Vulnerability Prevention Model for Web Browser using Interceptor Approach

1.0 INTRODUCTION

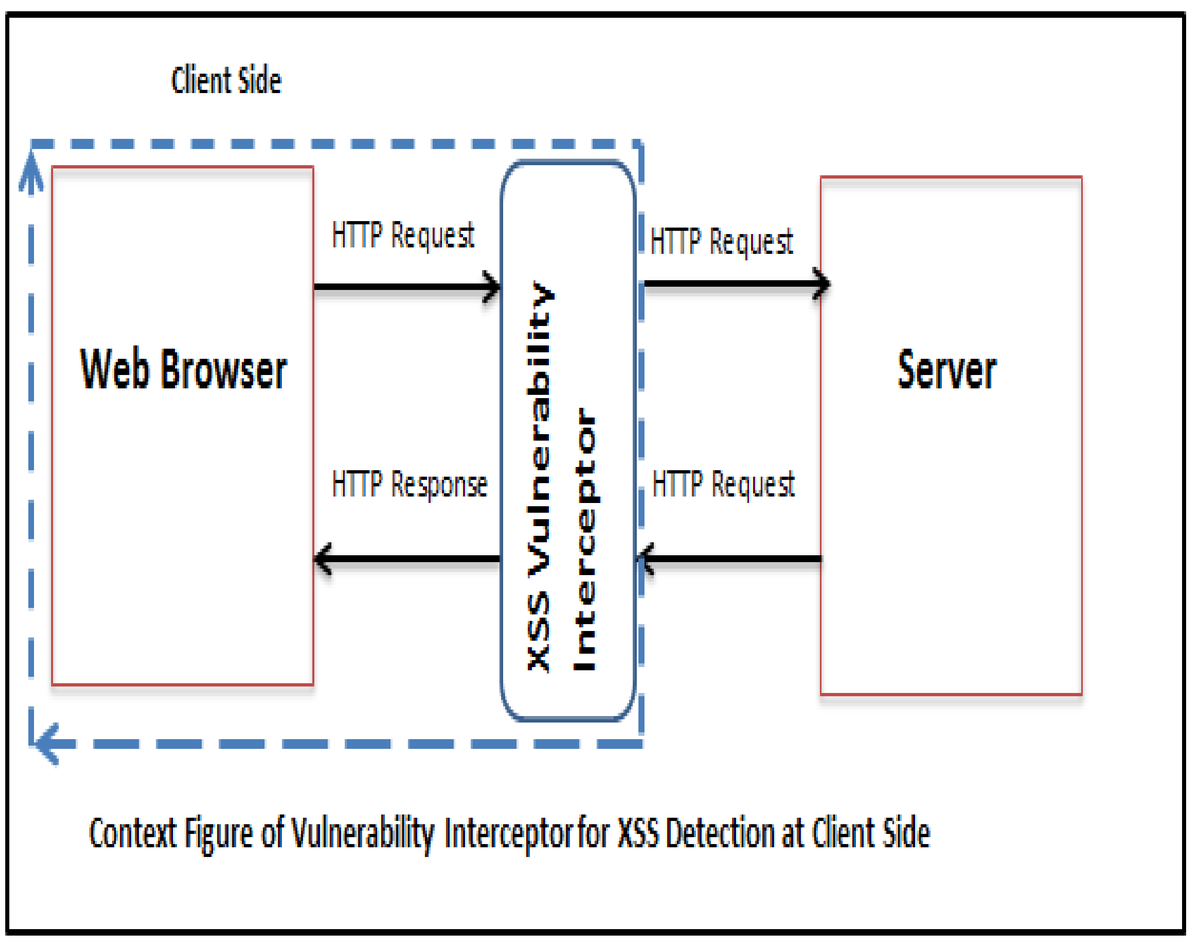
- **Cross Site scripting (XSS) is one of the most severe web security vulnerabilities.**
- **Drawback of existing techniques is the high rate of false positive, whereby a non-attack situation is considered as an attack or threat.**
- **The goal of this research is to design a prevention model for client side protection linked with web browser.**
- **The XSS vulnerability interceptor is based of crawl-payload and library filtering.**

2.0 OBJECTIVES

- **To investigate and assess various XSS Detection & Prevention Techniques at client side.**
- **To design and develop XSS Vulnerability Detection Interceptor at Client Side.**
- **To perform the Simulation and tests on the proposed Design**
- **To evaluate the results obtained after detecting the XSS using Proposed Interceptor.**

3.0 CONCLUSION

The framework will provide a client side detecion mechanism for identifying XSS vulnerability. The next step is to develop the detection module based on the suggested framework.



Context Figure of Vulnerability Interceptor for XSS Detection at Client Side

Fig 1. Proposed Design for XSS Vulnerability Detection Interceptor

3.0 METHODOLOGY

Phase 1: Literature Review & Background Study: In this phase, we will perform an in-depth review of existing and current literature related to prevention of cross site scripting vulnerabilities at client side.

