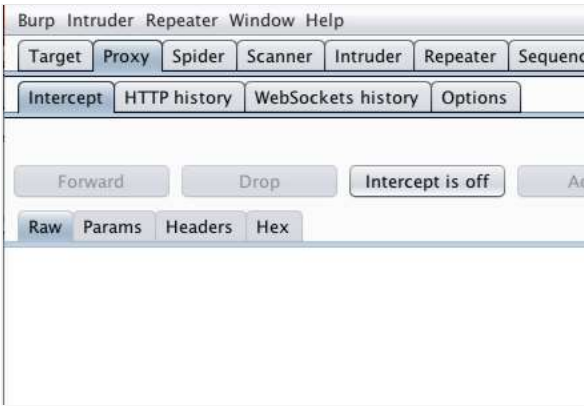
Using Burp Scanner to Test for DOM-Based XSS

DOM-based XSS (sometimes referred to as DOM-based JavaScript injection) vulnerabilities arise when a client-side script within an application's respon data from a controllable part of the DOM (for example, the URL), and executes this data as JavaScript. An attacker may be able to use the vulnerability t construct a URL which, if visited by another application user, will cause JavaScript code supplied by the attacker to execute within the user's browser in t context of that user's session with the application. The attacker-supplied code can perform a wide variety of actions, such as stealing the victim's session or login credentials, performing arbitrary actions on the victim's behalf, and logging their keystrokes.

First, ensure that Burp is correctly configured with your browser.

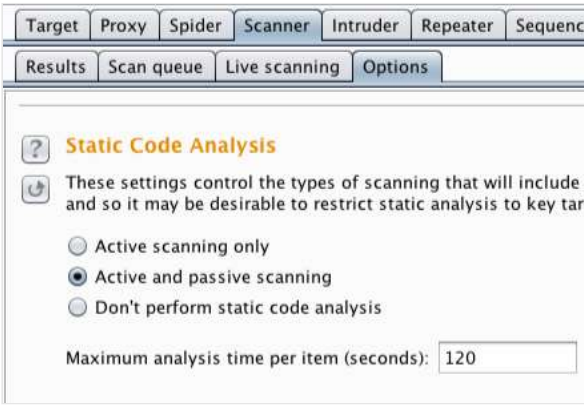
With Burp Proxy "Intercept" turned off, visit the web application you are testing in your browser.



One way to test a web application for potential DOM XSS vulnerabilities is by using Burp Scanner. By applying certain options, Burp Scanner will passively scan for DOM XSS vulnerabilities.

Go to the Scanner "Options" tab and locate the "Static Code Analysis" options.

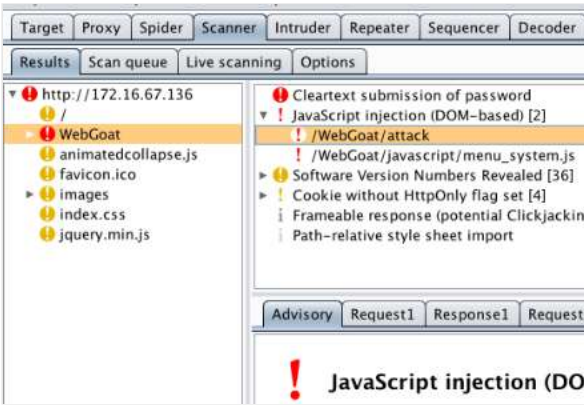
By default, Burp only performs static analysis for bugs like XSS during active scanning, but you can also enable this for passive scanning.



Now, visit the page of the website you wish to test for XSS vulnerabilities.

Burp Scanner will now passively detect any DOM XSS vulnerabilities as you browse.

