

UNIVERSITI TEKNOLOGI MARA

**ViewGuard: Screen Time
Monitoring & Alert Mobile App**

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ABSTRACT

Today, the computer is indispensable, and its presence has become very important and necessary in our daily life, and it has become easier for us to do many operations and activities. The computer was invented in the second half of the twentieth century and now it has become the backbone of life. However, without limiting our usage towards computer, it can cause negative health impact, physically and psychologically. Therefore, this project aims to build a mobile application and module that could monitor the user's computer usage to avoid impacting the overall health. This system is based on Arduino board and 2 different sensors to transmit data to monitor the usage. The objective of this project is to identify, design and develop ViewGuard Mobile Application. The target users are the Malaysian computer users. Users who tested the product found that the product is beneficial and have a positive impact as it contributes towards the wellbeing of the users. To conclude, the ViewGuard mobile application clearly will promote better health towards the computer users and will improve to those who has been impacted due to prolonged usage of computers.

Keyword: mobile application, IoT, computer usage, Arduino, health

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CHAPTER 1

INTRODUCTION

1.1 Project Background

A computer is a series of electronic hardware, such as a processor, memory sticks, storage drive, power supply unit and related peripherals, where it is combined as a single unit. Once combined, the unit are able to power on and will have the capability to run compatible software with its intended functions. Since the discovery of computer several decades ago, human has long depended on the computational unit to do countless functions and task as it is much faster, accurate, efficient, and versatile where using the typical human power would cost more time and resources to acquire the result. Because of this, computer are directly responsible towards the increase of productivity. Without the fast computational speed, human surely are not able to discover many things that contribute to the advancement of technology.

However, the usage of computer has taken its toll towards its users where it can cause negative health effect. As using the computer makes the user to be at a posture that effect the body when a specific amount of time is applied. Gunduz (2007) said that one of the causes of computer-related health issues is a lack of knowledge about computer ergonomics and an underestimation of the issues that arise. The concerns that arise due to ergonomics have led to the development of various standards and guidelines for computer workstation designs, such as the European's International Organization for Standardization ISO-9241, National standards: Australian Standard AS-3590.2, Canadian Standard Can/CSA-Z412-M89, and American Standard ANSI/HFES-100, and National guidelines: Australian National Code of Practice for the Prevention of Occupational Overuse Syndrome and A Guide to Work with Computers published by the Hong Kong's Labor Department

In 2020, the COVID-19 pandemic has bounded many people at their homes, in order to comply with the national Standard of Procedure. According to Aristovik (2020), The COVID-19 pandemic (produced by the SARS-CoV-2 virus) has caused many office workers, students, pupils have to do office matters, and attend school using the computer.