

#### **Elevator Pitch**

- Current passwords are boring and old fashioned. With this we can make it fun to access your banking and email. Make security fun!
- Thanks to settings on the piano, you could change the sounds without changing the input to make it so no one can learn your password by ear.
- Super secure as no one knows what the computer is reading from the keyboard.



## But... why?

- Makes passwords fun. Why use boring letters and numbers when you can make a password with sound?
- Unhackable, because hackers have to know exactly how you screw up "Through the Fire and Flames".
- Requires you to have a MIDI keyboard (technically an authentication hurdle that technically counts as something you have).
- Store passwords into a "database" to have user account creation. Ideally, this would be tied with a separate application.

### Standards & Technology

- Utilized OpenJDK-21 FluidSynth (for MIDI), Fluid SoundFont (to have the actual sound for fluid), and Alsa Utils (to make sound, make sound).
- Utilized a MIDI device (LPK 25) and the Java MIDI library to register piano inputs and play sounds dependent on what key is pressed. Play your favorite songs!
- Utilized Google imports to serialize/deserialize Users by utilizing Json files (JsonObject, JsonArray, and so on).
- Food and caffeine



People can access their own stuff now. No more getting stuck out in the rain when you forgot your key at work and they just closed for the night

### Standards & Technology

- Utilized a SHA256 standard algorithm to hash the passwords, with a randomized salt per user to make said hash more secure.
- Utilized Docker & Dockerfiles to containerize our application.
- Utilized Maven to organize our project and incorporate other packages.



# Where we fell short (Future Objectives)

- Boffin Lab no longer existing limited our resources heavily.
  - Bring Boffin Back!
- Want to implement future password entry "difficulties" to allow better security.
  - Maybe you should avoid Impossible Mode if you want to log in ever again...
- MIDI had some difficulties working with Linux. Many, many difficulties...
  - Since our programmer worked with Windows, we fell into the common trap of "but it works on my system!".
- We are lucky enough to only have one open issue!
  - The caveat we should probably fix that issue.
- Our project has many opportunities to be expanded on - we have theorized a great basis point to start with.
  - Allow password lengths of greater than 1

    Feature #11 · honeypint opened 13 hours ago





#### Pick Us!

- We make Awful Commit messages like those you have seen so far.
- We are ACM so it should be obvious.