



ZAP Scanning Report Without WAF

Summary of Alerts

Risk Level	Number of Alerts
High	2
Medium	2
Low	9
Informational	0

Alert Detail

High (Medium)	SQL Injection
Description	SQL injection may be possible.
URL	https://csye6225-fall2018-chandwanid.me/transaction/8a8080cd67512ea401675137df450000/attachments?query=query%27+AND+%271%27%3D%271%27+---+
Method	POST
Parameter	query
Attack	query' OR '1'='1' --
URL	https://csye6225-fall2018-chandwanid.me/transaction/8a8080cd67512ea401675137df450000?query=query%27+AND+%271%27%3D%271%27+---+
Method	GET
Parameter	query
Attack	query' AND '1'='1' --
Instances	2
Solution	<p>Do not trust client side input, even if there is client side validation in place.</p> <p>In general, type check all data on the server side.</p> <p>If the application uses JDBC, use PreparedStatement or CallableStatement, with parameters passed by '?'</p>

	<p>If the application uses ASP, use ADO Command Objects with strong type checking and parameterized queries.</p> <p>If database Stored Procedures can be used, use them.</p> <p>Do <i>*not*</i> concatenate strings into queries in the stored procedure, or use 'exec', 'exec immediate', or equivalent functionality!</p> <p>Do not create dynamic SQL queries using simple string concatenation.</p> <p>Escape all data received from the client.</p> <p>Apply a 'whitelist' of allowed characters, or a 'blacklist' of disallowed characters in user input.</p> <p>Apply the principle of least privilege by using the least privileged database user possible.</p> <p>In particular, avoid using the 'sa' or 'db-owner' database users. This does not eliminate SQL injection, but minimizes its impact.</p> <p>Grant the minimum database access that is necessary for the application.</p>
Other information	<p>The page results were successfully manipulated using the boolean conditions [query' AND '1'='1' --] and [query' OR '1'='1' --]</p> <p>The parameter value being modified was stripped from the HTML output for the purposes of the comparison</p> <p>Data was NOT returned for the original parameter.</p> <p>The vulnerability was detected by successfully retrieving more data than originally returned, by manipulating the parameter</p>
Reference	<p>https://www.owasp.org/index.php/Top_10_2010-A1</p> <p>https://www.owasp.org/index.php/SQL_Injection_Prevention_Cheat_Sheet</p>
CWE Id	89
WASC Id	19
Source ID	1
High (Medium)	SQL Injection
Description	SQL injection may be possible.
URL	https://csye6225-fall2018-chandwanid.me/transaction/765764578575758575674?query=query+AND+1%3D1+---+
Method	GET

Parameter	query
Attack	query OR 1=1 --
Instances	1
Solution	<p>Do not trust client side input, even if there is client side validation in place.</p> <p>In general, type check all data on the server side.</p> <p>If the application uses JDBC, use PreparedStatement or CallableStatement, with parameters passed by '?'</p> <p>If the application uses ASP, use ADO Command Objects with strong type checking and parameterized queries.</p> <p>If database Stored Procedures can be used, use them.</p> <p>Do <i>*not*</i> concatenate strings into queries in the stored procedure, or use 'exec', 'exec immediate', or equivalent functionality!</p> <p>Do not create dynamic SQL queries using simple string concatenation.</p> <p>Escape all data received from the client.</p> <p>Apply a 'whitelist' of allowed characters, or a 'blacklist' of disallowed characters in user input.</p> <p>Apply the principle of least privilege by using the least privileged database user possible.</p> <p>In particular, avoid using the 'sa' or 'db-owner' database users. This does not eliminate SQL injection, but minimizes its impact.</p> <p>Grant the minimum database access that is necessary for the application.</p>
Other information	<p>The page results were successfully manipulated using the boolean conditions [query AND 1=1 --] and [query OR 1=1 --]</p> <p>The parameter value being modified was stripped from the HTML output for the purposes of the comparison</p> <p>Data was NOT returned for the original parameter.</p> <p>The vulnerability was detected by successfully retrieving more data than originally returned, by manipulating the parameter</p>
Reference	<p>https://www.owasp.org/index.php/Top_10_2010-A1</p> <p>https://www.owasp.org/index.php/SQL_Injection_Prevention_Cheat_Sheet</p>
CWE Id	89
WASC Id	19

