Project Checkin 1

Security Improvement for CEN3078 Project: Pokemon Game in C++

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Description:

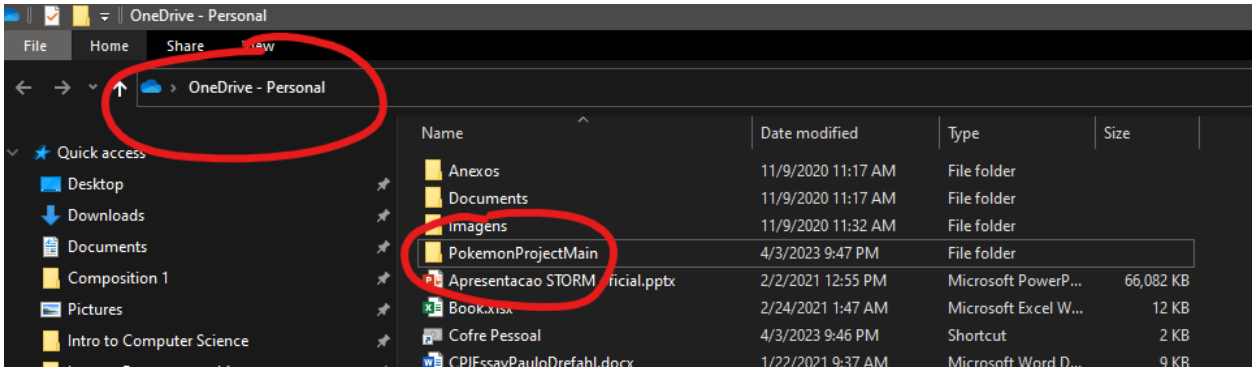
This is the first step in the process of improving the security of a Demo Pokemon game coded in C++ in our previous programming course. Our goal is to identify potential security vulnerabilities listed in the previous checklist and in the game's source code and develop effective countermeasures to prevent exploitation.

Progress Milestones:

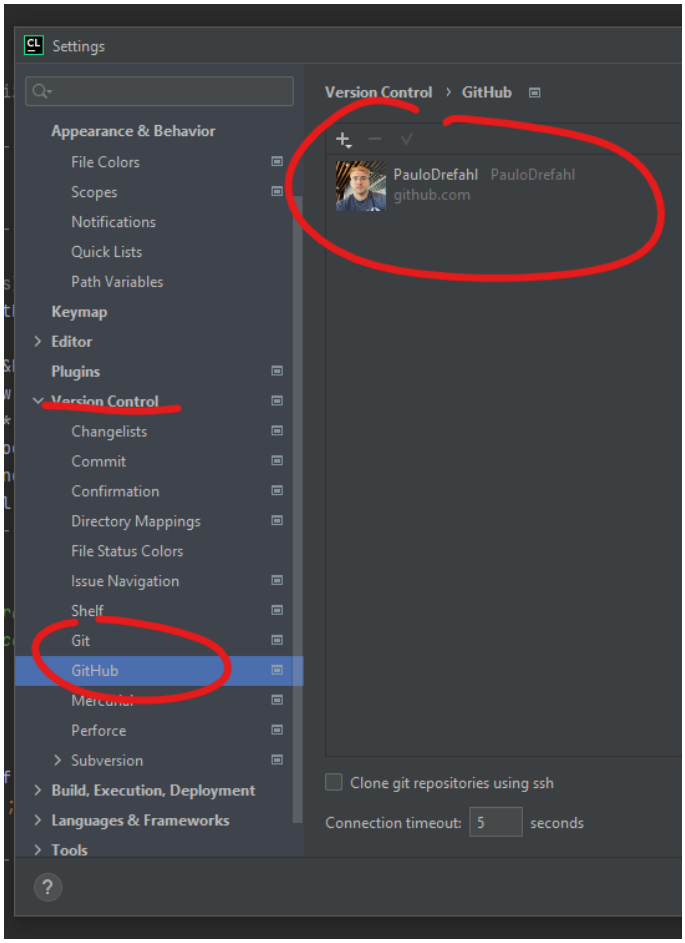
Checklist Item ID 5: Backup policy established