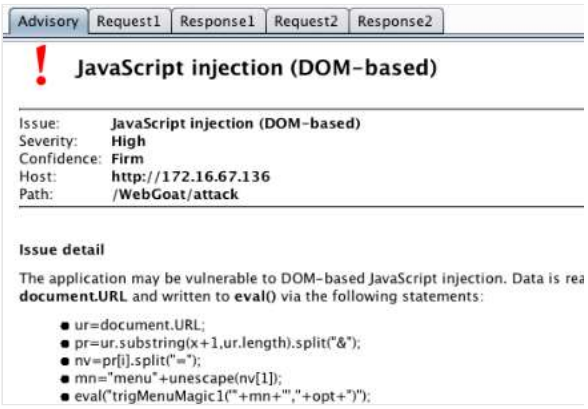
Go to the Scanner "Results" tab to view any potential vulnerabilities.



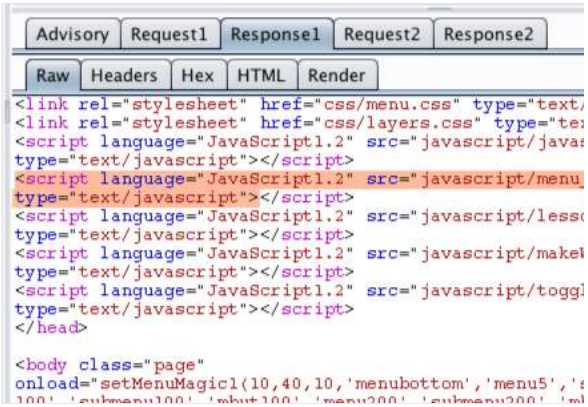
The Scanner "Advisory" tab provides further information on the issue.

You can review the JavaScript in the "Issue detail" to discern the plausibility of the vulnerability.

In this example, the unfiltered input from a URL in to an eval() statement is worth further investigation.



In the "Response 1" tab you can view the vulnerable JavaScript file being imported.



In the "Response 2" tab you can see how a value is read from a "document.url" file and written to "eval()".

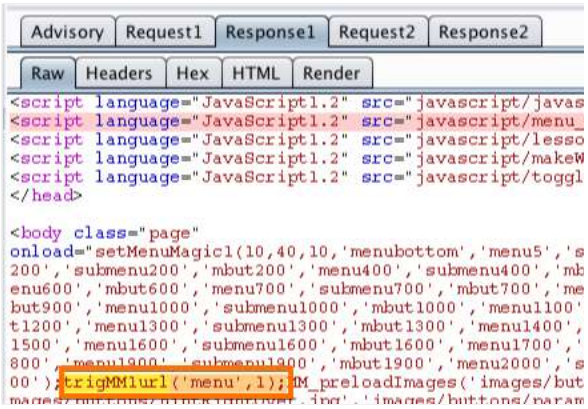
The information in these tabs provides details of what will be needed when attempting to produce a valid payload for a proof of concept.

In this example we can discern that the parameter name must be equal to the param variable when the function is called. This satisfies the "if" statement.

The function called is "trigMMlurl".

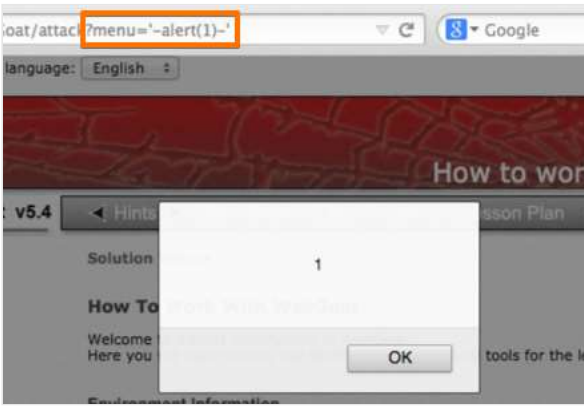
We can then discern that the parameter name is "menu".

We can also use single quotation marks to break out of the function.



The payload is added to the URL in the address bar of your browser.

The payload we have used to produce the proof of concept is **?menu='-alert(1)-'**.



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