

# ScanMasterX

Team No 10: UwUltimate Stardust Crusaders



# Team Details

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# Project Overview

- Problem: The Rising Cost Of Cybersecurity Breaches
  - Average Data Breach Cost: \$4.45 million (Forbes)
  - Projected Cybercrime Damages: Over \$10 Trillion by 2025 (Forbes)
- Our Solution: ScanMasterX
- Our Vision:
  - Lower The barrier to scan and analyze complex networks
  - Prevent Data Breaches by identifying vulnerable services
  - Perform Automated Security Testing
  - Display the Topology and Security Score

# Requirements List

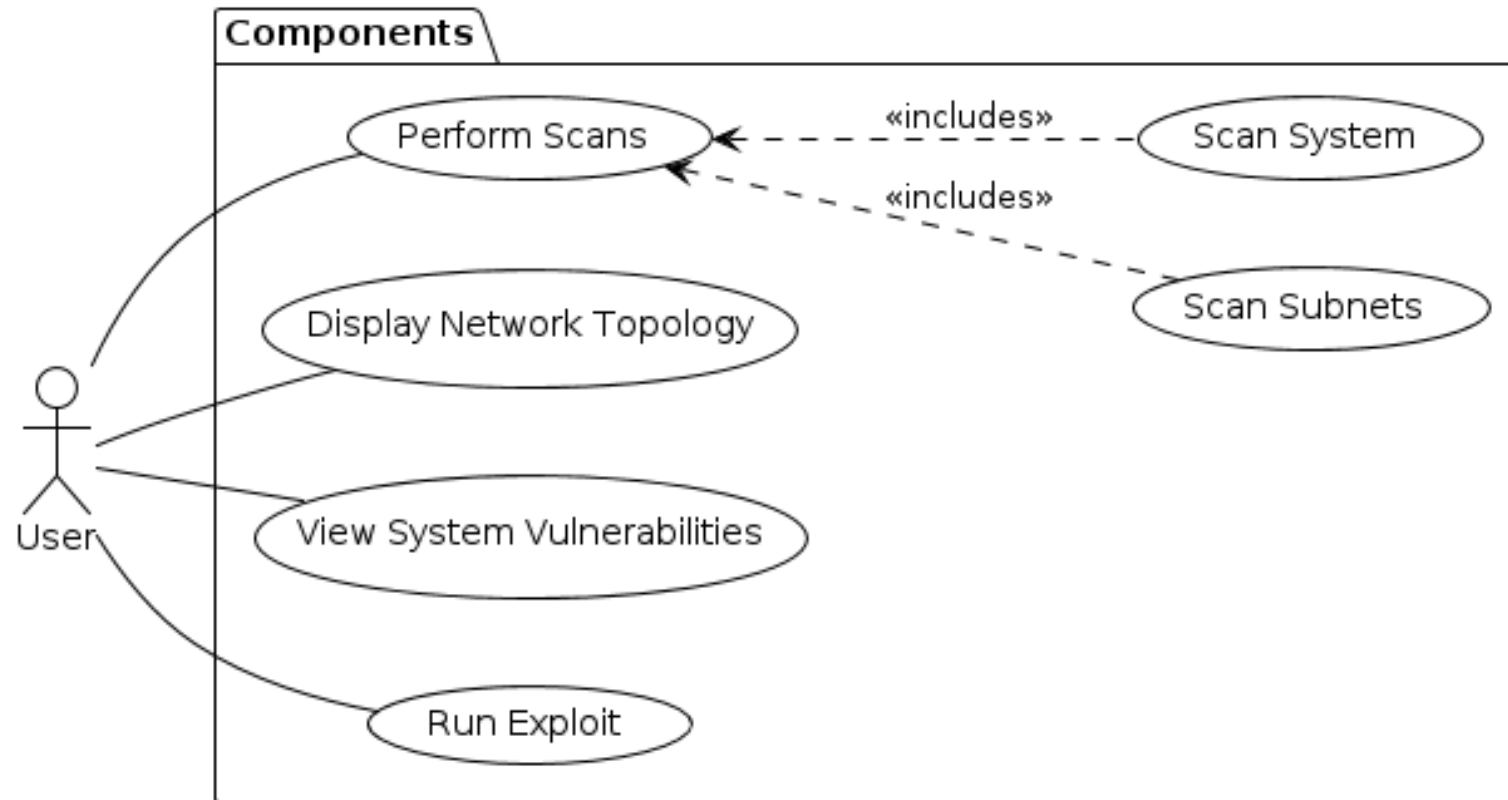
- There must be a feature to identify vulnerabilities on a server.
- There must be a component that will evaluate the security of the ports on a given server.
- The user must be able to select which device(s), which ports, or which group of ports, that they wish to test and scan.

