

MIRA BHAYANDAR MUNICIPAL CORPORATION

Water Connection Approval System

Web Application

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## Document Control

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# 1. Introduction

A3S Tech & Co. (A3S) was engaged by Mira Bhayandar Municipal Corporation to perform VAPT, for Water Connection Approval System Web Application. The report highlights gaps identified during the review and recommendations to remediate the gaps.

The objective of Web Application VAPT was to provide independent evaluation of the vulnerabilities in scope to fulfil the objectives of confidentiality, integrity, and availability and to perform controlled attack to assess the immunity level, to assess the overall level of security, discover weak links and provide recommendations and compliance status to vulnerable entities discovered. The report highlights gaps identified during the VAPT review, recommendations, risk ratings and impact of the vulnerabilities.

## 2. Engagement Scope

Below are the details of assets covered in the scope:

S. No.	Asset Description	Criticality of Asset	Internal IP Address	URL	Public IP Address	Location	Hash Value (in case of applications)	Version (in case of applications)	Other details such as make and model in case of network devices or security devices.
1.	Web Application – Water Connection Approval System	Not available	Not Available	<a href="#">dev.water.mbconline.in</a>	Not Available	MUMBAI	Not available	Not available	Not Applicable

## 3. Details of the Auditing team

S. no.	Name	Designation	Email Id	Professional Qualifications/ Certifications	Whether the resource has been listed in the Snapshot information published on CERT-In's website (Yes/No)
1.	Jasmeet Singh	Senior IS Consultant	<a href="mailto:jasmeet@a3stech.co.in">jasmeet@a3stech.co.in</a>	CEH	Yes

## 4. Audit Activities and Timelines

The audit was conducted in the following phases:

S. no.	Audit Activity	Timeline
1.	Information Gathering	February 5, 2026
2.	Scanning	February 5, 2026
3.	Information Analysis	February 5, 2026
4.	Vulnerability Assessment	February 6, 2026
5.	Penetration Testing	February 6, 2026
6.	Revalidation Testing	NA

## 5. Audit Methodology and Criteria / Standard referred for audit

The Audit Approach and Methodology was a Risk based Audit Approach. In a risk-based audit approach, IS auditors are not just relying on risk; they also are also relying on internal and operational controls as well as knowledge of the organization and its business. The audit was conducted based on combination of tools and manual testing. The audit methodology and approach are based on global best practice framework such as OWASP Top 10 Vulnerabilities, OSSTMM, SANS 25, CIS benchmarks. These are globally accepted standard and a benchmark for IT security across a large number of organizations.

List of OWASP vulnerabilities (Web Application) is:

S. no	Attack Type	Description
1.	A1- Broken Access Control	Improperly configured or missing restrictions on authenticated users allow them to access unauthorized functionality or data, such as accessing other users' accounts, viewing sensitive documents, and modifying data and access rights
2.	A2- Cryptographic Failures	Applications and APIs that don't properly protect sensitive data such as financial data, usernames and passwords, or health information, could enable attackers to access such information to commit fraud or steal identities.
3.	A3- Injection	Injection flaws, such as SQL, OS, and LDAP injection, occur when untrusted data is sent to an interpreter as part of a command or query. The attacker's hostile data can trick the interpreter into executing unintended commands or accessing unauthorized data
4.	A4- Insecure Design	Insecure design is a broad category representing different weaknesses, expressed as "missing or

S. no	Attack Type	Description
		ineffective control design". An insecure design cannot be fixed by a perfect implementation as by definition, needed security controls were never created to defend against specific attacks. One of the factors that contribute to insecure design is the lack of business risk profiling inherent in the software or system being developed, and thus the failure to determine what level of security design is required.
5.	A5- Security Misconfiguration	Good security requires having a secure configuration defined and deployed for the application, frameworks, application server, web server, database server, and platform. All these settings should be defined, implemented, and maintained as many are not shipped with secure defaults. This includes keeping all software up to date, including all code libraries used by the application
6.	A6- Vulnerable and Outdated Components	Developers frequently don't know which open source and third-party components are in their applications, making it difficult to update components when new vulnerabilities are discovered. Attackers can exploit an insecure component to take over the server or steal sensitive data.
7.	A7- Identification and Authentication Failures	Application functions related to authentication and session management are often not implemented correctly, allowing attackers to compromise passwords, keys, session tokens, or exploit other implementation flaws to assume other users' identities
8.	A8- Software and Data	Software and data integrity failures relate to code and infrastructure that does not protect against integrity violations. An insecure CI/CD pipeline can introduce the potential for unauthorized access, malicious code,

