**CHAPTER II**

**REVIEW OF RELATED LITERATURE AND STUDIES**

This chapter presents the review of the related literature and studies which served as reference in the development of Municipal Social Welfare Development PWD and Senior Citizen Information System. The researchers aimed to identify the areas that might lead to better understanding regarding with developing the system. This will serve as the source of basic ideas for the concepts of the website.

**Related Literature**

**Website**

According to Technopedia, A website is a collection of publicly accessible, interlinked Web pages that share a single domain name. Websites can be created and maintained by an individual, group, business or organization to serve a variety of purposes. Together, all publicly accessible websites constitute the World Wide Web. Although it is sometimes called “web page,” this definition is wrong, since a website consists of several webpages. A website is also known as a “web presence” or simply “site”. Websites come in a nearly endless variety, including educational sites, news sites, porn sites, forums, social media sites, e-commerce sites, and so on. The pages within a website are usually a mix of text and other media. That said, there are no rules dictating the form of a website.

Additionally, Computer Hope (2021) defines website as a central location of web pages that are related and accessed by visiting the home page of the website using a browser and as of January 2018, depending on which survey or hosting company being referenced, there are between 1.3 and 1.8 billion websites. Many of these websites are unused or not visited by many people, but the websites still exist and included. Today, the Internet consists of billions of websites created by billions of different people. Any business, government, organization, or person can create a website on the Internet. On most websites, you read the information contained on each web page. If there are any interesting hyperlinks, you follow those links by clicking or tapping on them to find more information or perform a task. You can also listen to music, watch videos, shop, communicate, and much more on many websites.

**Hyper Text Markup Language**

According to Susan C. (2021), HTML stands for Hypertext Markup Language. It allows the user to create and structure sections, paragraphs, headings, links, and blockquotes for web pages and applications. HTML is not a programming language, meaning it doesn’t have the ability to create dynamic functionality. Instead, it makes it possible to organize and format documents, similarly to Microsoft Word. HTML was invented by Tim Berners-Lee, a physicist at the CERN research institute in Switzerland. He came up with the idea of an Internet-based hypertext system. Hypertext means a text that contains references (links) to other texts that viewers can access immediately. He published the first version of HTML in 1991, consisting of 18 HTML tags. Since then, each new version of the HTML language came with new tags and attributes to the markup.

Additionally, Mozilla Developer Network’s HTML Element Reference, they say that there are 140 HTML tags, although some of them are already obsolete (not supported by modern browsers). Due to a quick rise in popularity, HTML is now considered an official web standard. The HTML specifications are maintained and developed by the World Wide Web Consortium (W3C).

**Cascading Style Sheet**

According to Computer Hope (2019), CSS is a language used to describe reusable styles for presenting documents written in a markup language. The W3C made CSS a specification, and it now allows web developers to change the layout and appearance of their web sites. A single CSS file can be linked to several pages, allowing a developer to update the look of all the sites at once. CSS is a style sheet language that modifies the appearance of a markup language. HTML, for example, is used to generate the fundamental layout of a web page, such as this paragraph. CSS is used to specify the font, font size, font weight, font position, and other visual attributes.

As stated in https://www.tutorialspoint.com/css/what\_is\_css.htm, Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects. CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

**XAMPP**

According to Prabhu Ganesan (2021) XAMPP is open source free software developed by Apache friends. XAMPP software package contains Apache distributions for Apache server, MariaDB, PHP, and Perl. And it is basically a local host or a local server. This local server works on your own desktop or laptop computer. You can just install this software on your laptop or desktop and test the clients or your website before uploading it to the remote web server or computer. This XAMPP server software gives you suitable environment for testing MYSQL, PHP, Apache and Perl projects on the local computer. The full form of XAMPP is X stands for Cross-platform, (A)Apache server, (M)MariaDB, (P)PHP and (P)Perl. The researchers used XAMMP as the local host for the server.

**Web Hosting**

According to Domantas G. (2021) Web hosting is an online service that enables you to publish your website or web application on the Internet. When you sign up for a web hosting service, you basically rent some space on a physical server where you can store all the files and data necessary for your website to work properly. A server is a physical computer that runs without any interruption so that your website is available all the time for anyone who wants to see it. Your web host is responsible for keeping that server up and running, protecting it from malicious attacks, and transferring your content such as text, images, files, etc. from the server to your visitors’ browsers. When you decide to start a new website, you need to find a web hosting provider that will supply you with that server space. Your web host stores all your files, assets, and databases on the server. Whenever someone types your domain name into the address bar of their browser, your host transfers all the files necessary to serve that request.

