Abstract– *The performance of Android-based mobile applications is very important to note because performance will be related to how users will experience the application. This is related to memory usage and CPU usage on android devices when using applications. There are several ways that are used in an effort to improve the performance of Android-based mobile applications, one of which is by applying an architecture pattern. The use of the right architecture is expected to produce good performance for Android devices when running an application. Therefore, the author doing the research whether the application of the MVVM architecture pattern will affect the use of memory, CPU, and code execution time in android-based applications. This is implemented using the Android Studio application and using the android profiler tool to measure the performance of the application.*

Keywords: Performance; CPU Usage; Memory Usage; Execution Time; MVVM (Model View ViewModel); MVC (Model View Controller)