S. no	Attack Type	Description
	Integrity Failures	or system compromise. Lastly, many applications now include auto-update functionality, where updates are downloaded without sufficient integrity verification and applied to the previously trusted application. Attackers could potentially upload their own updates to be distributed and run on all installations
9.	A9- Security Logging and Monitoring Failures	The time to detect a breach is frequently measured in weeks or months. Insufficient logging and ineffective integration with security incident response systems allow attackers to pivot to other systems and maintain persistent threats
10.	A10- Server-Side Request Forgery	SSRF flaws occur whenever a web application is fetching a remote resource without validating the user-supplied URL. It allows an attacker to coerce the application to send a crafted request to an unexpected destination, even when protected by a firewall, VPN, or another type of network access control list (ACL).

This document is an exception report highlighting the vulnerabilities and their compliance status.

Our review has been based on the assumption that the information provided to us was accurate and complete, as existing at the time of review, and that all relevant information, system access for review, and supporting documents, as asked for by A3S, were shared with us for the area that was subject of the review.

## 6. Tools/ Software used

S. no.	Name of Tool/Software used	Version of the tool /Software used	Open Source/Licensed
1.	Burp Suite	2025.12.5	Licensed

## 7. Executive Summary

The details of the vulnerabilities identified during the testing as mentioned as below:

S. No.	Affected Asset i.e. IP/URL/Application etc.	Observation/Vulnerability title	CVE/CWE	Severity	Recommendation	Reference	New or Repeat observation
1	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Brute Force Attack – Improper Restriction of Authentication Attempts	CWE-307	High	To mitigate this vulnerability, it is recommended to Implement account lockout after 5–10 failed login attempts. Apply rate limiting on authentication endpoints. Introduce CAPTCHA after multiple failed attempts. Add progressive delay between login attempts. Monitor and log suspicious login	<a href="https://owasp.org/Top10/A07_2021-IdentificationandAuthenticationFailures/">https://owasp.org/Top10/A07_2021-IdentificationandAuthenticationFailures/</a>	New

					behavior. Enforce strong password policies		
2	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Missing Rate Limiting on Authentication (Password) Functionality	CWE -307	<b>Medium</b>	<p>It is recommended to implement the following controls. Apply rate limiting on login endpoints (e.g., 5–10 attempts per minute). Enforce temporary IP blocking after threshold breach. Introduce CAPTCHA after multiple failed attempts. Implement progressive delay (exponential backoff). Monitor and alert on abnormal login behavior.</p>	<a href="https://owasp.org/Top10/A07_2021-Identification_and_Authentication_Failures/">https://owasp.org/Top10/A07_2021-Identification_and_Authentication_Failures/</a>	New
3	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Improper Input Validation	CWE -20	<b>Medium</b>	<p>Implement strict server-side input validation for all user inputs. Use allow-lists (whitelisting) instead of block-lists. Validate input</p>	<a href="https://owasp.org/Top10/A02_2021-Cryptographic_Failures/">https://owasp.org/Top10/A02_2021-Cryptographic_Failures/</a>	New

					length, type, format, and range. Encode or sanitize input before processing or displaying it. Implement centralized validation mechanisms.		
4	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Missing Length Validation in Phone Numbers	CWE -20	<b>Medium</b>	Enforce strict length validation for phone number inputs (e.g., exactly 10 digits for Indian mobile numbers). Validate input on both client-side and server-side. Allow only numeric characters and reject special characters. Implement proper error messages for invalid input.	<a href="https://techdocs.akamai.com/identity-cloud/docs/the-minimum-length-validation">https://techdocs.akamai.com/identity-cloud/docs/the-minimum-length-validation</a>	New
5	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Clear Text Password Transmission in Login Request	CWE -319	<b>Medium</b>	It is strongly recommended to: Enforce HTTPS (TLS 1.2 or higher) across the application. Avoid transmitting passwords in clear text. Implement secure encryption	<a href="https://owasp.org/Top10/A02_2021-Cryptographic Failures/">https://owasp.org/Top10/A02_2021-Cryptographic Failures/</a>	New

