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Website Security and Performance Analyzer

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ABSTRACT: As you know, nowadays too many data breaches are happening, many websites are hacked due to misconfiguration or lack of protection. These security headers will protect your website from some common attacks like XSS, code injection, clickjacking, etc.Performance testing is used to analyze various success factors such as response times and potential errors. With these performance results in hand, you can confidently identify bottlenecks, bugs, and mistakes and decide how to optimize your application to eliminate the problem.

KEYWORDS: Website security, Performance Testing, cyber Attack, Security Headers.

I. INTRODUCTION

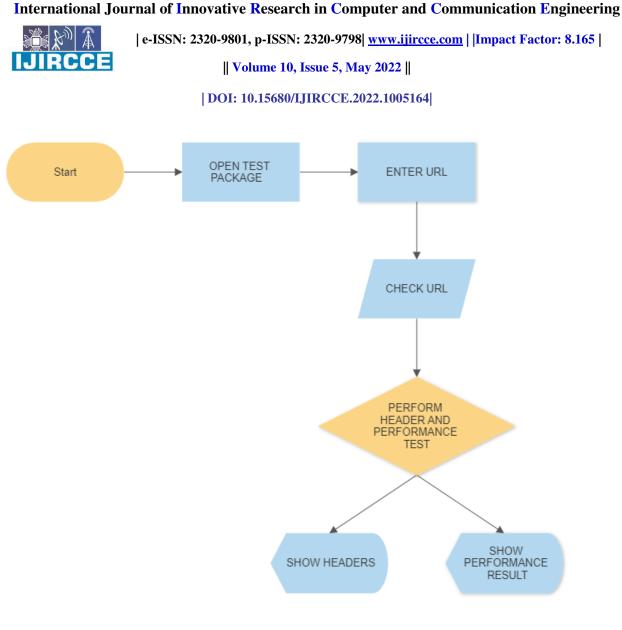
Website Security Checking is a type of Website Testing that check vulnerabilities, threats, risks in a website and prevents malicious attacks. The purpose of Website Security Tests is to identify all possible loopholes and weaknesses of the software system which might result in a loss of information, revenue, repute at the hands of the employees or outsiders of the Organization. The main goal of Security Testing is to identify the threats in the system and measure its potential vulnerabilities, so the threats can be encountered and the system does not stop functioning or can not be exploited. It also helps in detecting all possible security risks in the system and helps developers to fix the problems through coding.Web performance is the objective measurement and perceived user experience of a web site or application. This includes the following major areas: Reducing overall load time: How long does it take the files required to render the web site to download on to the user's computer.

II. LITERATURE SURVEY

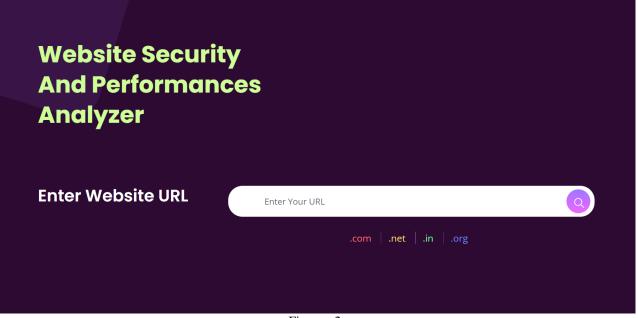
the number of users and in terms of the technology used. Along with that there has also been an increase in attacks on the web. The attacks on the web cannot be separated from the vulnerabilities that exist on the web. Therefor we need to look for any vulnerabilities that exist on the web. As a first step, we can use two open source tools to scan for web vulnerabilities, OWASP WAP and RIPS. In addition to these two tools, several other methods have been found to improve the accuracy of the scanning. Many studies have been conducted in the past in favour of performance and load testing, we will investigate those studies, respectively. A research was conducted on the Importance of performance testing of web applicationsEveryone wants the website to be very fast, at the same time, reliability of the application also plays an important role, such that user's satisfaction is the push for performance testing of a given application.

III. METHODOLOGY

For using the tool we have made an website which tests the security headers and performance of website which user enters the URL. User will get the result of that particular URL he entered.







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Important Security Headers

Strict-Transport-Security

Referrer-Policy

X-Frame-Options

using HTTPS, and that any future attempts to a or . Sites can use this to avoid click-jacking access it using HTTP should automatically be attacks, by ensuring that their content is not embedded into other sites.

Permissions-Policy

use of browser features in its own frame or in

X-Content-Type-Options

protect against MIME sniffing vulnerabilities. website however the user disguises a

Content-Security-Policyd

header allows web site administrators to control resources the user agent is allowed to against cross-site scripting attacks

Figure - 3

How your website Performance is measured

Performance testing using ping command

Starting at **OUTPUT HERE**

Figure - 4

SOFTWARE AND TECHNOLOGY

List of software and technologies that we have used for our project :

- Visual studio code -source-code editor 1)
- 2) Chrome Browser
- 3) Html, Css, Javascript
- 4) Bootstrap
- 5) Python

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IV. CONCLUSION

We have successfully made an website which tests security headers and website performance. Our aim is to reduce cyber attack like XSS, code injection, clickjacking, etc. You get a report with all security headers you need to fix Discover new cybersecurity weaknesses that make you exposed to attacks.its mainly for devlopers who build website so they can easily check security and performance and make changes in code what they have made .website speed is a significant factor in Google's algorithm. Fast-loading websites can expect to rank higher in the Search Engine ResultsPages and attract more visitors.

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