MidBrain - Antivirus

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Abstract*: This paper describes the development and implementation of "MidBrain," an antivirus software project to detect and mitigate malware through several techniques, including hash-based malware detection and real-time scanning. The project is student project being pursued towards the completion of a diploma program with the aim of developing rudimental malware detection features, including hash-based scanning and folder scanning with some basic real-time protection. Development of antiviruses is not something which can be practically learnt by experience, but we are students who have accessed any online resources and academic research so that we get into the real picture of antivirus software. We undertake a review of available approaches in antivirus technology, which relates to MidBrain design philosophy in the aim of simpleness, efficiency, as well as protection. Though the scope of this project is small compared to industry leaders like Quick Heal or McAfee, MidBrain would thus serve as a useful learning tool and a foundation for the future expansions.*

Keywords: Antivirus Software, Hash Based Detection, Malware Detection, Real Time Protection, Binary Scanning, Cybersecurity, Malware Prevention, MD5 Algorithm, Antivirus Techniques