					<p>mechanisms for data in transit.</p> <p>Ensure passwords are hashed and salted on the server side. Disable login access over HTTP.</p> <p>Use secure authentication frameworks (OAuth, SSO, etc.)</p>		
6	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Missing Security Headers	CWE-693	<b>Medium</b>	<p>It is recommended to configure and enable the required HTTP security headers at the web server or application level. At a minimum, implement the following:</p> <p>Content-Security-Policy: default-src 'self';</p> <p>X-Frame-Options: DENY</p> <p>X-Content-Type-Options: nosniff</p> <p>Strict-Transport-Security: max-age=31536000 ; includeSubDomains</p> <p>Referrer-Policy: no-referrer</p> <p>Permissions-Policy: geolocation=(),</p>	<p><a href="https://www.invicti.com/blog/web-security/missing-http-security-headers">https://www.invicti.com/blog/web-security/missing-http-security-headers</a></p>	New

					camera=(), microphone=()		
7	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Captcha Not Implemented	CWE-307	<b>Medium</b>	Implement CAPTCHA on authentication and sensitive transaction pages. Apply CAPTCHA after multiple failed login or OTP attempts. Use advanced bot detection mechanisms such as Google reCAPTCHA or equivalent solutions. Implement rate limiting along with CAPTCHA protection.	<a href="https://stackoverflow.com/questions/34016388/trying-to-implement-the-new-google-captcha">https://stackoverflow.com/questions/34016388/trying-to-implement-the-new-google-captcha</a>	New
8	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Out of date (jQuery Version)	CWE-1104	<b>Medium</b>	Upgrade jQuery to the latest stable version (v3.7.1 or above). Remove unused or legacy jQuery functions. Regularly review third-party libraries for security updates. Implement dependency monitoring as part of the SDLC.	<a href="https://github.com/jquery/jquery/security/advisories">https://github.com/jquery/jquery/security/advisories</a>	New
9	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Out of Date (Bootstrap Version)	CWE-1104	<b>Medium</b>	Upgrade Bootstrap to the latest stable and supported version. Remove	<a href="https://www.invicti.com/web-vulnerability-scanner/vulnerabilities">https://www.invicti.com/web-vulnerability-scanner/vulnerabilities</a>	New

					<p>unused or deprecated Bootstrap components. Regularly monitor third-party libraries for security updates. Implement a dependency management and patching process.</p>	<p><a href="#">/out-of-date-version-bootstrap</a></p>	
10	<p><a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a></p>	<p>Out of Date (X-Asp.Net )</p>	<p>CWE -1104</p>	<p><b>Medium</b></p>	<p>Upgrade the application to the latest supported ASP.NET / .NET Framework version. Apply the latest security patches from Microsoft. Disable version disclosure headers (X-AspNet-Version, X-Powered-By). Regularly monitor and update application frameworks and dependencies.</p>	<p><a href="https://stackoverflow.com/questions/12561370/how-to-expire-a-link">https://stackoverflow.com/questions/12561370/how-to-expire-a-link</a></p>	<p>New</p>
11	<p><a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a></p>	<p>Weak Ciphers</p>	<p>CWE -326</p>	<p><b>Medium</b></p>	<p>Disable all weak and legacy cipher suites. Remove CBC-based and RSA key exchange cipher suites.</p>	<p><a href="https://owasp.org/Top10/A02_2021-Cryptographic-Failures/">https://owasp.org/Top10/A02_2021-Cryptographic-Failures/</a></p>	<p>New</p>

