ABSTRACT

DESIGN AND BUILD BACK END OF GOLANG-BASED TRAVEL BOOKING APPLICATION WITH MICROSERVICE ARCHITECTURE

Author

MOCHAMMAD HANIF

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Innovation in website media can help companies improve service quality and compete with similar companies. In the tourism sector, the use of online travel booking applications is increasingly popular thanks to information technology. To deal with social, cultural, world of work, and technological advances. Merdeka Belajar Kampus Merdeka Policy is expected to provide solutions with an autonomous and flexible approach to education. Alterra Academy, as one of the companies participating in Kampus Merdeka's independent research program. Data systems serve as a tool for decision making and action, and at Alterra Academy, a travel booking application is needed to provide train ticket information and hotel reservations to customers and admins. The use of the Golang programming language is the choice for the back-end to develop this application, because Golang has high performance and efficiency. This research was developed using the Agile Scrum methodology combined with testing using BlackBox Testing and Load Testing. The result of this research is a successful application (build-and-test to deployment). The test results using the BlackBox Testing method and the Boundary Value Analysis technique show functionality of 100%. Load Testing shows variations in performance between threads such as Admin Order having high latency (33858.89/ms) and low throughput (2.7/sec), while some functions, such as Admin Station, have low latency (834.32/ms) and high throughput (103.6/sec). Performance monitoring and improvement on low-performance operations is required to ensure application stability and responsiveness.

Keywords: Back End, Echo, Golang, JWT, REST API, Travel Booking