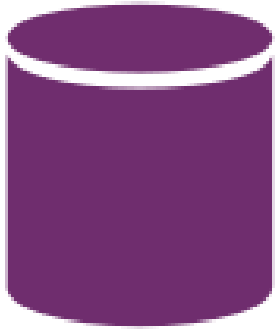
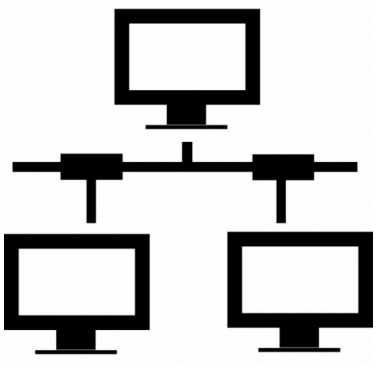
Toolkit

Python-based security oriented demonstration





Features

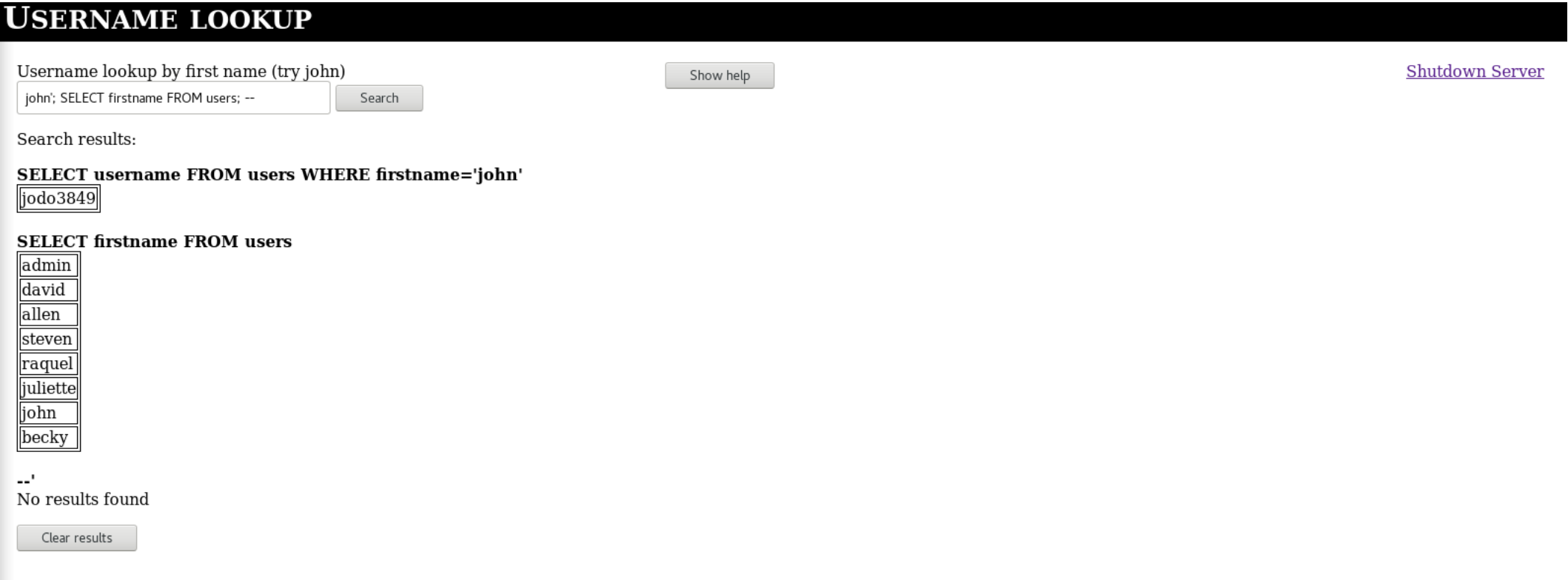
- SQL injection
- Eavesdropping/packet sniffing
- Image steganography

Application requirements

- **GUI**
  - Launcher
    - PyQt
  - Steganography (frontend)
    - PyQt
- **Non-GUI**
  - Eavesdropping
    - Python
    - wireshark
  - Steganography (backend)
    - Python
    - Python Image Library (PIL)
- **Web & database**
  - SQL injection
    - CherryPy server
    - SQLite3 database