					<p>Allow only strong modern cipher suites such as: AES-GCM, CHACHA20-POLY1305. Enforce TLS 1.2 (secure ciphers only) and TLS 1.3. Regularly review SSL/TLS configurations</p> <p>Recommended Cipher Examples:          TLS_AES_256_GCM_SHA384          TLS_CHACHA20_POLY1305_SHA256          TLS_AES_128_GCM_SHA256</p>		
12	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>	Version Disclosure (jQuery)	CWE -200	<b>Low</b>	<p>Avoid exposing exact jQuery version details in production environments. Minify and bundle JavaScript files.</p> <p>Remove version comments and banners from client-side resources. Keep jQuery updated to the latest stable version.</p>	<a href="https://owasp.org/www-community/attacks/InformationDisclosure">https://owasp.org/www-community/attacks/InformationDisclosure</a>	New
13		Version Disclosure	CWE -200	<b>Low</b>	Remove or obfuscate version	<a href="https://owasp.org/www-">https://owasp.org/www-</a>	New

		(Bootstrap)			comments and metadata from HTML/JS files. Upgrade to the latest Bootstrap version. Avoid exposing framework versions in client-side responses.	<a href="https://community/attacks/InformationDisclosure">community/attacks/InformationDisclosure</a>	
14		Version Disclosure (X-AspNet-Header)	CWE-200	Low	Remove or disable the X-AspNet-Version HTTP header. Remove the X-Powered-By header if enabled. Ensure server and framework configurations do not expose internal version details.	<a href="https://stackoverflow.com/questions/12561370/how-to-expire-a-link">https://stackoverflow.com/questions/12561370/how-to-expire-a-link</a>	New
15		Server Version Disclosure	CWE-200	Low	Remove or obfuscate the Server HTTP response header. Apply latest security patches to the web server. Implement secure header configurations.	<a href="https://serverfault.com/questions/991045/remove-modify-iis-10-server-header-which-discloses-iis-version">https://serverfault.com/questions/991045/remove-modify-iis-10-server-header-which-discloses-iis-version</a>	New
16		Stack Disclosure	CWE-200	Low	Disable the X-Powered-By HTTP	<a href="https://learn.microsoft.com/en-">https://learn.microsoft.com/en-</a>	New

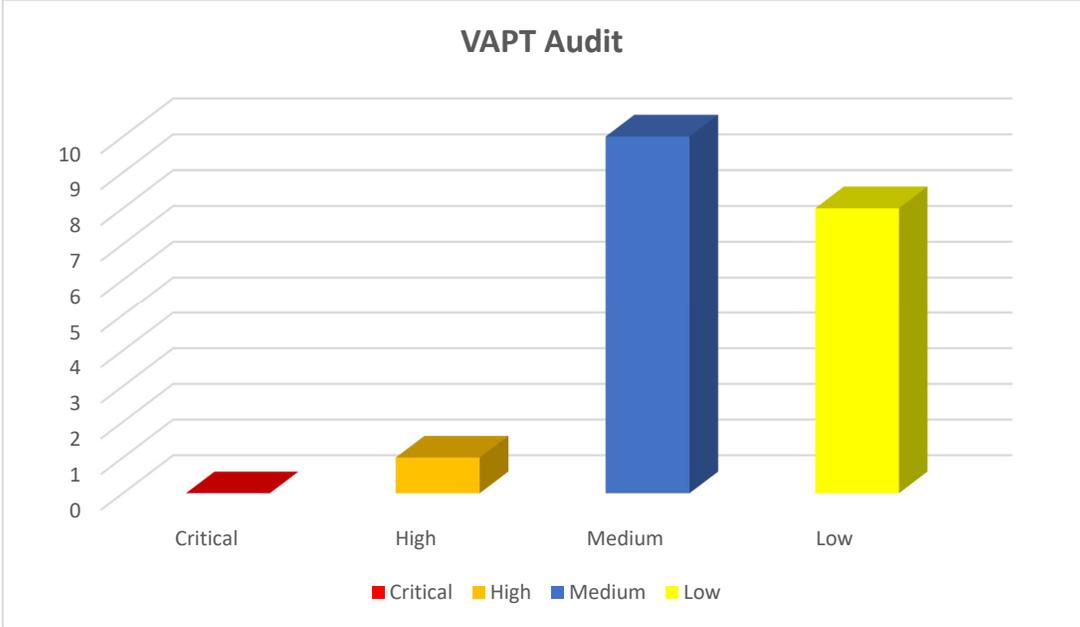
					response header. Avoid exposing internal technology details in HTTP responses. Apply secure server hardening and header management.	<a href="https://learn.microsoft.com/en-us/aspnet/core/security/headers">us/aspnet/core/security/headers</a>	
17		Clickjacking	CWE-1021	<b>Low</b>	Implement X-Frame-Options header (DENY or SAMEORIGIN). Configure Content-Security-Policy with frame-ancestors 'self'. Validate frame usage only for trusted domains if framing is required.	<a href="https://learn.microsoft.com/en-us/aspnet/core/security/headers">https://learn.microsoft.com/en-us/aspnet/core/security/headers</a>	New
18	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>	Cookies Not Marked Secure	CWE-614	<b>Low</b>	Set the Secure flag on all cookies, especially session and authentication cookies. Ensure cookies are transmitted only over HTTPS. Additionally, enable HttpOnly and SameSite attributes for	<a href="https://owasp.org/www-community/controls/SecureCookieAttribute">https://owasp.org/www-community/controls/SecureCookieAttribute</a>	New