**Information System**

Information system (IS) refers to a collection of multiple pieces of equipment involved in the collection, processing, storage, and dissemination of information**.** Hardware, software, computer system connections and information, information system users, and the system’s housing are all part of an IS. Personal computers, smartphones, databases, and networks are just some examples of information systems. Enterprises and corporations use information systems to interact with their suppliers and customer base, perform their operations, manage their organization, and carry out their marketing campaigns. They can be used for a broad variety of purposes, from managing supply chains to interacting with digital marketplaces. Individuals also rely on ISs to interact with peers and friends through social networks, carrying out everyday activities such as banking and shopping, or simply looking for knowledge and information.

**Related Foreign Studies**

**Consumer Profiling System**

According to Eldering, (2017) a data processing method and network for collecting, storing, and providing user profile data. The network comprises a number of persona agents, interconnected to a hub. The persona agents and the hub are stored within the data communications network. Each persona agent is associated with a user of the data communications network, and is operable to collect observational data from an application being executed by the user, as well to receive queries for profile data from the application and to respond to the queries with context-based profile data.

This study mentioned that consumer profiling system used difference way to collect individual profile data. Since the MSWD Calauan that has manually collecting data in each individual. The developers of PWD and Senior Citizen Information System also prioritized collecting information using Information System.

**Location-Based Demographic Profiling System**

Rosenberg et. al., (2017) a location-based demographic profiling system and is a disclosed that enables users to access information about physical establishments indicating the demographic makeup of the patrons currently located within the establishment. In one embodiment, a location-based demographic profiling method is employed that includes receiving, over a network, a profile request from a user device, the profile request identifying at least one establishment from a plurality of preidentified establishments; upon receiving the profile request, determining a current demographic profile of each establishment identified in the profile request, wherein each current demographic profile is a statistical representation of the number of individuals residing with an identified establishment who possess at least one identified demographic characteristic; and transmitting demographic profile data to the user device, the demographic profile data being adapted to cause the user device to present the determined demographic profile to be presented to the user.

With the help of Location Demographic Profiling Based System the developers of PWD and Senior Citizen Information System

**Profiling System for Online Marketplace**

Somji et. al., (2017) a profiling system provides customized, relevant, and targeted experience to customers of its clients throughout various touch points in an online marketplace. The profiling system utilizes gathered data on customers such as online marketplace behavior, subscriber information, usage, and the like to determine relevant segments for the customers. The segments are created and modified based on default and/or client defined rules. Intersections of these elements are used to classify subscribers of the marketplace into the segments on a periodic basis. Customized content such as tailored advertisements, engagement messages, customer relations communication, etc., are then provided to the subscribers based on the segments.

**Related Local Studies**

**Barangay Profiling System**

Sarne, R. (2017) stated that the objective of this study is to make a control system that manages processes in the industrial workplace. It reduces human errors and processing time; thus, it can boost productivity and result into a high quality of product produce. This can result in a system well integrated process that can perform much faster and more accurate than the manual system. The Barangay Profiling System is appropriate for the use of barangay employees, who have access to profile information of barangay residents for the direct reports and also departmental organizational staffs that have business need for this information for their business unit. The Barangay Profiling System is responsible for an effective and efficient approach for barangay employees and residents. It will help them accomplish task faster and also it eliminates the need of a large staff. It will provide profile-based information on residents. The interest of investigating the research topic is a good example of a computer-generated process, this can lessen the workload and provides information needed by a resident. As a result, it will benefit not only the barangay employee but the administration as a whole.

With the help of Barangay profiling system the developers of PWD and Senior Citizen Information System

**Automated vehicle class and color profiling system based on fuzzy logic**

According to A. C. P. Uy et al., (2017) Traffic congestion has been one of the leading problems in the Philippines, due to the ever-increasing number of cars in cities, which causes high volume of traffic. Nowadays, the problem is being more and more severe and rampant as the traffic enforcers are overpowered such that the reliability of traffic enforcers in apprehending traffic violators has become an issue. Hence, this causes severe destruction of property and more accidents that may endanger the lives of the people. From this, numerous researches and technology developments aim on designing and improving an automated traffic violation system that can be used for object detection and image recognition of the violators. Furthermore, the most vital part of an automated vehicular apprehension is the vehicle profiling, as the traffic enforcers need a more specific detail of violator for reliable apprehension. As such, this paper focuses on designing an automated vehicle class and color profiling system based on fuzzy logic.

