ABSTRACT

Pharmacy is a health facility that's available for everyone in the society. Access to medicine for everyday consumption can be easily obtained from pharmacies that also helped to increase the general well-being of the public. One of the pharmacies that served the public is Sugosha Pharmacy. Sugosha Pharmacy is one of pharmacies that is located in Denpasar Timur, Bali. With the appearance of Covid-19 pandemic when this research started, all kinds of physical contact between people is limited, impacting Sugosha Pharmacy operations, which still mainly uses physical transaction between customer and staffs. With that reason, and also the need to increase the pharmacy's market audience, owner of Sugosha Pharmacy wanted to have a digital transaction system. One of the implementations of digital transaction system is developing a web-based shopping application or e-commerce. In application development, there needs to be a development method for guidance in making steps of development. One of those method is SDLC (System Development Life Cycle), that has many kinds of software development model. One of that models is waterfall, a SDLC model that's compatible for a simple and certain software development. There also needs to be an evaluation technique to determine whether or not the application that's already been developed meets the requirements. The evaluation techniques that can be used are Black-box Testing and White-box Testing to evaluate if the end product of the development is working as intended. After developing the system following the waterfall model, an API and a front-end application for digital transaction system is created. Black-box testing is done to the functionality of API and front-end application, which resulted in great success where all the test cases results are the same as the expected results. White-box testing is done towards the API code, using Coverage test, and the result is that only a little more than half of the code that are written in the application is used in the API operation. A lot of lines of the codes are not used because most of it are unused and scrapped lines of code that are not yet removed from the application, and also some of it are error handling code that are not included in the test cases.

Keywords: E-commerce, web application, Waterfall, Black Box, White Box