					better protection. Set-Cookie: sessionid=abc123; Secure; HttpOnly; SameSite=Strict		
19		Internal Server Error	CWE-209	<b>Low</b>	Implement proper exception handling and return generic error messages to users. Disable detailed error messages and stack traces in production environments . Log detailed errors securely on the server side for debugging. Validate and sanitize all user inputs to prevent unexpected errors.	<a href="https://stackoverflow.com/questions/5385714/deploying-website-500-internal-server-error">https://stackoverflow.com/questions/5385714/deploying-website-500-internal-server-error</a>	New

Tabular Representation of the vulnerabilities:

Risk Rating	Count of Observations
Critical	-
High	1
Medium	10
Low	8

Graphical Representation of vulnerabilities

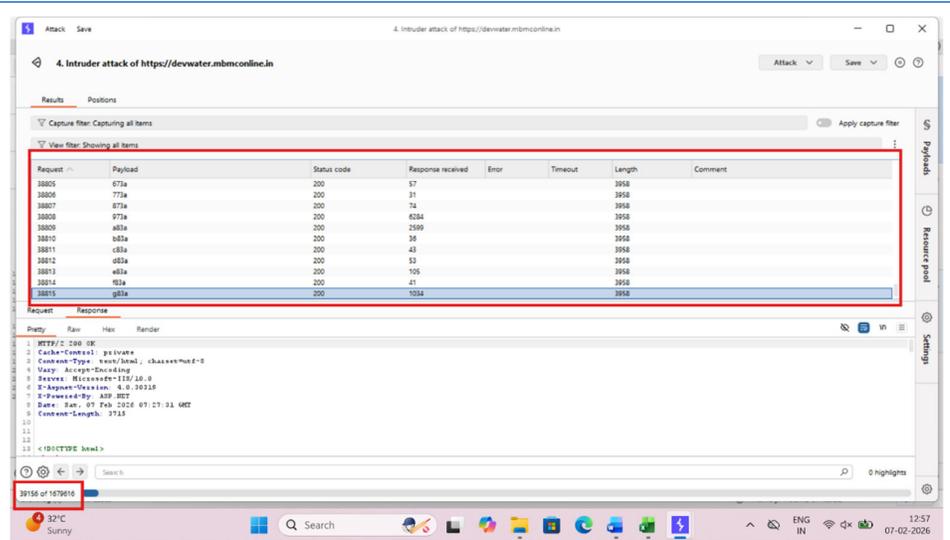


## 8. Detailed Observations

### 1. Brute Force Attack – Improper Restriction of Authentication Attempts

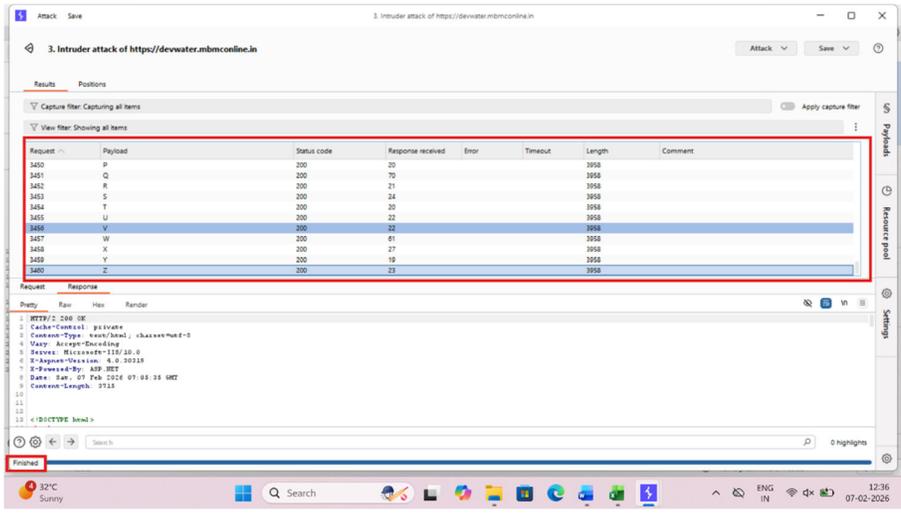
<i>Vulnerability Title</i>	<i>Affected URLs/IP</i>
