Minor Project- Report

Aug-2021-2022

Semester:3rd

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| TITLE OF THE PROJECT | Simple Malware Scanner | | | |
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| STUDENT NAME | Tejas R | Sumanth Manohar | Sumantha Bhatta | Varun A |
| USN | 1DS20CS227 | 1DS20CS227 | 1DS20CS218 | 1DS20CS232 |
| INDIVIDUAL  CONTRIBUTION | SHA-256 algorithm,  File handling and file  Reading, GUI design  And integration of code with GUI. | GUI design, Database creation. | File handling,  Database connectivity,  Database query,  Database creation. | GUI design,  Database  creation,  Database query. |
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| PROJECT ABSTRACT : | The project involves the implementation of signature based Malware detection using Java .The contents of a file are read and the corresponding hash signature of the file  Is generated using SHA-256 hashing algorithm. This signature is compared with the  Signatures of known viruses stored in a virus signature database. Malware is detected when there is a matching signature found in the database. Options to  Delete the malicious program is also available for the safety Of the machine. | | | |
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| Introduction | The project includes a simple Swing GUI with a JTextArea where the scan results are  displayed. The window also includes two buttons namely “Browse..” and “Delete”.  On clicking the browse button, a Swing File Explorer window opens where the required file or directory or file to be scanned is selected. The path of the selected file  is displayed on the window and the scanning process starts. | | | |
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| Design | Open File explorer on Clicking browse button  Display Window  Display selected path in the window and invoke read() method on file  Display scan results in window  Establish database connection and search for the signature in the database  Read the contents of the file and generate Hash signature from getSHA() method  If user chooses to delete  true false  Delete malicious files and display message | | | |
| PLATFORM USED  (H/W & S/w tools to be used | Java JDK-16, Eclipse IDE for Java developers, MYSQL server, Swing GUI framework project implementation done on windows operating system. | | | |
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| Project Source Code Link (Github/ Google DRive) | https://drive.google.com/file/d/1qlegeKqHMuO2PmtGGLD9VewrQdFkucdq/view?usp=sharing | | | |
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| Conclusion /FUTURE ENHANCEMENT | We would like to develop the functionality to detect viruses that have non-static signatures, using behavioral analysis and expand the database. | | | |
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| Ui sCreenshots |  | | | |