UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

DEVELOPING AN ANDROID APPLICATION FOR EXERCISE ROUTINE BASED ON FUZZY INFERENCE SYSTEM

P10M19

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Report submitted in partial fulfilment of the requirement
for the degree of
Bachelor of Science (Hons.) Management Mathematics
Faculty of Computer and Mathematical Sciences

JULY 2019

ACKNOWLEDGEMENTS

IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

The purpose of this study is to determine the suitable exercise routine for a beginner who wants to start a workout to lose weight. This research developed an android studio based on Fuzzy Inference System (FIS) in order to determine the exact exercise for the beginner. Usually, people do exercise randomly without knowing how many time and what type of exercise that they need to do. By having limited knowledge and guidance, this will affect the muscle of the body such as it can cause cramp at a certain part of the body because the body needs time to develop a new activity. This study was introduced to help those who want to lose their weight by using this system to avoid any problems. The FIS takes a multi-input-multi-output (MIMO) design approach with two input variable (previous level and rate of hardness) and many outputs. In addition, to make the system more efficient, this study developed an application for beginner to determine their exercise routine. The level of exercise in the android studio is limited to ten levels only and the type of exercise for this study is limited to five exercises only which are mountain climbers, lunges, push up, squat and jumping jack. Furthermore, this study can be improved by adding more levels so that people can use this system longer for effective result. Fully developed, FIS and android studio can be used for everyone for daily uses.