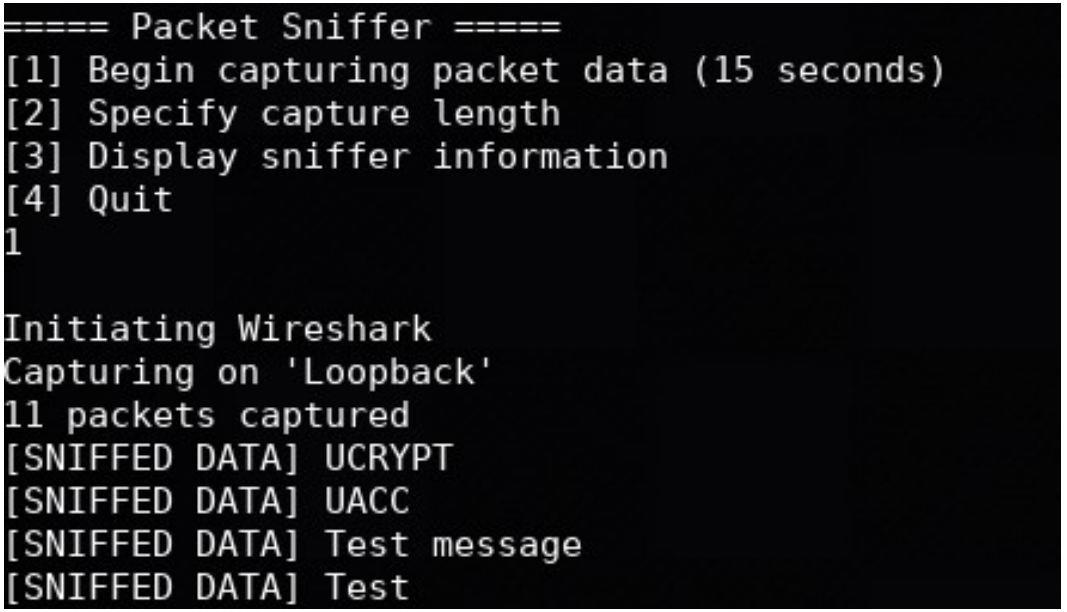
SQLi

- Simple CherryPy server to demonstrate how SQL injections are preformed
- Database generated at runtime to limit SQL command reprocussions – drop all the tables you like!