Source ID	1
Medium (Medium)	X-Frame-Options Header Not Set
Description	X-Frame-Options header is not included in the HTTP response to protect against 'ClickJacking' attacks.
URL	https://csye6225-fall2018-chandwanid.me/transaction
Method	POST
Parameter	X-Frame-Options
URL	https://csye6225-fall2018-chandwanid.me/
Method	GET
Parameter	X-Frame-Options
Instances	2
Solution	Most modern Web browsers support the X-Frame-Options HTTP header. Ensure it's set on all web pages returned by your site (if you expect the page to be framed only by pages on your server (e.g. it's part of a FRAMESET) then you'll want to use SAMEORIGIN, otherwise if you never expect the page to be framed, you should use DENY. ALLOW-FROM allows specific websites to frame the web page in supported web browsers).
Reference	http://blogs.msdn.com/b/ieinternals/archive/2010/03/30/combating-clickjacking-with-x-frame-options.aspx
CWE Id	16
WASC Id	15
Source ID	3
Medium (Medium)	Application Error Disclosure
Description	This page contains an error/warning message that may disclose sensitive information like the location of the file that produced the unhandled exception. This information can be used to launch further attacks against the web application. The alert could be a false positive if the error message is found inside a documentation page.
URL	https://csye6225-fall2018-chandwanid.me//transaction/8a8080cd67512ea401675137df450000/attachments
Method	POST
Evidence	HTTP/1.1 500
Instances	1
Solution	Review the source code of this page. Implement custom error pages. Consider implementing a mechanism to provide a unique error reference/identifier to the client (browser) while logging the details on the server side and not exposing them to the user.
Reference	

CWE Id	200
WASC Id	13
Source ID	3
Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.
URL	https://blocklists.settings.services.mozilla.com/v1/blocklist/3/%7Bec8030f7-c20a-464f-9b0e-13a3a9e97384%7D/60.2.0/Firefox/20180905211815/Linux_x86_64-gcc3/en-US/default/Linux%204.18.0-kali2-amd64%20(GTK%203.24.1%20Clibpulse%2012.2.0)/Kali/1.0/1/1/new/
Method	GET
Parameter	Cache-Control
Instances	1
Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
CWE Id	525
WASC Id	13
Source ID	3
Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.
URL	https://activity-stream-icons.services.mozilla.com/v1/icons.json.br
Method	GET
Parameter	Cache-Control
Evidence	public,max-age=3600
Instances	1
Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
CWE Id	525
WASC Id	13

Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://activity-stream-icons.services.mozilla.com/v1/icons.json.br
Method	GET
Parameter	X-Content-Type-Options
Instances	1
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>
Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://csye6225-fall2018-chandwanid.me/
Method	GET
Parameter	X-Content-Type-Options

URL	https://csye6225-fall2018-chandwanid.me/user
Method	GET
Parameter	X-Content-Type-Options
URL	https://csye6225-fall2018-chandwanid.me/transaction
Method	POST
Parameter	X-Content-Type-Options
Instances	3
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>

Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3

Low (Medium)	Web Browser XSS Protection Not Enabled
Description	Web Browser XSS Protection is not enabled, or is disabled by the configuration of the 'X-XSS-Protection' HTTP response header on the web server

URL	https://csye6225-fall2018-chandwanid.me//transaction/8a8080cd67512ea401675137df450000/attachments
Method	POST
Parameter	X-XSS-Protection
URL	https://csye6225-fall2018-chandwanid.me/
Method	GET
Parameter	X-XSS-Protection
URL	https://csye6225-fall2018-chandwanid.me/transaction

Method	POST
Parameter	X-XSS-Protection
URL	https://csye6225-fall2018-chandwanid.me/transaction/8a8080cd67512ea401675137df450000/attachments
Method	POST
Parameter	X-XSS-Protection
Instances	4
Solution	Ensure that the web browser's XSS filter is enabled, by setting the X-XSS-Protection HTTP response header to '1'.
Other information	<p>The X-XSS-Protection HTTP response header allows the web server to enable or disable the web browser's XSS protection mechanism. The following values would attempt to enable it:</p> <p>X-XSS-Protection: 1; mode=block</p> <p>X-XSS-Protection: 1; report=http://www.example.com/xss</p> <p>The following values would disable it:</p> <p>X-XSS-Protection: 0</p> <p>The X-XSS-Protection HTTP response header is currently supported on Internet Explorer, Chrome and Safari (WebKit).</p> <p>Note that this alert is only raised if the response body could potentially contain an XSS payload (with a text-based content type, with a non-zero length).</p>
Reference	https://www.owasp.org/index.php/XSS_(Cross_Site_Scripting)_Prevention_Cheat_Sheet https://blog.veracode.com/2014/03/guidelines-for-setting-security-headers/
CWE Id	933
WASC Id	14
Source ID	3
Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.
URL	https://csye6225-fall2018-chandwanid.me/user
Method	GET
Parameter	Cache-Control

