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6COSC023W – Final Project Report

Delish

A Recipe Recommendation and a Nutrition Education System for a Healthy Life

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Abstract

The process of “human metabolism” is an essential element of cellular function. Obesity, diabetes, hypertension, heart disease, and cancer are only a few of the diseases linked to disordered metabolic states. In the recent past, it has been identified that Sri Lanka is having a rising number of cases in these areas mainly due to the lack of control on daily nutrient intake and other lifestyle choices of the individuals. This has become an epidemic among various age groups in Sri Lanka and it concerns not only the urban population's health, but also rural regions’ as well due to rapid growth. Hence, it is critical that improper metabolic states be addressed all across the country as a proactive measure. This project intends to address the problem of increased incidences of diseases connected to incorrect metabolic states in Sri Lanka, by preventing the main cause of this, which is inability to maintain a healthy weight. “Delish”, an attempt to support this through a technical standpoint, was established and deployed after analysing the existing gaps in current procedures and comprehending the challenges faced by consumers and industry professionals. The proposed Android mobile application will be utilised to tackle observed challenges in the Sri Lankan Health care industry as a self-care application. Although there are quite a number of self-help applications available to plan diets for free and for cheap price ranges, they lack evidence-based practices and leave users frustrated. Therefore, the proposed solution is focused on providing a result-oriented solution to those who need support to develop and maintain their healthy metabolic state by addressing some identified problems. Development of the application backed by in-depth research, appropriate usage of agile project management methodologies and Rational Unified Process was conducted in the hope of supporting the general public through lifestyle modification strategies or maintain their healthy body weight, as well as keep continual communication with industry professionals, which will increase the process' overall productivity. Furthermore, proper utilization of API integration was explored in order to deliver the maximum quality delivery by the short span of time. Many industry experts, technical experts and non-experts reviewed the implemented prototype to determine the project's overall performance in addressing the concerns stated, and the feedback received confirmed the solution's utility and effectiveness in managing inappropriate metabolic states in Sri Lanka.

Keywords: Metabolism, Obesity, Malnutrition, Nutritional Health, Lifestyle Modification, Personalized Diet Plan, Online Consultation, Natural Language Processing, Android Development, API integration