Summer Internship Report

CAS – DRDO

IT Audit Tool

By

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Mentors

We would like to extend our deepest gratitude to our mentors, Pramod Kumar Jha sir [Sc-F], Shambavi Sharma mam [Sc-B], B. Ashwini Mam [TO-C] and Sampath Kumar sir [JRF] whose guidance and support have been instrumental throughout our internship. Their unwavering patience, insightful feedback, and wealth of knowledge have not only enriched our learning experience but also inspired us to strive for excellence. They have provided us with invaluable opportunities to grow both professionally and personally, fostering an environment where we felt encouraged to ask questions, take on challenges, and develop new skills. We are profoundly grateful for their commitment to our development and for the time and effort they invested in mentoring us. This experience has been profoundly impactful, and we are confident that the lessons we have learned will continue to guide us in our future endeavours. Thank you for believing in us and for your exceptional mentorship.

Abstract

This project presents the development and implementation of an Internal IT Audit Tool designed to enhance the efficiency and effectiveness of IT audit processes within an organization. The tool aims to streamline audit workflows, automate checks, and provide comprehensive reporting capabilities. The IT Audit Tool assists in identifying vulnerabilities, ensuring adherence to regulatory standards, and mitigating risks associated with IT infrastructure. Key features include automated audit trails and an intuitive user interface, which collectively facilitate thorough and accurate evaluations of IT systems. The project underscores the importance of robust internal controls and continuous monitoring in safeguarding organizational assets and maintaining operational integrity.

Introduction

The Centre for Advanced Systems (CAS) under the Defence Research and Development Organisation (DRDO) is focused on the design and development of systems and technologies crucial for national security. As part of its continuous improvement and regulatory compliance efforts, CAS DRDO requires a robust internal IT audit tool. This tool aims to streamline the audit processes, ensure compliance with IT policies, and enhance the overall security posture of the organization. Through this tool, organizations can achieve a higher level of audit precision, reduce manual effort, and enhance overall governance and compliance frameworks.

Methodology

The development of the IT audit tool was carried out using an agile methodology, allowing for iterative development and continuous feedback. The following steps were undertaken:

Requirement Gathering: Understanding the specific needs and requirements of CAS DRDO Audit process by discussing with the IT team.

Development: Coding the tool using the chosen technologies.

Testing: Conducting unit, integration, and system testing to ensure the tool's functionality and reliability.

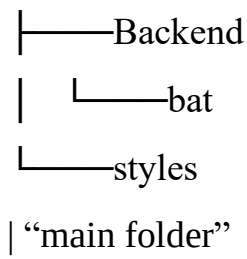
Deployment: Implementing the tool within the CAS DRDO IT infrastructure.

Tools Utilised:

- **Programming Languages:** Python, JavaScript, Batch-files
- **Frameworks:** Electron for GUI framework
- **Version Control:** GitHub
- **Deployment:** Electron-packager

Code Description

In the project, we have various python, JS modules, being utilized for the frontend and the backend aspects of the tool. Here is an overview of how the code is set up.



Backend:

- In this folder we have JS files, which call the backend python files, as the user clicks on the buttons in the GUI.
- In the subfolder **bat**, we have the batch-files and the python files which serve as the backend for this tool.

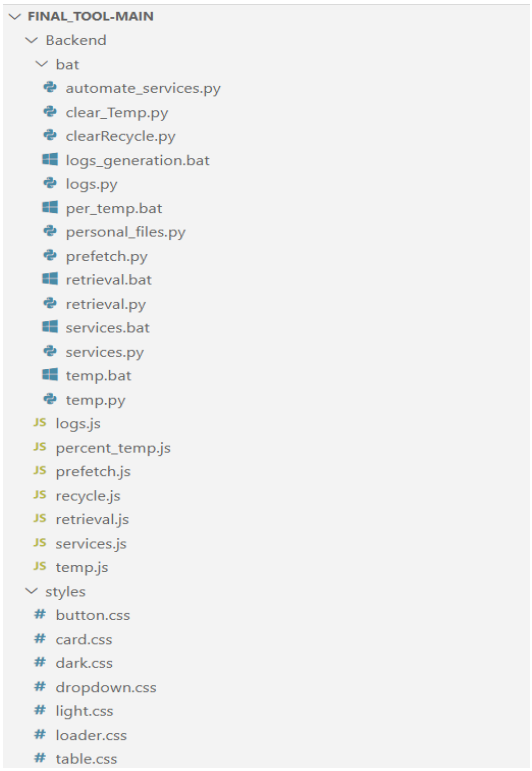
Styles:

