Software and Computer Security

SOFE 4848U

Project Proposal

Date: February 6, 2023

Project Group: Group 17

Student Name	**Student Number**
Carson McClelland	100725653
Shwan Majeed	100749077
Walid Ayub	100695612
Kalid Ajibade	100660188

1- Project background: Walid

A USB scanner application is a tool for users to check the USB keys for any sort of security risk it may present. Once connected to a computer, the application so long as connected to the same wifi, will be able to scan and detect any issues. The app should be able to scan for any possible software that could present itself as harmful. This application will be visually appealing for absolute customer satisfaction along with easy to use for all users by having a UI design that will allow users to know what they are doing or make it simple for them to figure it out, by giving instructions. The scanner app should have functions such as running a scan on the USB keys, rearranging data from the scan, having a settings menu, and possibly sharing the data. This app will help with the issues many users have with potential hazards to their USBs and can eliminate these hazards.

2- Project purpose and objectives: - Carson

The main purpose of our project is to develop an application that will scan USB keys upon inserting the key into the computer. Portable devices increase vulnerability on a network. When a device leaves company property it becomes accessible to security risks, and can bring back malicious files primed to infiltrate and exploit the network. By creating an application that scans and assesses all contents on a USB it can increase security and limit potential attacks. The application needs to be able to determine if a file on the USB has malware, files containing malicious code that is executed upon opening. The program needs to be able to perform a scan in a reasonable amount of time. Users will not want to wait over 5 minutes to access files. The application should be able to detect when a USB has been plugged into the machine. The application should give a detailed report of USB health, available space, space, used, number of corrupted files, and any potential risks. Clam AV is an open source antivirus engine we plan on utilizing in our program framework.

3- Project Scope: Kalid

Major Goals

Deliverable 1/ Project Proposal (Febuary 6, 2023)

Deliverable 2/ Development and Design (March 15, 2023)

Deliverable 3/ Project Report and Code (March 27 2023)

Deliverable 4/ Presentation (March 31, 2023)

Project Goal Dates (Rough Deadlines)

Gathering Requirements (Feb 10)

Gather info on tools needed (software) (Feb 12)

Initial Programing (Feb 15)

First prototype/ Midway evaluation (Mar 15)

Testing/Revision (Mar 21)

