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OPEN WEB APPLICATION SCANNING TOOL

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Abstract

Vulnerability Scanning is the assessment of a web site using a "Web Application Scanning Tool" which looks for the security weaknesses in a website as prescribed by OWASP Standards such as SQL Injection, Cross Site Scripting and Broken Authentication alone in it. The task involves running a program (a vulnerability scanning application) on one machine and then connecting, via a network, to the websites that you wish to check. Scanning report can be generated in the format of 'pdf' or 'doc' with dynamic bar chart, which contains the impact of the vulnerabilities in the website and also the recommendations to overcome such vulnerabilities.

Keywords: OWASP, PDF, DOC, BAR CHART.

1. INTRODUCTION

Web security is the process of securing confidential data stored online from unauthorized access and modification. This is accomplished by enforcing stringent policy measures. Security threats can compromise the data stored by an organization is hackers with malicious intentions try to gain access to sensitive information.

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It's well known that poorly written software creates security issues. The number of bugs that could create web security issues is directly proportional to the size and complexity of your web applications and web server. Basically, all complex programs either have bugs or at the very, least weaknesses. On top of that, web servers are inherently complex programs. Web sites are themselves complex and intentionally invite ever greater interaction with the public. And so the opportunities for security holes are many and growing.

2. SYSTEM ANALYSIS

In existing system, all the hyperlinks are crawled including the image links from the parent link so that scanning is performed to such unwanted image links also. User has to wait for an unknown amount of time to obtain the result of the scanning functionality with respect to the number of sub links available. Since the report contains only the overview of the scanning result which includes only the general idea about the existence of the vulnerabilities in the website, it is not easy to get a perfect idea about the security weakness if the websites. User can scan only the required links from the entire list of crawled links and also can scan the links only with respect to the required security weaknesses. The estimated amount of time for the scanning functionality will be informed earlier to the user so that the user can well plan the activities. Also, proper recommendations are provided along with the impact of the vulnerability, in order to get rid of all the vulnerabilities present in the website.

3. IMPLEMENTATION

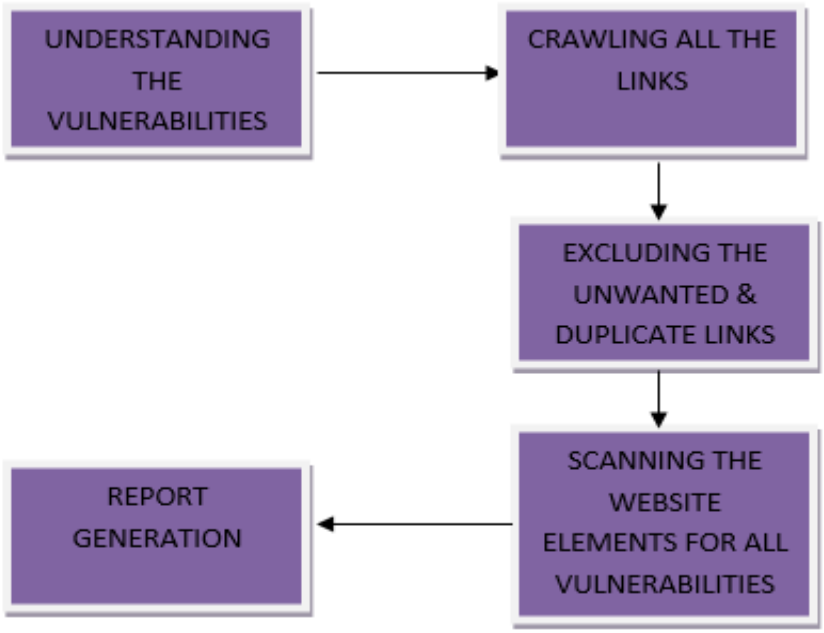

Fig. Project Flow

A web application security scanner is a program which communicates with a web application through the web front-end in order to identify potential security vulnerabilities in the web application and architectural weakness. A web application security scanner facilitates the automated review of a web application with the expressed purpose of discovering security vulnerabilities, and is required to comply with various regulatory requirements. Web application scanners can look for a wide variety of vulnerabilities, including SQL injection, Cross Site Scripting, Broken Authentication ect,. Selenium is one of widely used Test Automation platform for Web applications. Selenium-Web Driver makes direct calls to the browser using each browser's native support for automation. Web Driver's goal is to supply a well-designed object-oriented API that provides improved support for modern advanced web-app testing problems. Security misconfiguration can happen at any level of an application stack, including the platform, web server, application server, database, framework, and custom code.

