

# TO DEMONSTRATE THE SUITABILITY OF OPERATING SYSTEMS FOR A MULTI-THREADED APPLICATION

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## ABSTRACT

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This report is intended to provide detailed information about the whole project. The development of the system will also be examined in detail.

This project studies in depth and mainly focused about the studies of how well an operating system can undertake a multithreaded application. There are a lot of operating systems introduced in the market, which they are categorized into open-source as well as close-source. Open-source is meant that the sources are published, such as UNIX and Linux operating systems. In return, the close-source operating system is meant that the sources are not published, such as Microsoft Windows operating system, which is well-known.

Hereby, the author had decided to compare the performances of Linux operating system and Windows operating system through a multithreaded Java program – Hurdle Racing Game that is compatible for both operating systems. As regard, the comparison will be done by analyzing the CPU Usage graph, memory usage graph as well as the thread used graph. In order to make the analysis simpler, the average of memory usage and the average of CPU usage are shown for statistical analysis used.

The multithreaded application – Hurdle Racing Game is created in a multithreading structure as to fulfill the requirement of this project that each of the hurdle and monitoring control will be concurrently initiated as a thread once the system is run until the hurdle race is ended.