# ABSTRAK

Raharja, MK. 2023. Pengembangan *Back-end* Berbasis *Restful API* Menggunakan *Architecture Pattern Model Route Controller*. Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

Tilik Desa adalah layanan yang ditujukan kepada masyarakat terutama di desa, dimana semua sistem menggunakan teknologi untuk mengintegrasikan setiap layanan di Pengadilan Negeri Jember Kelas 1A. Pada saat ini Tilik Desa belum bisa mengelola data permohonan masyarakat dengan lebih cepat. Maka perlu adanya pengembangan teknologi untuk mengintegrasikan layanan Tilik Desa, dan mengacu pada latar belakang tersebut penelitian ini mengembangkan *Back-end* berbasis *Restful API* menggunakan *Pattern Model Route Controller*. Kemudian dilakukan pengujian *Unit Testing* menggunakan metode *Statement Coverage*. Dengan hasil yang didapatkan adalah 3 *Sprint* 12 *Product Backlog*. Pada *Sprint* 1 dilakukan 4 pengujian *Statement Coverage* yang hasilnya 69.2% untuk pengujian pertama, 79.5% untuk pengujian kedua, 89.7% untuk pengujian ketiga, dan terakhir 100%. Pada *Sprint* 2 dilakukan 3 pengujian *Statement Coverage* yang hasilnya 83.8% untuk pengujian pertama, 96.7% untuk pengujian kedua, dan terakhir 100%. Di *Sprint* 3 dilakukan 3 pengujian *Statement Coverage* yang hasilnya 68.7% untuk pengujian pertama, 93.7% untuk pengujian kedua, dan terakhir 100%. Hasil keseluruhan di akhir *sprint* mendapatkan persentase 100% yang mana menandakan pengujian telah berhasil dilakukan.

Kata Kunci: *Back-end, Architecture Pattern, Unit Testing, Statement Coverage*.

# *ABSTRACT*

*Raharja, MK. 2023. Restful API-Based Back-end Development Using Architecture Pattern Model Route Controller. Final Project. Undergraduate. Informatics Engineering Study Program. University of Muhammadiyah Jember.*

*Tilik Desa is a service aimed at the community, especially in villages, where all systems use technology to integrate each service in Jember District Court Class 1A. Currently, Tilik Desa has not been able to manage community application data more quickly. So it is necessary to develop technology to integrate it, and referring to this background, this research develops a Restful API-based Back-end using the Pattern Model Route Controller. Then Unit Testing was carried out using the Statement Coverage method. The results obtained are 3 Sprints 12 Product Backlogs. In Sprint 1, 4 Statement Coverage tests were carried out which resulted in 69.2% for the first test, 79.5% for the second test, 89.7% for the third test, and finally 100%. In Sprint 2, 3 Statement Coverage tests were carried out, the results of which were 83.8% for the first test, 96.7% for the second test, and finally 100%. In Sprint 3, 3 Statement Coverage tests were carried out, the results of which were 68.7% for the first test, 93.7% for the second test, and finally 100%. The overall result at the end of the sprint gets a percentage of 100% which indicates that the test has been successfully carried out.*

*Keywords: Back-end, Architecture Pattern, Unit Testing, Statement Coverage.*