4. LANGUAGE DETAILS

Java is a programming language and computing platform first released by Sun Microsystems in 1995. It is the underlying technology that powers state-of-the-art programs including utilities, games, and business applications. Java runs on more than 850 million personal computers worldwide, and on billions of devices worldwide, including mobile and TV devices. Java is fast, secure, and reliable. From laptops to data centre, game consoles to scientific supercomputers, cell phones to the Internet, Java is everywhere. Java language is platform independent means program of java is easily transferable because after compilation of java program bytes code will be created then we have to just transfer the code of byte code to another computer. This is not necessary for computers having same operating system in which the code of the java is created and executed after compilation of the java program. Java is distributed language means because the program of java is compiled onto one machine can be easily transferred to machine and executes them on another machine because of bytes codes. So java is specially designed for Internet users which use the remote computers for executing their programs on local machine after transferring the programs from remote computers or either from the internet. Java programs are compiled to portable intermediate form known as byte codes, rather than to native machine level instructions and JVM executes Java byte code. This architecture means that Java programs are faster than program or scripts written in purely interpreted languages but slower than C and C++ programs that compiled to native machine languages.

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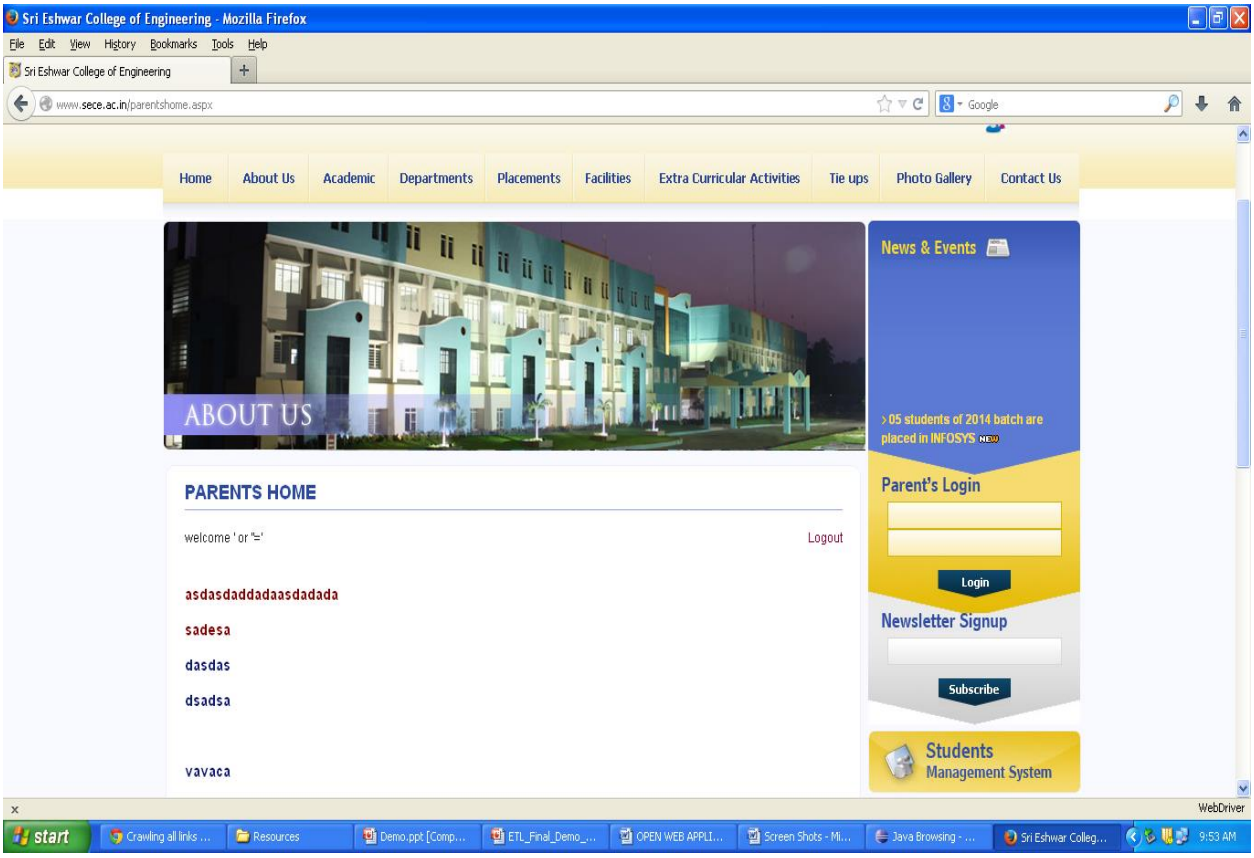
5. RESULT ANALYSIS



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