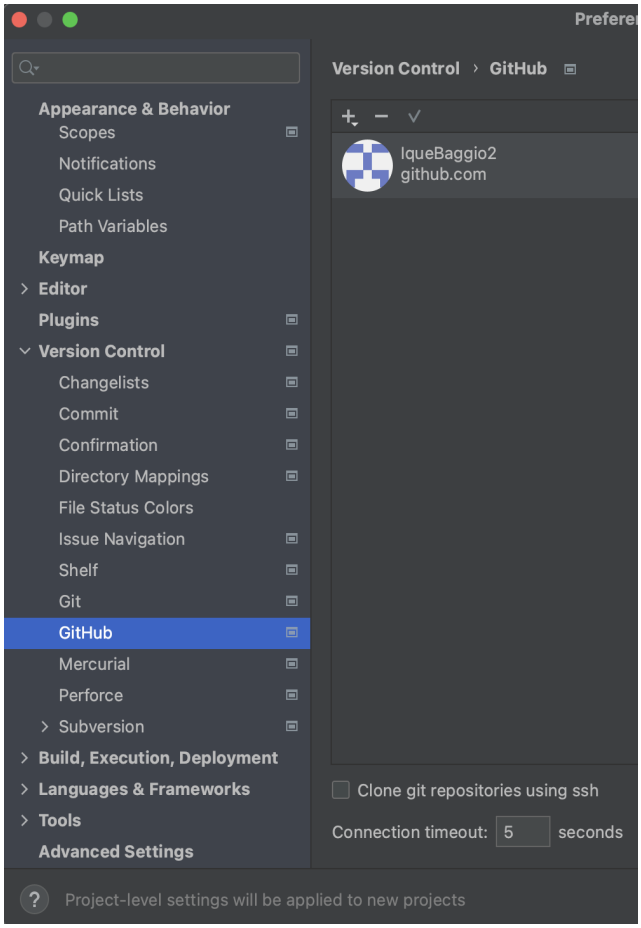
We updated the backup settings in all the machines utilized in the development process of the game. The IDE used CLION changes the project files directly stored in our respective onedrives. In addition we also created separate github projects as an extra security step.

- Transfer project to onedrive



- Integrating the IDE CLION with github to manage version control and pull requests:

