

APPLYING THE MIFFLIN-ST JEOR ALGORITHM IN DEVELOPING AN ANDROID-BASED APPLICATION FOR HEALTHY LIFESTYLE GUIDE

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ABSTRACT

Limited knowledge about balanced nutrition can hinder many individuals in pursuing a healthy lifestyle. Inaccurate calorie intake calculations may lead to a situation where daily caloric consumption does not align with individual needs, resulting in either a deficiency or an excess. This study aims to develop a healthy lifestyle guide application that assists users in adopting beneficial living habits. The algorithm employed to calculate daily caloric requirements in this research is the Mifflin-St Jeor equation. The system design utilizes the Unified Modeling Language (UML), with implementation carried out using the Kotlin programming language and Android Studio software. The resulting application provides a range of features designed to support users in maintaining their overall health and well-being. These features include an information menu on healthy lifestyles, a feature for recording food consumption to obtain nutritional calculation results, a schedule recording feature, and a reminder feature. The application also includes BMI and BMR calculators. The BMI calculator determines the user's weight category, while the BMR calculator is based on the Mifflin-St. The Jeor algorithm determines a user's daily calorie requirement—the Mifflin-St. Jeor algorithm is a sophisticated tool that considers various physiological parameters, including weight, height, age, and gender, to determine an individual's daily calorie requirements.

Keywords: Android; Mobile Application; Nutrition; Mifflin-St Jeor; Unified Modeling Language