

DEVELOPMENT OF ANDROID-BASED VIRTUAL SORTING APPLICATION FOR PROGRAMMABLE LOGIC CONTROLLER CONTROLLER

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ABSTRACT

This research is a development research in the field of Android-based automation to improve the performance of innovative products. The current Covid-19 pandemic has changed the pattern of community life. Indonesia is currently in a transitional period from pandemic to endemic. This transitional condition towards the endemic phase does not eliminate the existence of the Covid-19 virus in the community, so that the community still needs to maintain health protocols, one of which is limiting mobility. Technological developments, especially the development of smartphone technology, are expected to be able to help people to keep their mobility limited by being able to control their work from home. This condition can be used by researchers in collaboration with partners (CV Karya Teknologi) to develop virtual technology in the field of automation so that work control can be carried out from home. The purpose of this research is the Development of an Android-Based Virtual Sorting Station Application for Programmable Logic Controller Control. The research procedure adopts the ADDIE Lee Owens development procedure, with procedural steps covering Analysis, Design, Development, Implementation, and Evaluation. The analysis phase consists of two activities, including needs analysis and front-end analysis. The design phase includes the assignment of the project team, scheduling, application specification, learning structure, configuration settings, and review. In addition, the design also includes the desired performance of the application being developed, product testing methods, and partner multimedia methods. The product development stage is broken down into several parts, namely specification of user interface requirements, flowcharts for each hyperlink execution, modeling of the application's technical architecture, writing program code, and integration testing. The implementation and evaluation stages are carried out by involving material experts in the field of automation, media experts, partners, and partners' users. Inputs and suggestions are analyzed and followed up on parts where it is possible to add, subtract, or modify the features being developed.

Kata Kunci: *android, virtual, plc,*