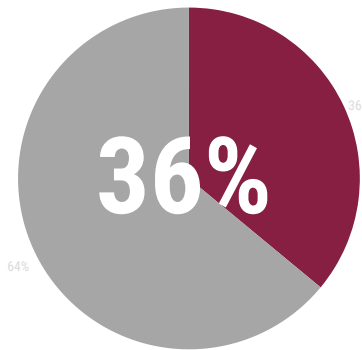


Inbox Investigator: a Tool for Privacy/Security Education

Bradon Hassell, Ethan Homoroc, Haochen Zhang

Problem and Context

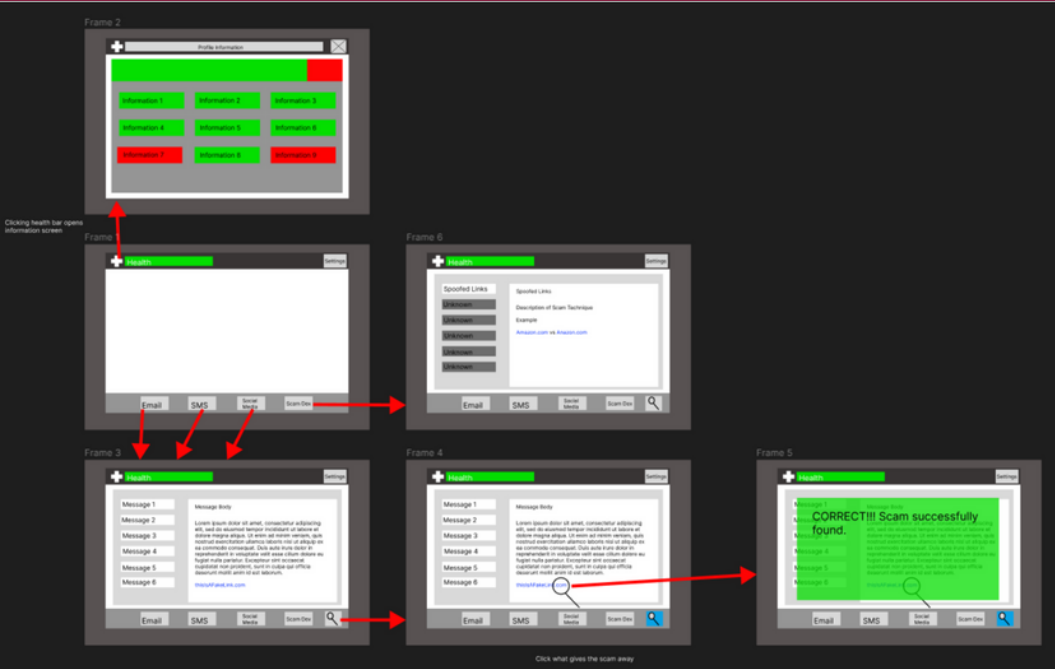


of all cyberattacks in the U.S. are phishing attacks [1]

- College students do not know how to correctly identify potential privacy threats and dangers
- People 18-25 are the most likely age group to fall victim to cybercrime [2]

OUR PRODUCT

Inbox Investigator is a simulator that aims to teach users how to recognize the signs of phishing emails. Users are presented with an inbox with a number of emails they must open, read, and decide whether or not is a legitimate, safe email, or a phishing/spoof email.



- Users will learn through trial by error after a brief tutorial
- Users “win” by sifting through all of the emails without losing all of their health
- Health is lost by clicking on or indirectly identifying phishing clues
- A bank of clues to look out for is at the user’s disposal to reference back to when needed