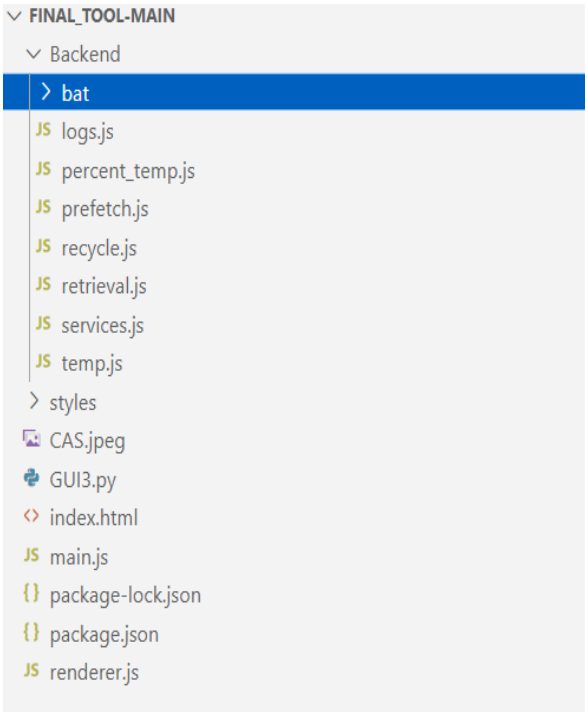
- This folder holds all the css files which are called in the index.html file, which is the main design of the GUI application.

Main Folder:

- In the base directory, we contain all the important modules of the project, namely:
    - Cas.jpeg : logo image
    - Index.html : main GUI design of the project
    - Main.js: calls the other modules
    - Package.json: contains the details used to update the exe file
    - Renderer.js

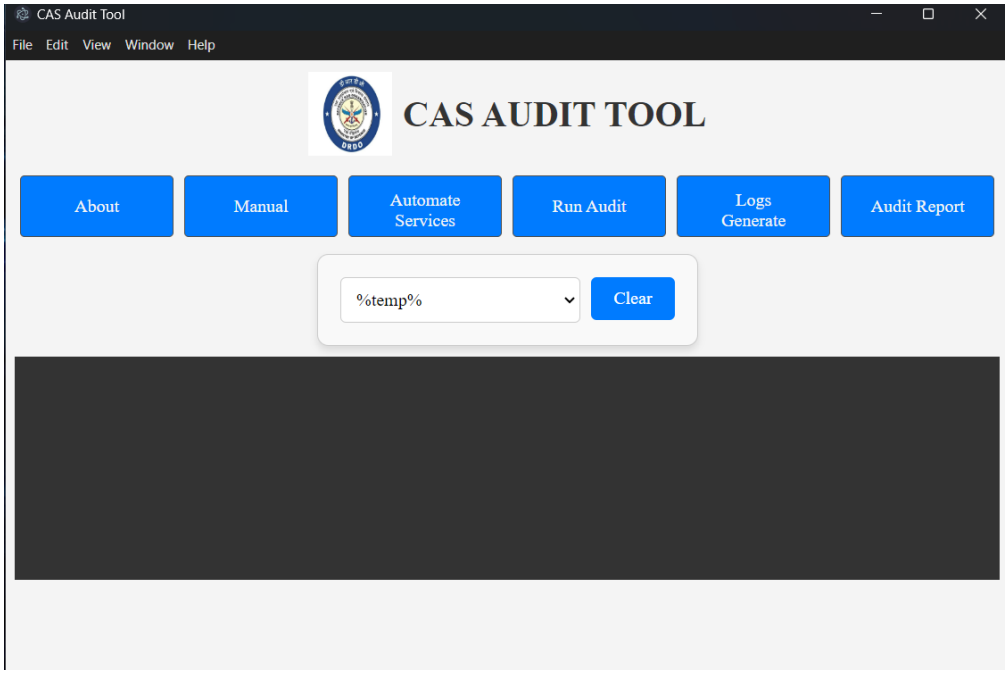
Here is the attached directory structure of the project



