

IMPLEMENTASI ALGORITMA LEVENSHTTEIN DISTANCE DALAM APLIKASI KAMUS BAHASA MUNA BERBASIS FLUTTER

ABSTRAK

Bahasa Muna merupakan salah satu bahasa daerah di Sulawesi Tenggara yang saat ini mengalami penurunan penutur terutama di kalangan generasi muda. Pelestarian bahasa yang menggunakan kamus cetak kurang efektif karena aksesnya terbatas dan pencarian kosakata memerlukan waktu yang relatif lama. Penelitian ini bertujuan untuk merancang aplikasi kamus Bahasa Muna berbasis Flutter serta mengimplementasikan algoritma Levenshtein Distance yang mampu merekomendasikan kosakata yang relevan meskipun terjadi kesalahan pengetikan. Metode penelitian menggunakan Agile *Scrum* dengan empat *sprint* yang meliputi perancangan, implementasi, pengujian dan dokumentasi. Hasil penelitian ini menunjukkan bahwa aplikasi Kamus Bahasa Muna berhasil dirancang dan seluruh fitur berjalan sesuai kebutuhan sistem. Implementasi algoritma Levenshtein Distance mampu memberikan rekomendasi kosakata yang sesuai terhadap kesalahan pengetikan pengguna dengan rata-rata waktu eksekusi 4 milidetik pada dataset 2.000 *entri*. Hasil pengujian menunjukkan UAT Pengguna Umum memperoleh rata-rata skor 4,62 dari 5,00 termasuk dalam kategori sangat baik dan UAT Admin memperoleh rata-rata skor 4,22 dari 5,00 juga termasuk dalam kategori sangat baik serta tingkat keberhasilan 100% pada *Black Box Testing*.

Kata Kunci: Agile; Bahasa Muna; Flutter; Kamus; Levenshtein Distance

IMPLEMENTATION OF THE LEVENSHTein DISTANCE ALGORITHM IN A FLUTTER-BASED MUNA LANGUAGE DICTIONARY APPLICATION

ABSTRACT

Muna is one of the regional languages in Southeast Sulawesi that is currently experiencing a decline in the number of speakers, particularly among the younger generation. Language preservation through printed dictionaries is considered ineffective due to limited accessibility and the time required to search for vocabulary. This study aims to develop a Flutter-based Muna Dictionary application and implement the Levenshtein Distance algorithm to recommend relevant vocabulary even when users make typing errors. The research employed the Agile method with four sprints covering planning, implementation, testing, and documentation. The results show that the Muna Dictionary application was successfully developed, and all features functioned according to the system requirements. The implementation of the Levenshtein Distance algorithm was able to provide appropriate vocabulary recommendations for user typing errors, with an average execution time of 4 milliseconds on a dataset of 2,000 entries. The testing results indicate that the UAT for general users achieved an average score of 4.62 out of 5.00, categorized as excellent, while the UAT for administrators achieved an average score of 4.22 out of 5.00, also categorized as excellent. In addition, the application achieved a 100% success rate in Black Box Testing.

Keywords: Agile; Flutter; Levenshtein Distance; Muna Language; Dictionary.