

# ***ANDROID BASED E-LEARNING APPLICATION SYSTEM DESIGN (Case Study: Muhammadiyah Vocational School 1 Prambanan Klaten)***

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## ***ABSTRACT***

*The main problems in this thesis are 1) the media used by teachers in the learning process is not yet varied, teachers tend to use textbooks and worksheets so that students are less interested in participating in the learning process, 2) Students are allowed to use cellphones as a learning resource, 3) At school the capacity of wifi is available but has not been used optimally in the learning process due to limited media in its use, 4) Students are more interested in searching for assignments via the internet, 5) Students are more interested in searching for assignments using cellphones rather than books in the library, 6) Teachers still use multimedia less in the learning process, 7) The school does not integrate local culture enough, for example the learning material does not contain local wisdom culture, so researchers designed an Android-based e-learning application integrated with local culture. This research aims to produce an Android-based e-learning application integrated with local culture that is valid and practical for SMK Muhammadiyah 1 Prambanan Klaten. This research was created by applying the REST API and MVP architectural design. Model-View-Presenter (MVP) is one of the architectural patterns that promotes separation of interests, separating graphical interfaces and business logic processes. The resulting application was developed using the Kotlin and PHP programming languages. Application test results using the Whitebox method stated that the application ran smoothly and as expected. By applying the REST API architectural design and the MVP architectural pattern, it produces an Android-based e-Learning application that is light and user friendly. In the future, this research will be developed so that the resulting application has more features.*

**Keywords:** *Muhammadiyah Vocational School 1 Prambanan Klaten, E-Learning, Android, REST API, MVP*