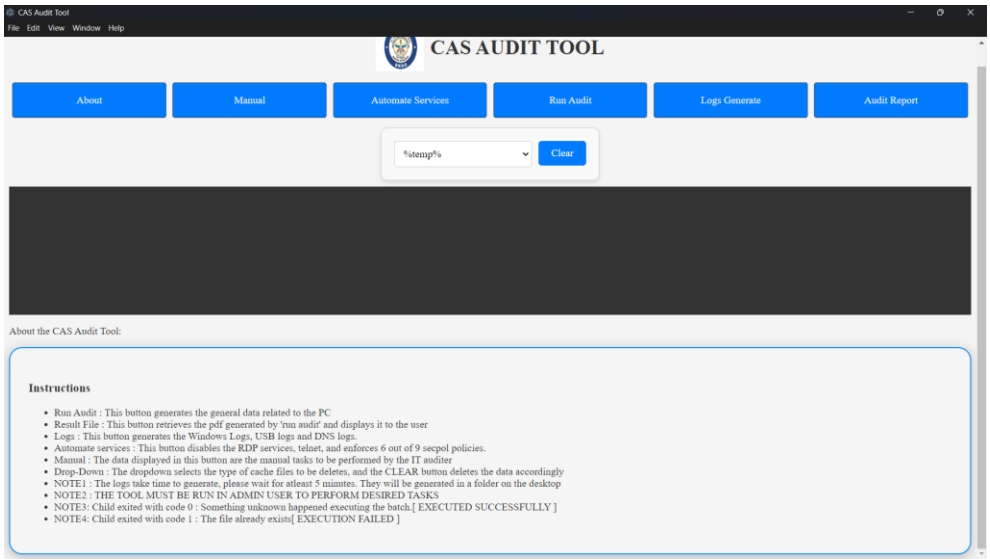


Outputs

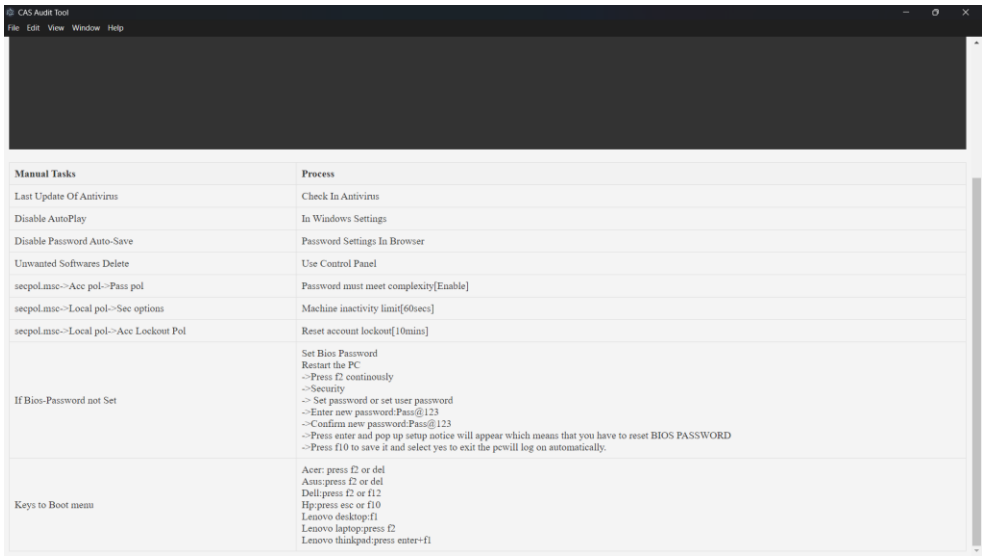
Attached below are the outputs of the audit tool



About Window:



Manual Tasks Window



Manual Tasks	Process
Last Update Of Antivirus	Check In Antivirus
Disable AutoPlay	In Windows Settings
Disable Password Auto-Save	Password Settings In Browser
Unwanted Softwares Delete	Use Control Panel
secpol.msc->Acc pol->Pass pol	Password must meet complexity[Enable]
secpol.msc->Local pol->Sec options	Machine inactivity limit[60secs]
secpol.msc->Local pol->Acc Lockout Pol	Reset account lockout[10mins]
If Bios-Password not Set	Set Bios Password Restart the PC ->Press f2 continously ->Security -> Set password or set user password ->Enter new password:Pass@123 ->Confirm new password:Pass@123 ->Press enter and pop up setup notice will appear which means that you have to reset BIOS PASSWORD ->Press f10 to save it and select yes to exit the pcwill log on automatically.
Keys to Boot menu	Acer: press f2 or del Asus:press f2 or del Dell:press f2 or f12 Hp:press esc or f10 Lenovo desktop:f1 Lenovo laptop:press f2 Lenovo thinkpad:press enter+f1

Dropdown box