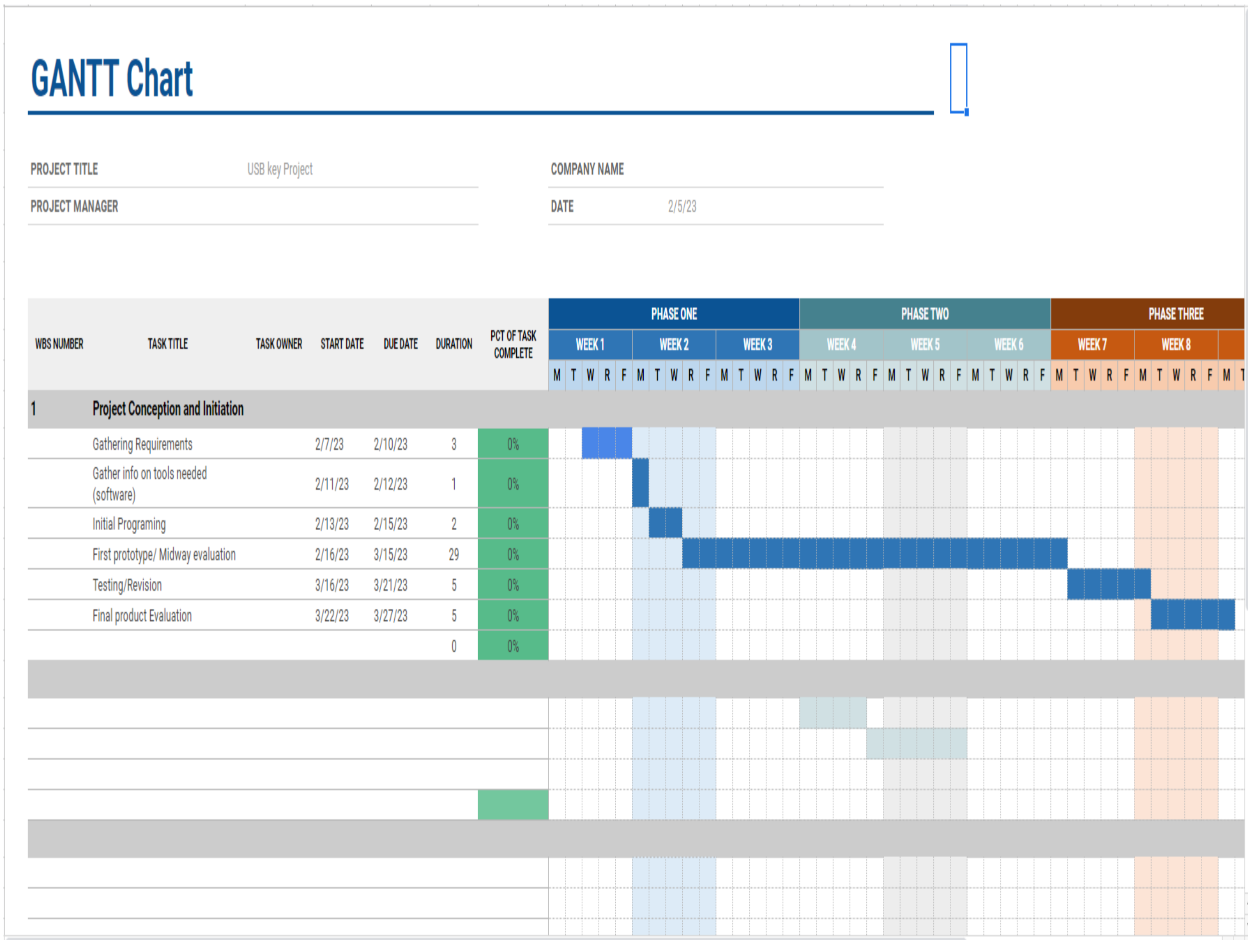
Final product Evaluation (Mar 27)

4- Deliverables:Shwan

For this project, there are four deliverables that must be completed. The first deliverable, which is due February 6, 2023 is the Project Phase 1. In Project Phase 1, the group will go through a project planning and gather requirements in order to discuss the overall scope of the project, the requirements needed to complete the project, and the timeline it must be completed in. The grade breakdown for the first deliverable is 10% of the project grade. Once the first project phase is completed, the next deliverable will be Project Phase 2. In Project Phase 2, the group will go through development and design in order to apply the project and complete tasks as described in the first deliverable. The second deliverable will be due March 15, 2023 and be worth 20% of the project grade. Once the first two deliverables have been completed, the next deliverable will be Project Phase 3, which will be the final report for the project and consist of the group verifying and testing that the project meets the objectives that were created. The final report deliverable will be submitted on March 27, 2023 and will count for 40% of the project grade. The final deliverable for the project will be the Project presentation where the group will demonstrate the capabilities of the project to show that the implemented objectives have been successfully completed. The Project Presentation will be completed March 27-31, 2023 during lab hours.

5- Project Timeline (gantt chart) : kalid

.



https://docs.google.com/spreadsheets/d/1poSM0xALscepUbMt_cy8395k0fSwnC4vIBqU3E062kc/edit?usp=sharing

References

[1] “Linux check the physical health of a USB stick [flash drive].” [Online]. Available: https://www.cyberciti.biz/faq/linux-check-the-physical-health-of-a-usb-stick-flash-drive/. [Accessed: 06-Feb-2023].

[2] Unix as a Second Language By Sandra Henry-Stocker and S. Henry-Stocker, “Using ClamAV to detect viruses on linux,” *Network World*, 09-Mar-2022. [Online]. Available: https://www.networkworld.com/article/3652690/using-clamav-to-detect-and-remove-viruses-on-linux.html#:~:text=The%20ClamAV%20command%20can%20identify,not%20remove%20the%20viruses%20themselves.&text=One%20popular%20and%20easy%2Dto,systems%2C%20Ubuntu%20and%20Fedora%20included. [Accessed: 06-Feb-2023].