.com, the term refers as any program that is accessed over a network connection using HTTP, rather than existing within a device’s memory.

Operationally, it is defined as the web environment where the system will run but restricted only to the beneficiary’s end.