Phase 2: Test Data Collection & Knowledge Engineering: In this phase, we will collect malicious JavaScripts and populate database containing the scripts to be tested on our prevention model.

Phase 3: Framework Design: Design the framework for client side interceptor model using suitable approach such as machine learning, etc.

Phase 4: Implementation : In this phase the entire system will be developed using JavaScript and Python.

Phase 5: Experimental Study & Validation: In this phase, the XSS vulnerability interceptor will be tested by using different malicious scripts and the results will be obtained.

Phase 5: Data Analysis: In this phase, the project details and outcomes are documented for the purpose of reporting. However, proper documentation will be carried out throughout the project duration

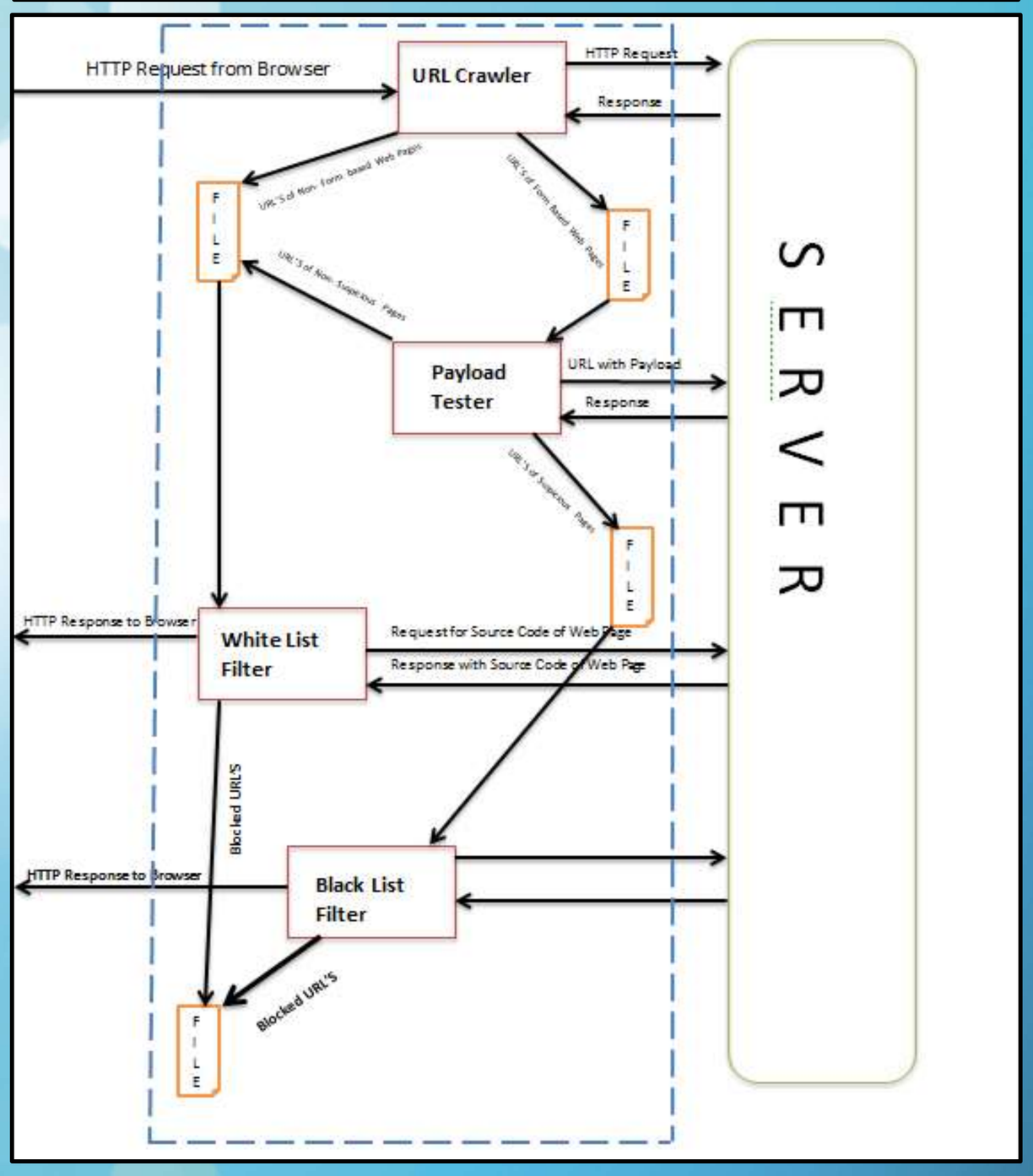


Fig 2. of Vulnerability Interceptor for XSS Detection at Client Side

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