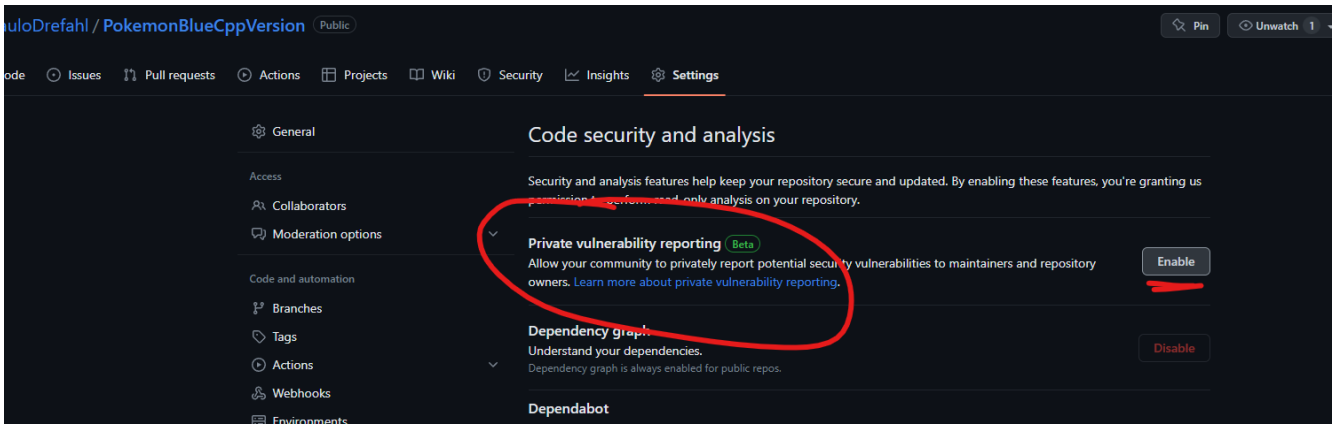




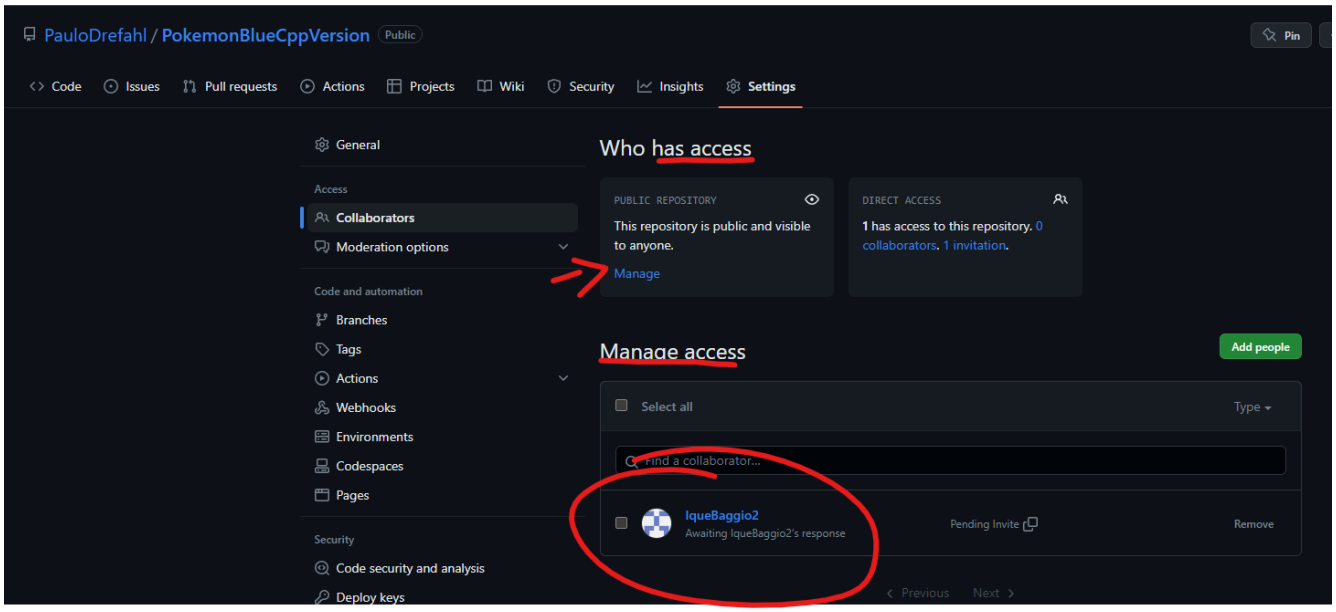
Checklist Item ID 11: Internal Actor threats are accounted for and policies/planning is in place for these.

The updated security policies cover areas such as access control, authentication and authorization mechanisms(pull requests), vulnerability management and reporting, and data protection (access control of uploaded files). These policies provide a comprehensive framework for protecting the Pokemon game project from potential security breaches and data loss, and provide a safe and secure environment for all contributors to the project.

