

ABSTRACT

Docker is software used to develop, test, and run applications in *containers*. *Container* is a virtualization technology that can be used to package applications and their dependencies, allowing them to be distributed and run on other infrastructures. *Docker* is distributed with *command-line client* that can be used to manage *Docker* components. For novice users who are new to *Docker*, using the *command-line* to manage *Docker* is ineffective because it requires memorizing the syntax of each command. *Graphical user interface* (GUI)-based application can be used as an alternative to *command-line*, where users simply press buttons and submit data into forms to manage *Docker*. The development of a web-based *Docker* management application using the *ICONIX Process* method aims to produce an application that can serve as an alternative to the *Docker command-line*. The application is developed using the *ICONIX Process* method, with *TypeScript* programming language and the *Next.js 14* framework through *Visual Studio Code*. Application testing conducted using *Black-Box Testing*. A total of 56 test items are created in the test plan and successfully tested. The results of this study indicate that the implementation of the *ICONIX Process* method in the development of the *Docker* management application has been successfully done.

Keywords : *command-line, Docker, graphical user interface (GUI), ICONIX Process*