URL	https://csye6225-fall2018-chandwanid.me/
Method	GET
Parameter	Cache-Control
URL	https://csye6225-fall2018-chandwanid.me/transaction
Method	POST
Parameter	Cache-Control
Instances	3
Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
CWE Id	525
WASC Id	13
Source ID	3
Low (Medium)	Web Browser XSS Protection Not Enabled
Description	Web Browser XSS Protection is not enabled, or is disabled by the configuration of the 'X-XSS-Protection' HTTP response header on the web server
URL	http://csye6225-fall2018-chandwanid.me:443/user
Method	GET
Parameter	X-XSS-Protection
URL	http://csye6225-fall2018-chandwanid.me:443/
Method	GET
Parameter	X-XSS-Protection
Instances	2
Solution	Ensure that the web browser's XSS filter is enabled, by setting the X-XSS-Protection HTTP response header to '1'.
Other information	<p>The X-XSS-Protection HTTP response header allows the web server to enable or disable the web browser's XSS protection mechanism. The following values would attempt to enable it:</p> <p>X-XSS-Protection: 1; mode=block</p> <p>X-XSS-Protection: 1; report=http://www.example.com/xss</p>

	<p>The following values would disable it:</p> <p>X-XSS-Protection: 0</p> <p>The X-XSS-Protection HTTP response header is currently supported on Internet Explorer, Chrome and Safari (WebKit).</p> <p>Note that this alert is only raised if the response body could potentially contain an XSS payload (with a text-based content type, with a non-zero length).</p>
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Reference	<p>https://www.owasp.org/index.php/XSS_(Cross_Site_Scripting)_Prevention_Cheat_Sheet</p> <p>https://blog.veracode.com/2014/03/guidelines-for-setting-security-headers/</p>
CWE Id	933
WASC Id	14
Source ID	3

Low (Medium)	X-Content-Type-Options Header Missing
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Description	<p>The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.</p>
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URL	https://tracking-protection.cdn.mozilla.net/except-flashallow-digest256/1490633678
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/block-flash-digest256/1496263270
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/except-flash-digest256/1494877265
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/base-track-digest256/1541603465
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/allow-flashallow-digest256/1490633678
Method	GET
Parameter	X-Content-Type-Options

URL	https://tracking-protection.cdn.mozilla.net/mozstd-trackwhite-digest256/1541603465
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/except-flashsubdoc-digest256/1517935265
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/block-flashsubdoc-digest256/1512160865
Method	GET
Parameter	X-Content-Type-Options
Instances	8
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>
Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://shavar.services.mozilla.com/downloads?client=navclient-auto-ffox&appver=60.2&pver=2.2
Method	POST

Parameter	X-Content-Type-Options
Instances	1
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>
Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3



ZAP Scanning Report with WAF

Summary of Alerts

Risk Level	Number of Alerts
High	0
Medium	1
Low	8
Informational	0

Alert Detail

Medium (Medium)	X-Frame-Options Header Not Set
Description	X-Frame-Options header is not included in the HTTP response to protect against 'ClickJacking' attacks.
URL	https://csye6225-fall2018-bhargavan.me/transaction
Method	POST

Parameter	X-Frame-Options
Instances	1
Solution	Most modern Web browsers support the X-Frame-Options HTTP header. Ensure it's set on all web pages returned by your site (if you expect the page to be framed only by pages on your server (e.g. it's part of a FRAMESET) then you'll want to use SAMEORIGIN, otherwise if you never expect the page to be framed, you should use DENY. ALLOW-FROM allows specific websites to frame the web page in supported web browsers).
Reference	http://blogs.msdn.com/b/ieinternals/archive/2010/03/30/combating-clickjacking-with-x-frame-options.aspx
CWE Id	16
WASC Id	15
Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://tracking-protection.cdn.mozilla.net/except-flashallow-digest256/1490633678
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/block-flash-digest256/1496263270
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/except-flash-digest256/1494877265
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/base-track-digest256/1541603465
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/allow-flashallow-digest256/1490633678
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/mozstd-trackwhite-digest256/1541603465

Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/except-flashsubdoc-digest256/1517935265
Method	GET
Parameter	X-Content-Type-Options
URL	https://tracking-protection.cdn.mozilla.net/block-flashsubdoc-digest256/1512160865
Method	GET
Parameter	X-Content-Type-Options
Instances	8
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>
Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://shavar.services.mozilla.com/downloads?client=navclient-auto-ffox&appver=60.2&pver=2.2
Method	POST
Parameter	X-Content-Type-Options

Instances	1
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>

Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3

Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.