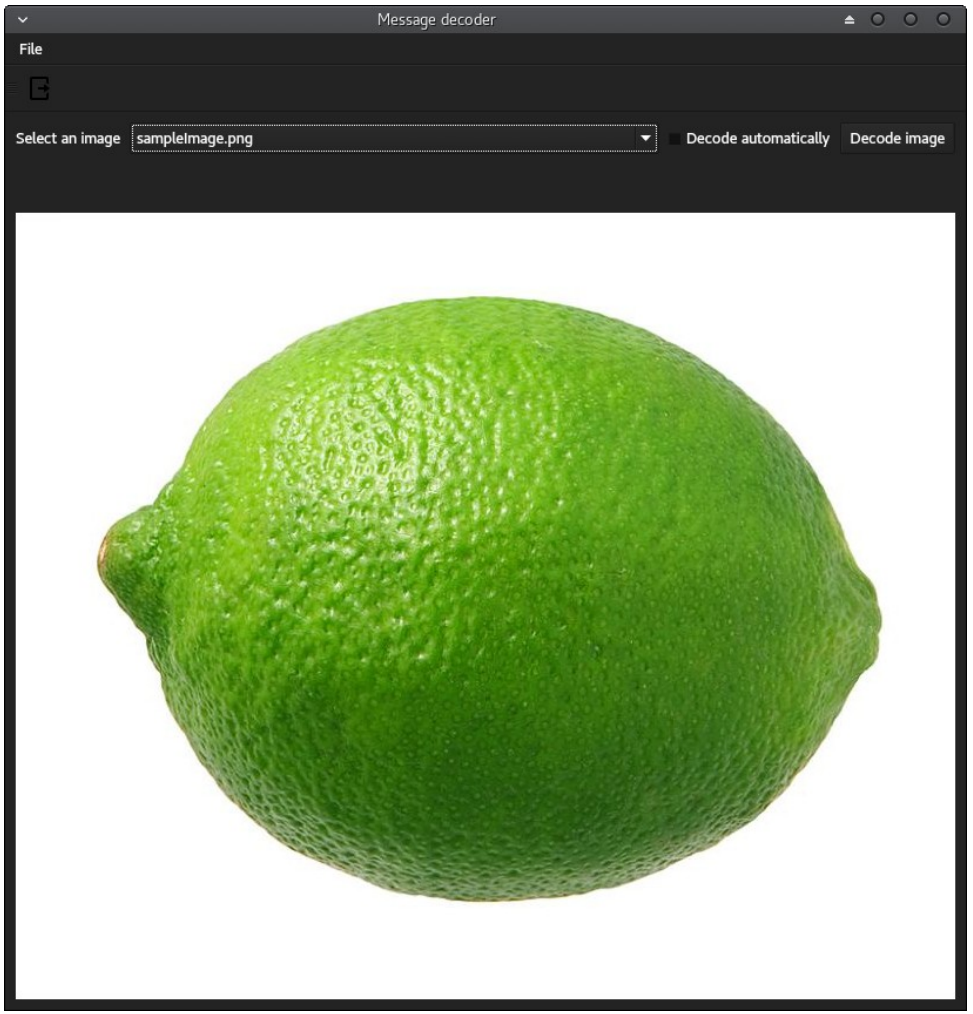
Eavesdropping

- Sender-reciever relationship for simplicity
  - Supports basic encryption
- Sniffer displays packet data



Steganography

- Encodes a plaintext message into .png image
- Decodes and displays messages



Unfinished business

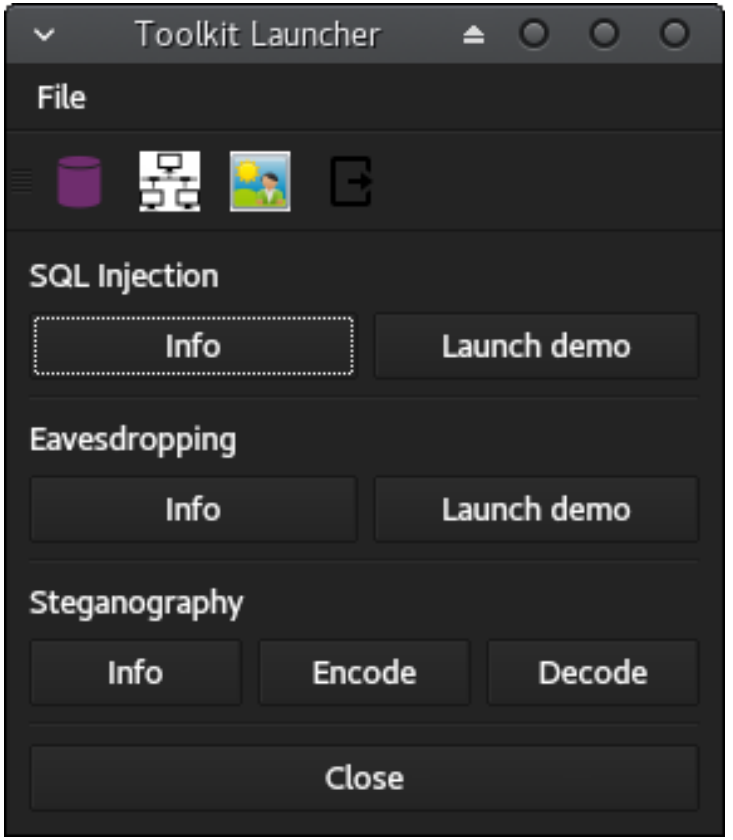
Additional features:

- RSA & Diffie-Hellman for Eavesdropping demo

Bugs

- Steganography window improperly resizes
- Enter key doesn’t execute query on SQL webpage

Live demo


Toolkit Launcher
File
SQL Injection
Info
Launch demo
Eavesdropping
Info
Launch demo
Steganography
Info
Encode
Decode
Close