# Project Solution Approach

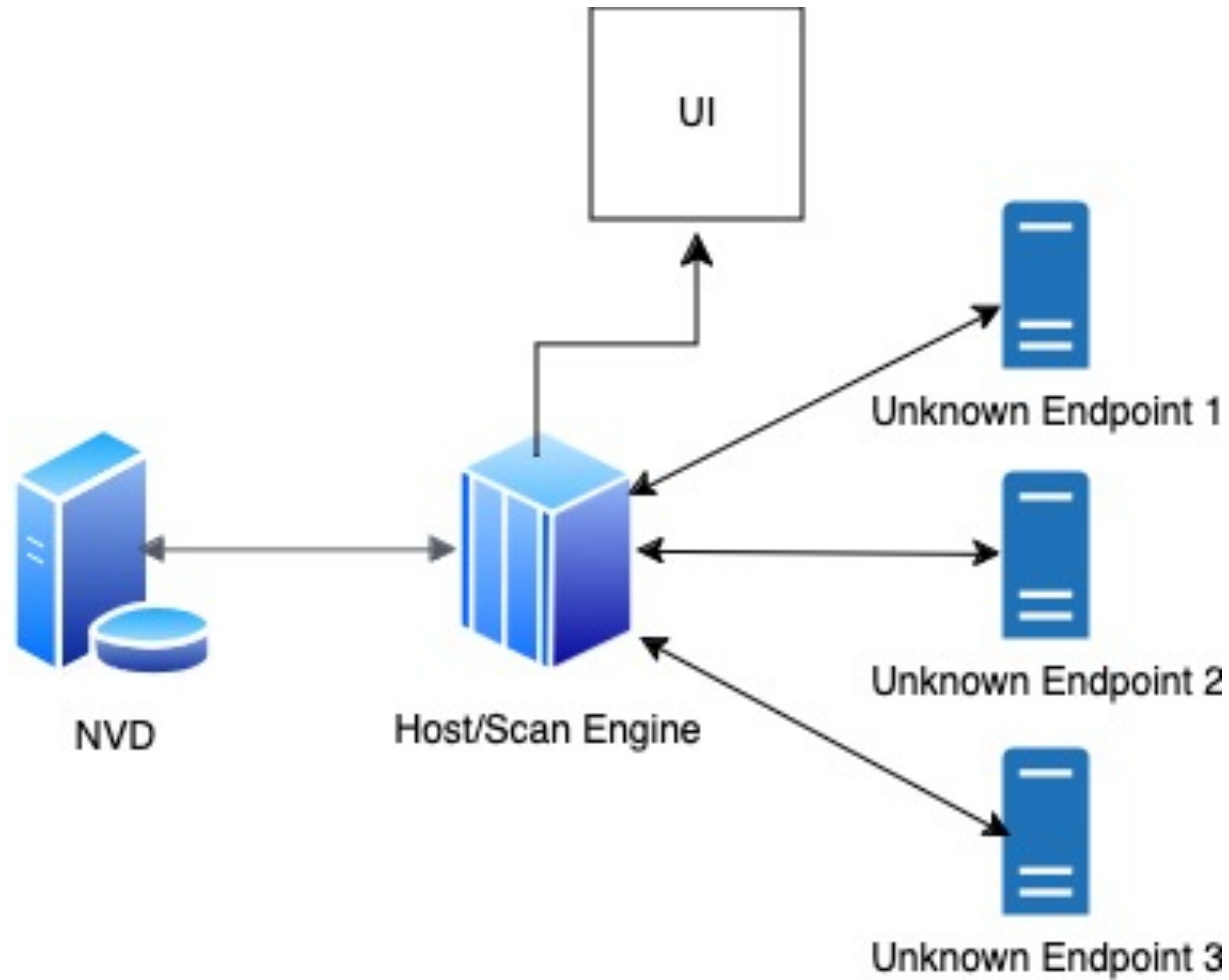
- **Major Components**
  - Custom scanner leveraging Nmap
  - GUI for user to interact with
- **Tools, Frameworks, Platforms, Libraries**
  - PYQT - UI framework for Python
  - NMAP – A CLI network scanner
  - CVE Database [TBD]