Brute Force Attack – Improper Restriction of Authentication Attempts	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<i>Detailed Observation</i>	Multiple login requests were sent with different payloads. The application returned HTTP 200 OK responses for all attempts. No account lockout mechanism was triggered. No CAPTCHA challenge was enforced. No request rate-limiting was observed. Response length and behavior remained consistent across attempts. This confirms that the application allows unlimited authentication attempts.
<i>Vulnerability Reference (CWE/CVE)</i>	CWE-307
<i>Severity</i>	<b>High</b>
<i>Recommendation</i>	To mitigate this vulnerability, it is recommended to Implement account lockout after 5–10 failed login attempts. Apply rate limiting on authentication endpoints. Introduce CAPTCHA after multiple failed attempts. Add progressive delay between login attempts. Monitor and log suspicious login behavior. Enforce strong password policies
<i>Reference</i>	<a href="https://owasp.org/Top10/A07_2021-Identification_and_Authentication_Failures/">https://owasp.org/Top10/A07_2021-Identification_and_Authentication_Failures/</a>
<i>New/ Repeat Observation</i>	New Observation

References to evidences / Proof of Concept (POCs)



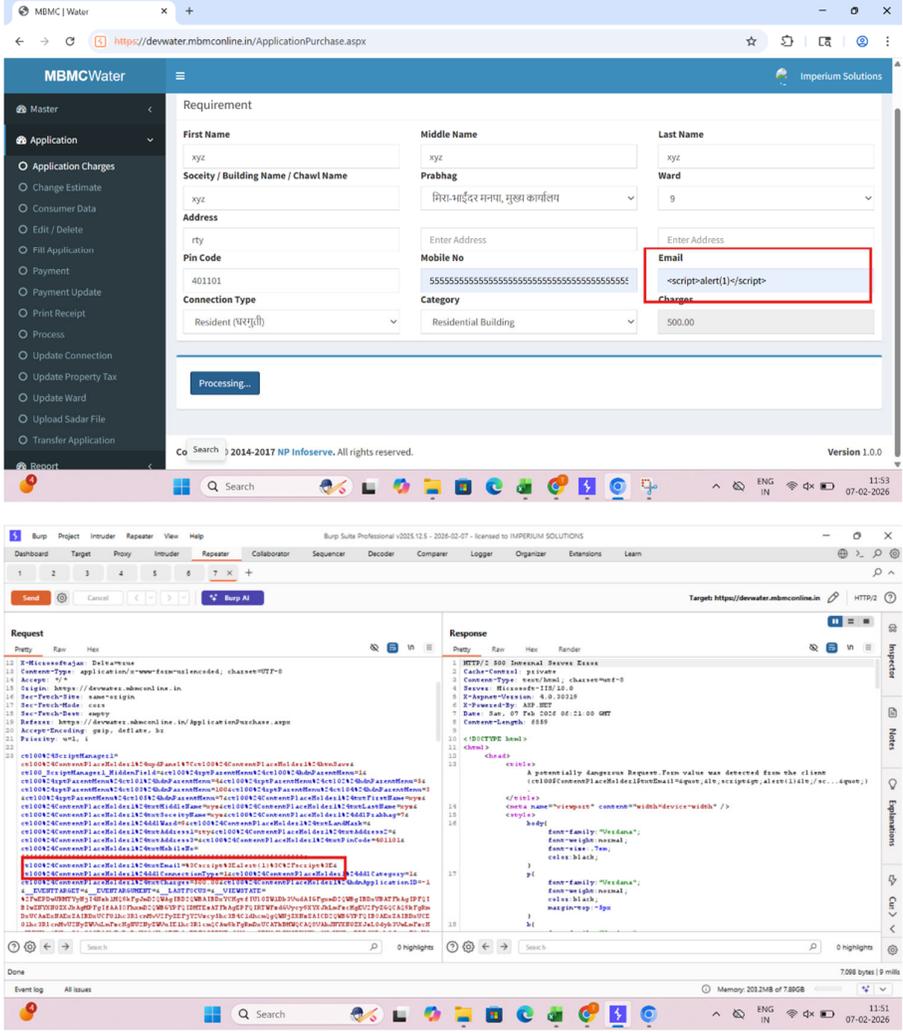
## 2. Missing Rate Limiting on Authentication (Password) Functionality