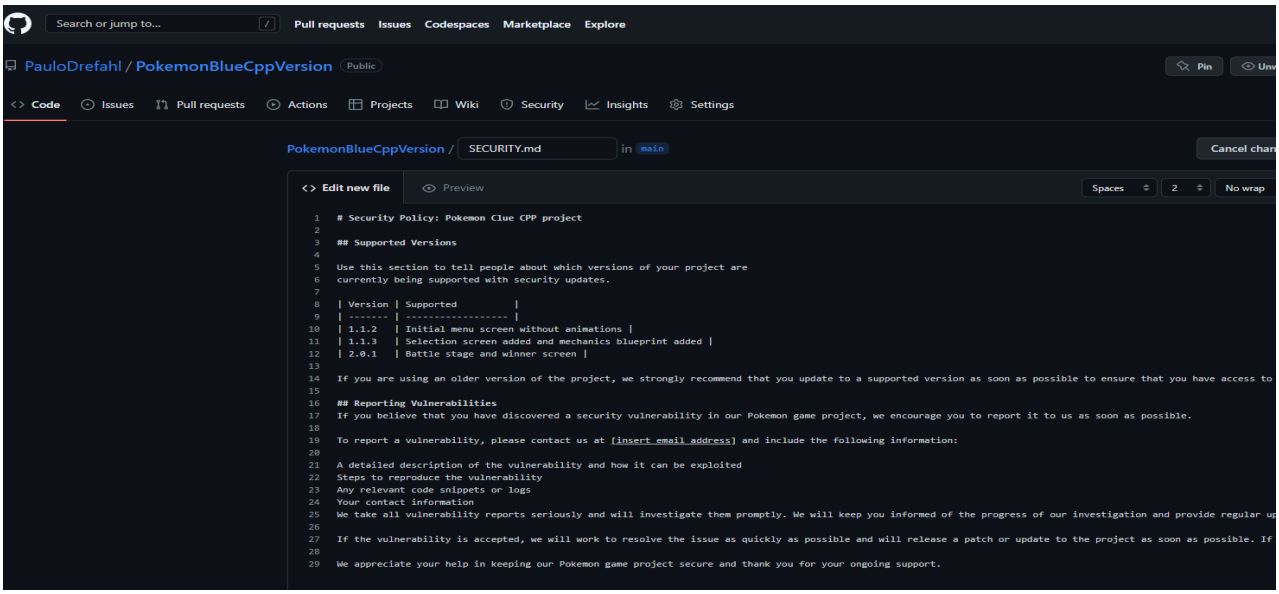
- Enabling vulnerability report:

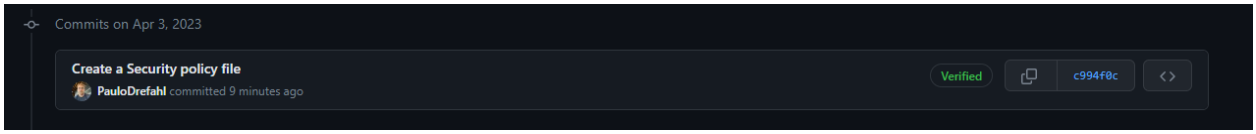


- Editing access control and sensitive files:



- Updating security Policy:

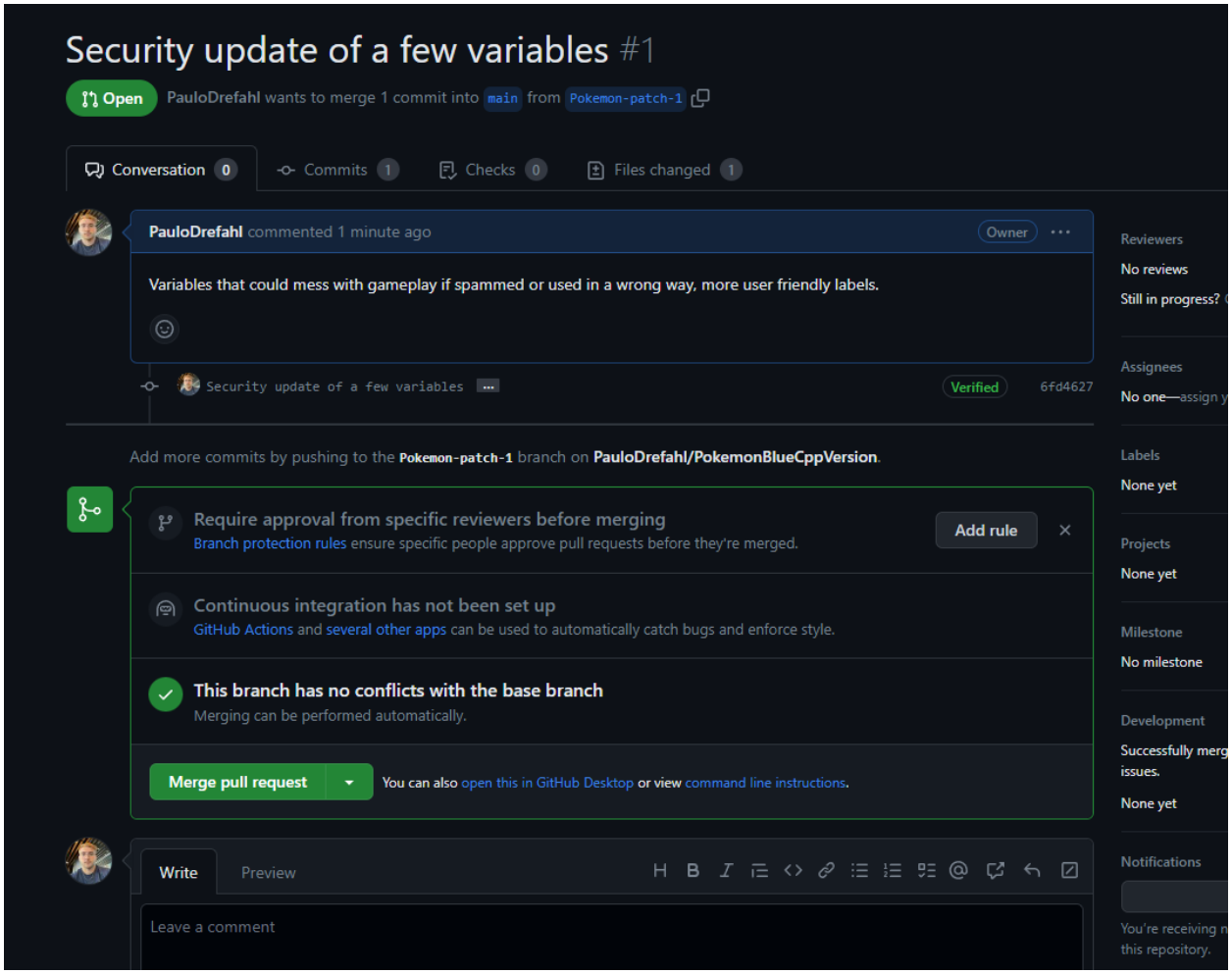




Commit SHA: c994f0c4b2e64789d6a2b8de392f47c62e24913f

Checklist Item ID 14: Configuration Issues

Pull request to a new branch proposed to fix variables that could lead to bugs if exploited.



Next Steps:

1) **Security Control issue:** Provides for hiding information and this is used to protect sensitive information and code.

   Priority: MID

   Ease to fix: Easy

   How to address: We will have to control the levels of permission to what I can access and what other people can.

2) **Security Control issue:** Platform user groups are used to only allow changes to be made to code by authorized individuals.

   Priority: MID

   Ease to fix: Moderate

   How to address: We have to configure the files in our repository to only allow us to make changes in the program.

3) **Security Control issue:** Third-Party libraries used in code are up-to-date and have been checked to ensure no security issues exist.

   Priority: MID

   Ease to fix: Easy

   How to address: We have to check on the SFML website for possible updates and if so implement them.

4) **Security Control issue:** Physical Security of actual computer code is stored is adequate.

   Priority: HIGH

   Ease to fix: Easy

   How to address: Make sure that both computers have the file also in the One Drive, so that in case something goes bad with the computers we will be able to recover the data. Also, change passwords to really secure ones, and lastly make sure the anti-virus of the computer is updated and working properly.