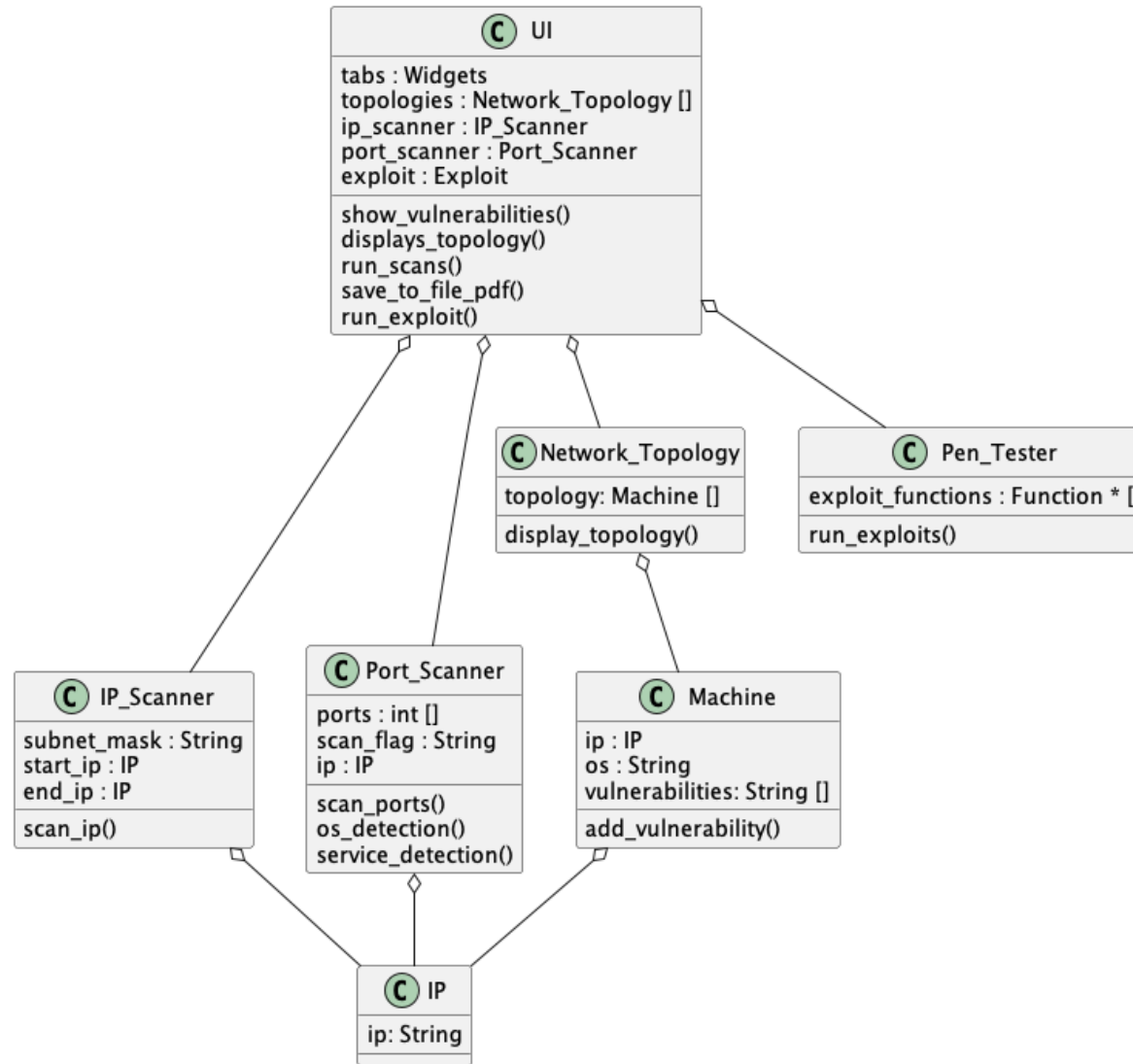
# Use Case Modeling



# System Architecture Diagram

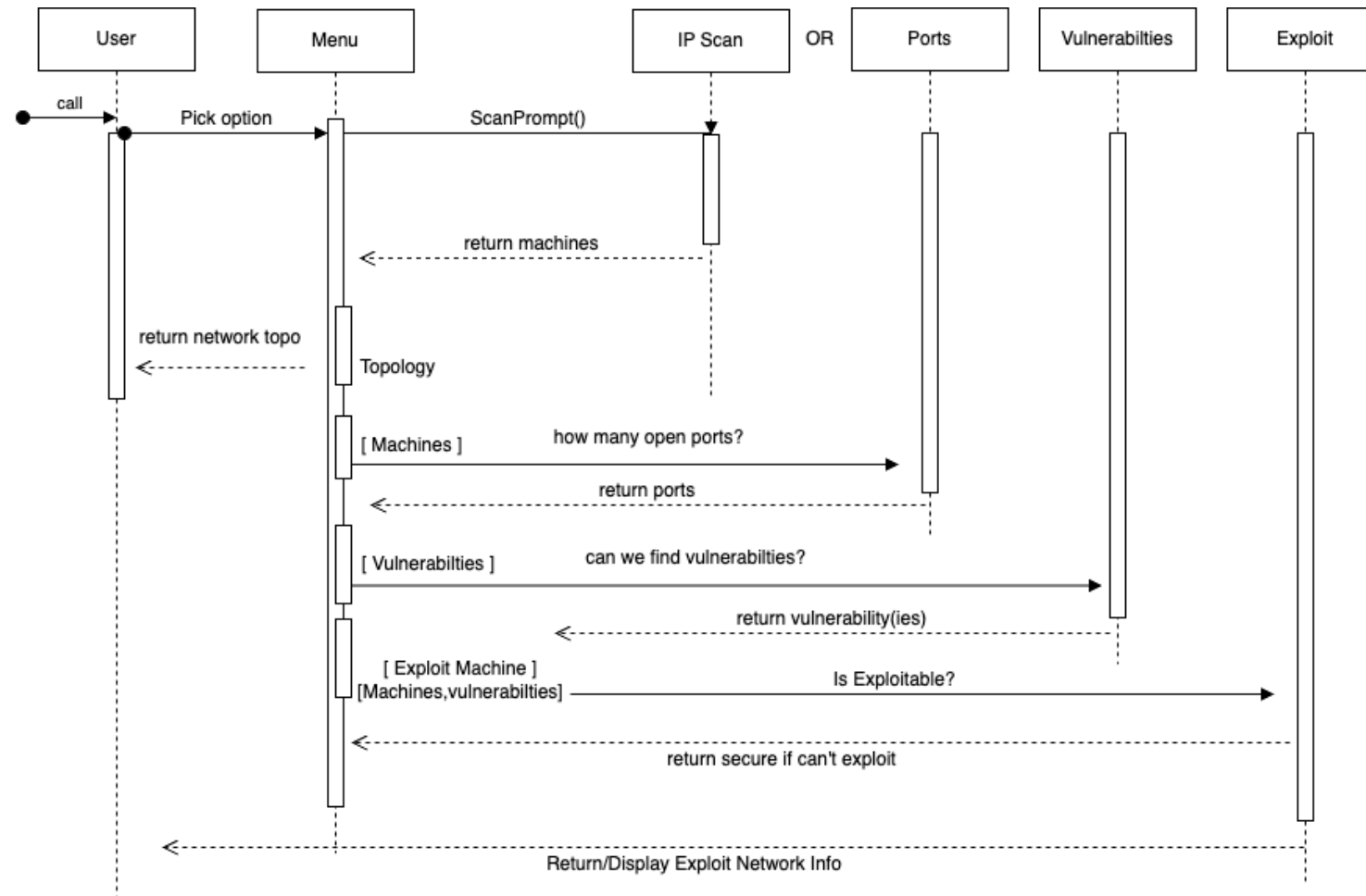


# Structural Modeling: Class Diagram

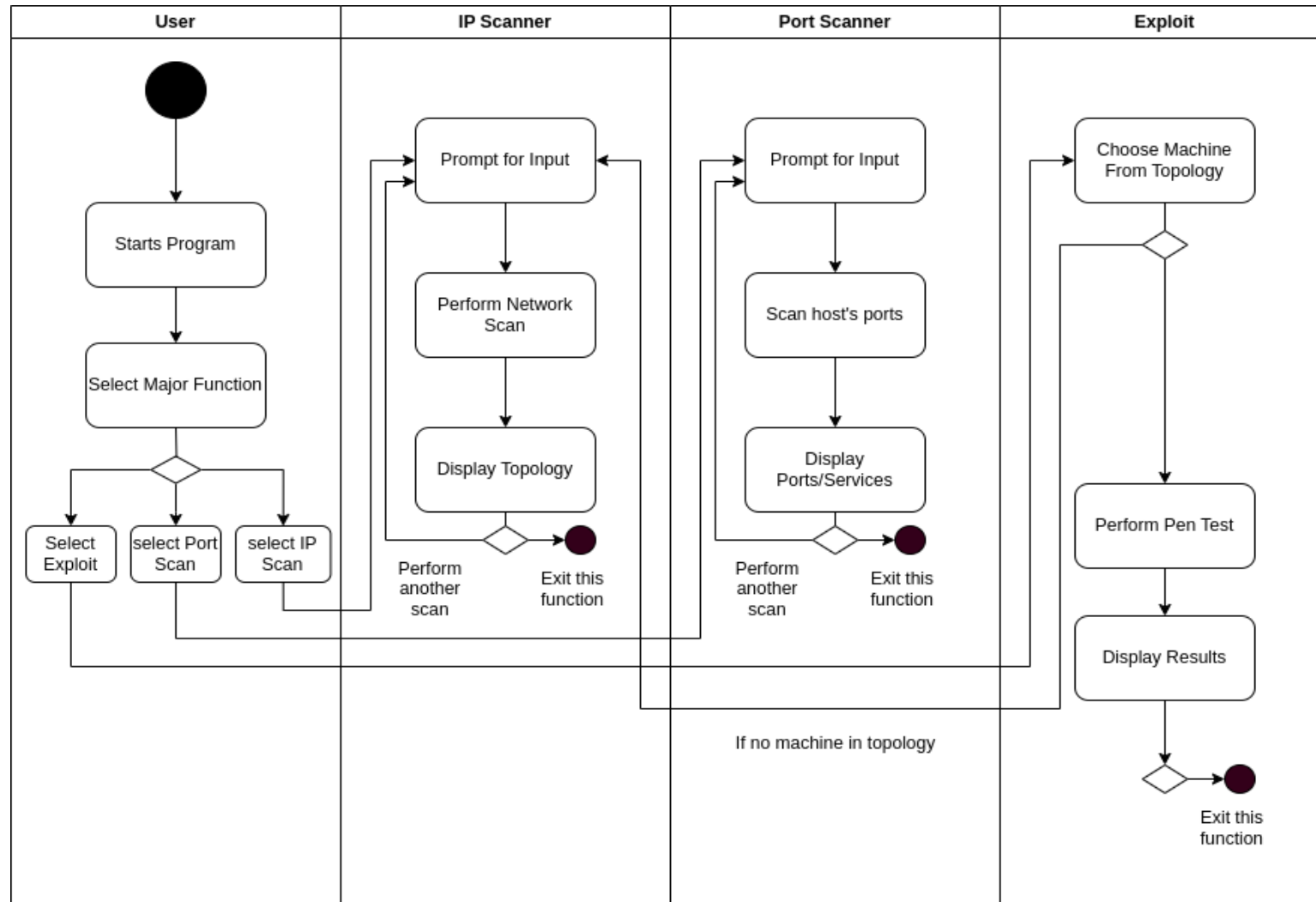




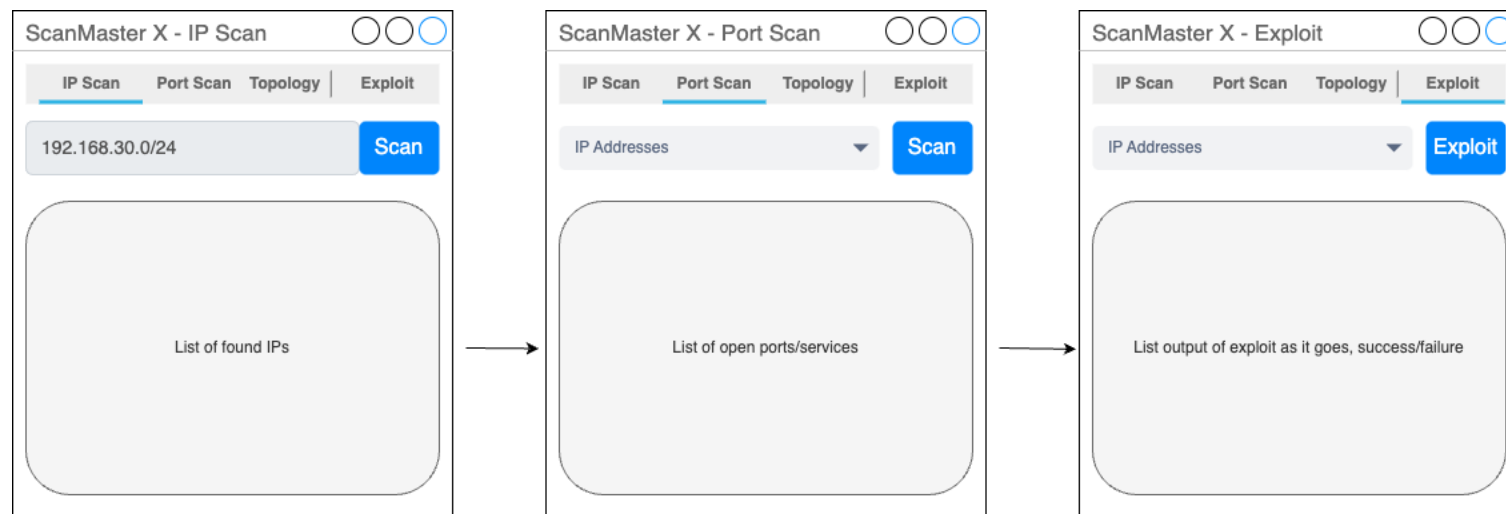
# Behavioral Modeling: Sequence Diagram



# Behavioral Modeling: Activity Diagram



# UI



# Demo Time on Exploits!

```
class Pen_Tester:

    def __init__(self):
        self.exploits = [self.login_to_ftp,]

    def run_exploits(self,machine):

        for exploit in self.exploits:
            result = exploit(machine.IP)
        return result

    def login_to_ftp(self,host):
        try:
            with ftplib.FTP(str(host)) as ftp:
                print("IM TRYING TO LOG IN")
                ftp.login()
                print("Login successful!")
                return True
        except ftplib.all_errors as e:
            print(f"Failed to connect or login: {e}")
            return False
```



# What's Next??

- Development of the UI
- Displaying the Topology
- Identifying Vulnerabilities

