Detailed explanation of the proposed solution

- Our solution is an agent-less vulnerability and network scanner for Windows OS, using **blockchain**, **cybersecurity**, and **AI/ML** technologies.
- It leverages native tools like WMI and PowerShell to perform system and network-level vulnerability assessments by analyzing configurations, user accounts, firewall rules, and open ports.
- It integrates with threat intelligence databases like ExploitDB and CVE to identify known vulnerabilities and provide remediation steps.
- Using blockchain for secure logging ensures tamper-proof records, while AI/ML models perform anomaly detection and risk prediction to improve detection accuracy.
- The findings are compiled into a comprehensive PDF/HTML report with mitigation strategies, offering a smart, secure, and innovative solution for system security.

How it addresses the problem

- **Addresses Vulnerabilities**: Identifies outdated or misconfigured Windows systems to prevent security risks.
- **Agent-less Deployment**: No installation needed, reducing complexity and minimizing attack surfaces.
- **Proactive Security**: Maps system and network vulnerabilities to help users secure their systems.
- **Automated Reporting**: Ensures continuous monitoring and quick remediation of vulnerabilities.

Code Breakers

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Innovation and uniqueness of the solution

- **Agent-less Approach**: Operates without requiring an agent, reducing system overhead and integrating seamlessly with native tools like PowerShell and WMI.
- **Blockchain Integration**: Ensures tamper-proof, immutable logging of scans, enhancing data integrity in cybersecurity.
- **AV/EDR Friendly**: Complements existing AV and EDR tools, working alongside them for comprehensive security coverage.
- **AI/ML and Threat Intelligence**: Uses AI/ML for anomaly detection and integrates threat intelligence for real-time vulnerability identification and patching.
- **Comprehensive Scanning**: Provides system and network assessments with automated reports for easy remediation.

TECHNICAL APPROACH

Frameworks and Libraries:

- **WinPEAS**: For system enumeration and vulnerability discovery.
- **Posh-Sysmon / Posh-SecMod**: For advanced Windows event logging and network scanning.
- **ExploitDB, CVEDetails**: For crawling and fetching relevant vulnerabilities and exploits.
- **TensorFlow/PyTorch**: For AI integration to detect anomalies and predict vulnerabilities.

Tools:

- **WMI (Windows Management Instrumentation)**: For gathering system-level data.
- **SecurityPolicyDSC**: For checking compliance with Windows security policies.
- **WinCDP / LDWin**: For network scanning and mapping.

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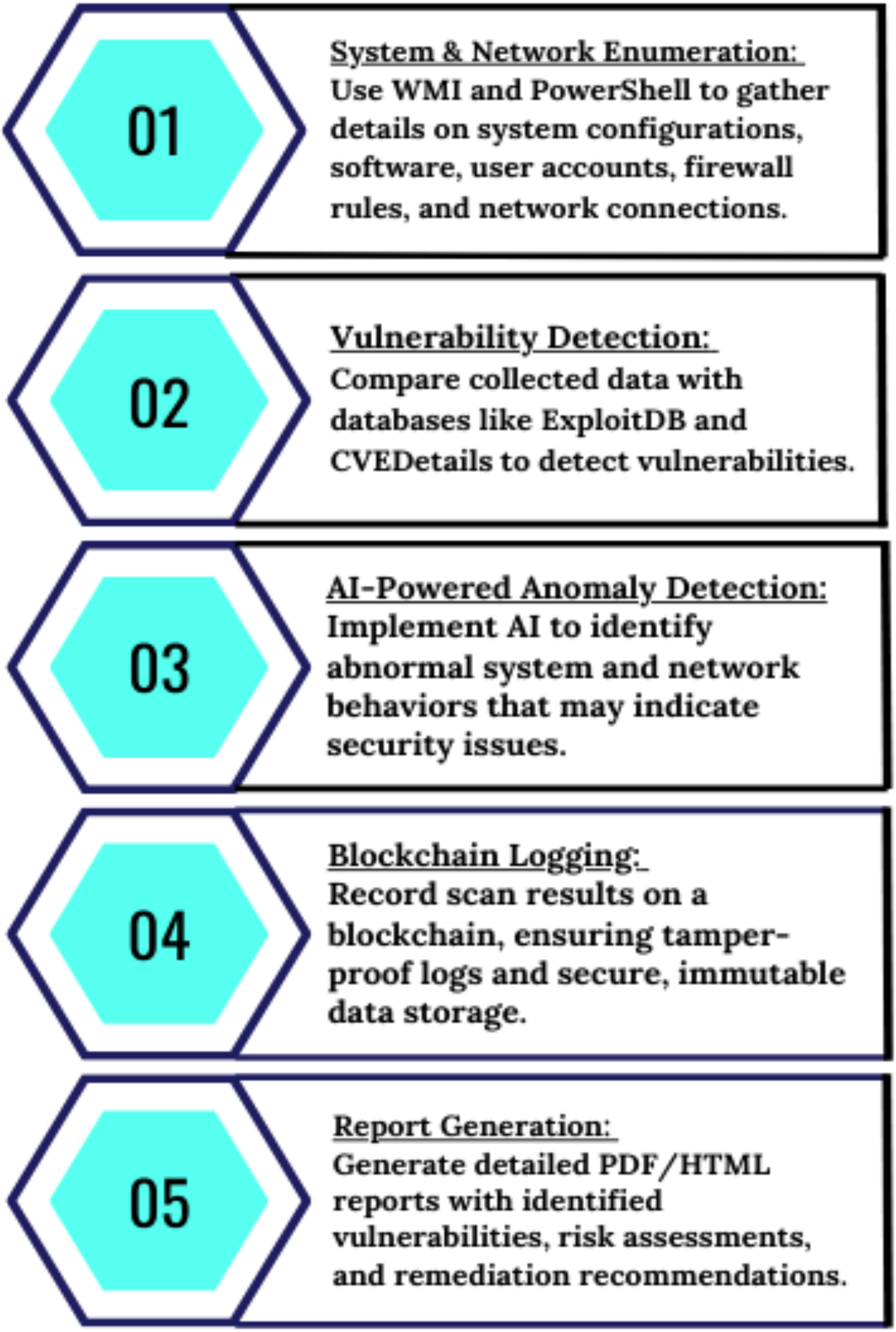
Methodology and process for implementation:

Technologies to be used:

JS
SQL



01

System & Network Enumeration:
Use WMI and PowerShell to gather details on system configurations, software, user accounts, firewall rules, and network connections.

02

Vulnerability Detection:
Compare collected data with databases like ExploitDB and CVEDetails to detect vulnerabilities.

03

AI-Powered Anomaly Detection:
Implement AI to identify abnormal system and network behaviors that may indicate security issues.

04

Blockchain Logging:
Record scan results on a blockchain, ensuring tamper-proof logs and secure, immutable data storage.

05

Report Generation:
Generate detailed PDF/HTML reports with identified vulnerabilities, risk assessments, and remediation recommendations.