URL	https://blocklists.settings.services.mozilla.com/v1/blocklist/3/%7Bec8030f7-c20a-464f-9b0e-13a3a9e97384%7D/60.2.0/Firefox/20180905211815/Linux_x86_64-gcc3/en-US/default/Linux%204.18.0-kali2-amd64%20(GTK%203.24.1%20Clibpulse%2012.2.0)/Kali/1.0/1/1/new/
Method	GET
Parameter	Cache-Control
Instances	1
Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
CWE Id	525
WASC Id	13
Source ID	3

Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.

URL	https://activity-stream-icons.services.mozilla.com/v1/icons.json.br
Method	GET
Parameter	Cache-Control
Evidence	public,max-age=3600
Instances	1
Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
CWE Id	525
WASC Id	13
Source ID	3

Low (Medium)	X-Content-Type-Options Header Missing
Description	The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.
URL	https://activity-stream-icons.services.mozilla.com/v1/icons.json.br
Method	GET
Parameter	X-Content-Type-Options
Instances	1
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p> <p>If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.</p>
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Reference	<p>http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx</p> <p>https://www.owasp.org/index.php/List_of_useful_HTTP_headers</p>

CWE Id	16
WASC Id	15
Source ID	3

Low (Medium)	Incomplete or No Cache-control and Pragma HTTP Header Set
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Description	The cache-control and pragma HTTP header have not been set properly or are missing allowing the browser and proxies to cache content.
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URL	https://csye6225-fall2018-bhargavan.me/transaction
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Method	POST
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Parameter	Cache-Control
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URL	https://csye6225-fall2018-bhargavan.me/user
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Method	GET
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Parameter	Cache-Control
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Instances	2
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Solution	Whenever possible ensure the cache-control HTTP header is set with no-cache, no-store, must-revalidate; and that the pragma HTTP header is set with no-cache.
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Reference	https://www.owasp.org/index.php/Session_Management_Cheat_Sheet#Web_Content_Caching
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CWE Id	525
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WASC Id	13
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Source ID	3
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Low (Medium)	Web Browser XSS Protection Not Enabled
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Description	Web Browser XSS Protection is not enabled, or is disabled by the configuration of the 'X-XSS-Protection' HTTP response header on the web server
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URL	https://csye6225-fall2018-bhargavan.me/transaction
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Method	POST
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Parameter	X-XSS-Protection
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URL	https://csye6225-fall2018-bhargavan.me/transaction/64838762894632846239/attachments
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Method	POST
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Parameter	X-XSS-Protection
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Instances	2
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Solution	Ensure that the web browser's XSS filter is enabled, by setting the X-XSS-Protection HTTP response header to '1'.
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Other information	<p>The X-XSS-Protection HTTP response header allows the web server to enable or disable the web browser's XSS protection mechanism. The following values would attempt to enable it:</p> <p>X-XSS-Protection: 1; mode=block</p> <p>X-XSS-Protection: 1; report=http://www.example.com/xss</p> <p>The following values would disable it:</p> <p>X-XSS-Protection: 0</p> <p>The X-XSS-Protection HTTP response header is currently supported on Internet Explorer, Chrome and Safari (WebKit).</p> <p>Note that this alert is only raised if the response body could potentially contain an XSS payload (with a text-based content type, with a non-zero length).</p>
Reference	<p>https://www.owasp.org/index.php/XSS_(Cross_Site_Scripting)_Prevention_Cheat_Sheet</p> <p>https://blog.veracode.com/2014/03/guidelines-for-setting-security-headers/</p>
CWE Id	933
WASC Id	14
Source ID	3
Low (Medium)	X-Content-Type-Options Header Missing
Description	<p>The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.</p>
URL	https://csye6225-fall2018-bhargavan.me/user
Method	GET
Parameter	X-Content-Type-Options
URL	https://csye6225-fall2018-bhargavan.me/transaction
Method	POST
Parameter	X-Content-Type-Options
Instances	2
Solution	<p>Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages.</p>

	If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.
Other information	<p>This issue still applies to error type pages (401, 403, 500, etc) as those pages are often still affected by injection issues, in which case there is still concern for browsers sniffing pages away from their actual content type.</p> <p>At "High" threshold this scanner will not alert on client or server error responses.</p>
Reference	http://msdn.microsoft.com/en-us/library/ie/gg622941%28v=vs.85%29.aspx https://www.owasp.org/index.php/List_of_useful_HTTP_headers
CWE Id	16
WASC Id	15
Source ID	3