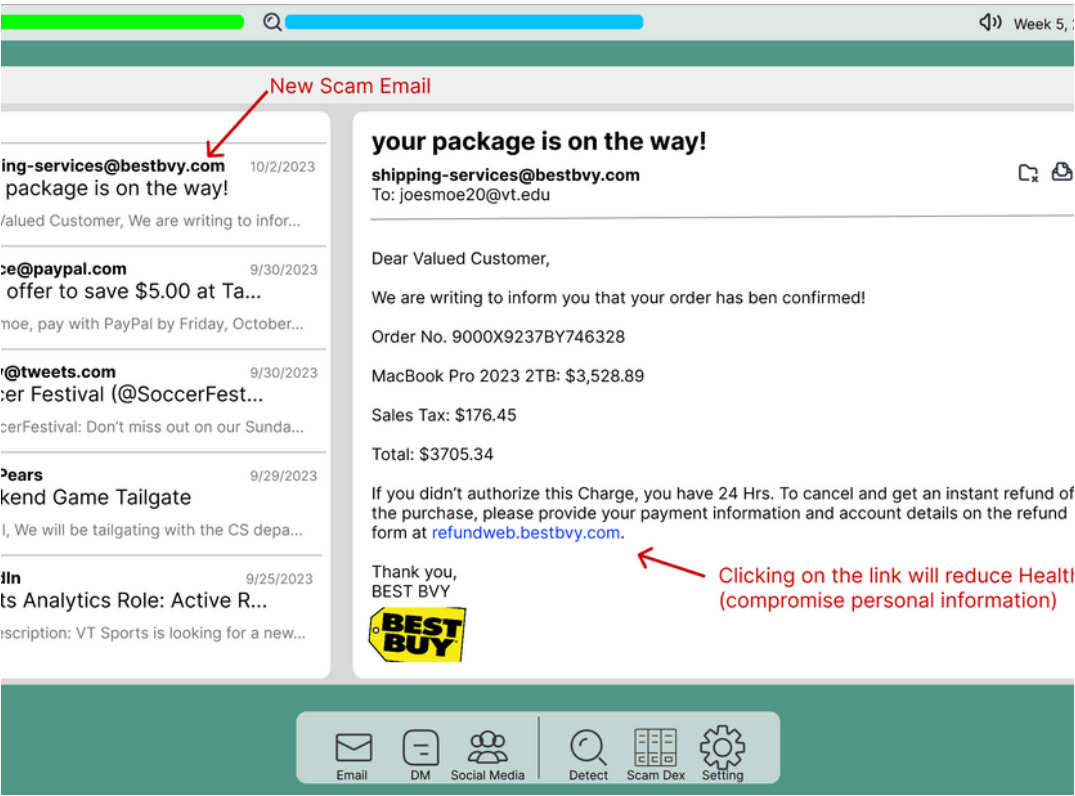
Design Process

Engineering

- Used GameMaker to build the game; Godot
- GitHub for version control

Functional Requirements

- “Health bar” to track player mistakes
- A Detection mode that allows users to identify clues within apps
- A pop-up window that indicates users have been scammed when they click on compromising content.
- Reference handbook that records reported scam tactics (Scam Dex)



User Evaluations

Good

- UI is clean and well-designed
- Idea is intuitive and effective as a learning tool

Room For Improvement

- Tutorial should be more comprehensive
- It can be easy to get stuck
- Scam clues seemed a little inconsistent

Future Implementations

- Add the social media and text tabs
- Adda hint tool
- make the dex more interactive/available

References

[1] J. Rushton, “50+ phishing statistics you need to know – where, who & what is targeted,” Techopedia, <https://www.techopedia.com/phishing-statistics#:~:text=Phishing%20Statistics%20Highlights,to%20the%20FBI%20in%202022> (accessed Sep. 8, 2023).

[2] E. editorial staff, “Younger people more likely to fall victim to cyber crime, survey finds,” RSS, <https://eandt.theiet.org/content/articles/2021/11/younger-people-more-likely-to-fall-victim-to-cybercrime-survey-finds/#:~:text=Younger%20people%20more%20likely%20to%20fall%20victim%20to%20cyber%20crime%2C%20survey%20finds,By%20E%26T%20editorial&text=Younger%20individuals%20aged%2018%20to,a%20study%20by%20Atlas%20VPN> (accessed Sep. 8, 2023).