

ABSTRAK

RANCANG BANGUN *FRONT END* APLIKASI PENGINGAT AKTIVITAS OLAHRAGA DAN MOTIVASI KESEHATAN DENGAN METODE *RAPID APPLICATION DEVELOPMENT (RAD)* MENGGUNAKAN *FRAMEWORK FLUTTER*

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Gaya hidup modern yang cenderung minim aktivitas fisik meningkatkan risiko penyakit tidak menular. Meskipun kesadaran masyarakat akan pentingnya olahraga cukup tinggi, banyak individu mengalami kesulitan menjaga konsistensi akibat kesibukan, lupa jadwal, dan kurangnya motivasi. Berdasarkan pra-survei, 73,7% responden menyatakan kesulitan menjaga rutinitas olahraga. Penelitian ini bertujuan untuk merancang dan membangun *front end* aplikasi kesehatan pribadi bernama “Moger” yang berfungsi sebagai asisten pengingat jadwal olahraga dan penyedia motivasi harian. Aplikasi ini dikembangkan menggunakan *framework* Flutter dengan bahasa pemrograman Dart, serta memanfaatkan SQLite sebagai media penyimpanan data lokal (*local storage*) tanpa ketergantungan pada server eksternal. Metode pengembangan sistem yang diterapkan adalah *Rapid Application Development (RAD)* yang terdiri dari tahapan *Requirement Planning, User Design, Construction, dan Cutover*. Fitur utama aplikasi meliputi manajemen jadwal olahraga, pencatatan aktivitas, pelacakan konsumsi air minum, statistik mingguan, serta notifikasi pengingat dan pesan motivasi. Pengujian sistem dilakukan menggunakan metode *Black Box Testing* dan *System Usability Scale (SUS)*. Hasil *Black Box Testing* menunjukkan bahwa seluruh fitur fungsional berjalan sesuai dengan skenario yang diharapkan. Sementara itu, evaluasi *usability* menghasilkan skor rata-rata SUS sebesar 82, yang masuk dalam kategori penerimaan “Sangat Baik” (*Excellent*). Hal ini menunjukkan bahwa aplikasi Moger efektif dan mudah digunakan untuk membantu pengguna menjaga konsistensi olahraga serta pola hidup sehat.

Kata kunci: Aplikasi *Mobile*, Flutter, *Rapid Application Development (RAD)*, SQLite, *System Usability Scale (SUS)*.

ABSTRACT

DESIGN AND DEVELOPMENT OF FRONT END EXERCISE REMINDER AND HEALTH MOTIVATION APPLICATION USING RAPID APPLICATION DEVELOPMENT (RAD) METHOD WITH FLUTTER FRAMEWORK

By

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Modern lifestyles characterized by minimal physical activity increase the risk of non-communicable diseases. Although public awareness regarding the importance of exercise is relatively high, many individuals struggle to maintain consistency due to busy schedules, forgetfulness, and a lack of motivation. Based on pre-survey data, 73.7% of respondents expressed difficulty in maintaining an exercise routine. This research aims to design and build a front-end personal health application named "Moger," serving as an exercise schedule reminder and provider of daily motivation. The application was developed using the Flutter framework with the Dart programming language and utilizes SQLite for local data storage, eliminating the dependency on external servers. The system development method employed is Rapid Application Development (RAD), consisting of Requirement Planning, User Design, Construction, and Cutover stages. Key features of the application include exercise schedule management, activity logging, water intake tracking, weekly statistics, as well as reminder notifications and motivational messages. System testing was conducted using Black Box Testing and the System Usability Scale (SUS). The Black Box Testing results indicated that all functional features operated according to the expected scenarios. Meanwhile, the usability evaluation yielded an average SUS score of 82, classified within the "Excellent" acceptance category. These results demonstrate that the Moger application is effective and user-friendly in assisting users to maintain exercise consistency and a healthy lifestyle.

Kata kunci: Mobile Application, Flutter, Rapid Application Development (RAD), SQLite, System Usability Scale (SUS).