The study proposes an automated vehicle class and color profiling system to specifically have distinct information on any apprehended car in an intelligent traffic system. The problem arises from the fact that traffic enforcers are sometimes unreliable with apprehending cars due to the lack of information on the violator. The solution is an automated system which consists of background difference method, and fuzzy logic to classify these violators. The general process is as follows: a capture picture from a traffic CCTV camera is subjected to a car detection process, and then the fuzzy inference systems are run to find the class and color of the car, and finally display a cropped picture of it along with the said descriptions. The automated car profiling system was found to have an accuracy of 99.391% for the classification process while 98.580% for the color profiling process. These results show that the algorithm is well-suited for a reliable implementation on intelligent traffic system.

**FDM Cloud Based Application Performance Monitoring System of The Cadets While on Board Ship Training for the Philippine Merchant Marine Academy in San Narciso Zambales**

Mobo, F. (2017) stated that the main thrust of the study is to develop a cloud-based application performance monitoring system of the cadets while on board ship training for the Philippine Merchant Marine Academy in San Narciso, Zambales which intended to serve as an alternative system that can be used by the target school in monitoring the performance of the cadets while on ship board and determine its effectiveness. The researcher has used the descriptive research method wherein the study is focused on the present situations. It involves the recording, description and the presentation of the present system, composition and phenomena. The Statement of the problem focused in obtaining the effectiveness of the proposed cloud-based application in performance monitoring system of the cadets for the Philippine Merchant Marine Academy, San Narciso, Zambales. Findings showed that the Department of Shipboard Training needs a real time system that can monitor the cadets while on board ship training. Based on the conclusion of this study, the researcher recommends the development of the cloud-based application which will monitor the performance of the cadets while on board ship training and lastly, the developed system was tested during the implementation and met no errors. Based on the findings, the number of respondents as group per course is in parallel to the ratio of the students currently enrolled at PMMA. Majority of the respondents for both the groups came from the existing Group whose ages range from 19-21 years old. As revealed, the majority of the respondents for both the groups are males from the Proposed Group. In the proposed system out of one hundred percent respondents, thirty or 93.5% cadets; while the officials are nine or 6.5% of the one hundred, from the total of thirty-nine respondents.

**Development of an Information-Based Dashboard: Automation of Barangay Information Profiling System (BIPS) for Decision Support towards e-Governance**

Lacasandile et al. (2020) stated the need to address societal issues of every community is a salient aspect that demands attention from the people in authority. These are important responsibilities of every barangay and its official in the Philippines. Profiling each household in the community using information and communication technology could achieve good governance through E-government as its core. Once profile data is aggregated, essential information could provide statistics in labor and employment, family income and expenditures, demography by (population) and (age), water and sanitation, type of housing and education. The focus is based on the profiling of Zone 42 and adding other facets as mentioned above was initiated, with the idea that educational institution around the barangay can help towards the areas included. This paper intends to aid barangay official in budget allocation and decision making in their respective governed area with the use of Barangay Information Profiling System (BIPS). Building an Information-Based Dashboard was initiated last 2016 and assessed by IT expert, was given readiness for beta launch to its target users. The functionality criteria were given a mean score of 4.47, which means that the respondents agreed that the system sequence of operation is easy to understand, and the result of their queries is correct and accurate. The system testing had a favorable result with a mean of 4.50 which means that the system passed the standard of completing, processing of a request, response time and the usage of computer resources for all of its function.

**Synthesis**

The related literature and studies included in this study have bearing in the development of the PWD and Senior Citizen Information System. The related studies are very similar to the present study in the sense that it emphasized the significant role of the developed Information System.

The related studies were very useful in the framing and planning of how we should tackle the development of the system. It only shows that the need of implementing the developed PWD and Senior Citizen Information System will contribute a big help not only to the Office of MSWD but also to both PWD’s and Seniors of Calauan.