Vulnerability Title	Affected URLs/IP
Missing Rate Limiting on Authentication (Password) Functionality	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	Rate limiting is a security control used to restrict the number of requests a user or IP address can make within a specific time period. During the security assessment, it was observed that the application does not enforce rate limiting on the login/password endpoint, allowing an attacker to send multiple authentication requests continuously.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-307
<b>Severity</b>	<b>Medium</b>
<b>Recommendation</b>	It is recommended to implement the following controls. Apply rate limiting on login endpoints (e.g., 5–10 attempts per minute). Enforce temporary IP blocking after threshold breach. Introduce CAPTCHA after multiple failed attempts. Implement progressive delay (exponential backoff). Monitor and alert on abnormal login behavior.
<b>Reference</b>	<a href="https://owasp.org/Top10/A07_2021-Identification_and_Authentication_Failures/">https://owasp.org/Top10/A07_2021-Identification and Authentication Failures/</a>

<p><b>New/ Repeat Observation</b></p>	<p>New Observation</p>
<p><b>References to evidences / Proof of Concept (POCs)</b></p>	

**3. Improper Input Validation**

<p><b>Vulnerability Title</b></p>	<p><b>Affected URLs/IP</b></p>
<p>Improper Input Validation</p>	<p><a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a></p>
<p><b>Detailed Observation</b></p>	<p>The application does not properly validate user-supplied input before processing it. As a result, malicious or unexpected input can be accepted and handled by the application, potentially leading to security vulnerabilities such as injection attacks, application errors, or unauthorized behavior.</p>
<p><b>Vulnerability Reference (CWE/CVE)</b></p>	<p>CWE-20</p>
<p><b>Severity</b></p>	<p><b>Medium</b></p>
<p><b>Recommendation</b></p>	<p>Implement strict server-side input validation for all user inputs. Use allow-lists (whitelisting) instead of block-lists. Validate input length, type, format, and range. Encode or sanitize input before processing or displaying it. Implement centralized validation mechanisms.</p>
<p><b>Reference</b></p>	<p><a href="https://owasp.org/Top10/A02_2021-Cryptographic_Failures/">https://owasp.org/Top10/A02_2021-Cryptographic Failures/</a></p>

<p><b>New/ Repeat Observation</b></p>	<p><b>New Observation</b></p>
<p><b>References to evidences / Proof of Concept (POCs)</b></p>	 <p>The top screenshot shows the MBMC Water application purchase form. The 'Email' field contains the payload: <code>&lt;script&gt;alert(1)&lt;/script&gt;</code>. The bottom screenshot shows the Burp Suite response, where the injected payload is visible in the response body, demonstrating a successful injection.</p>

#### 4. Missing Length Validation in Phone Numbers

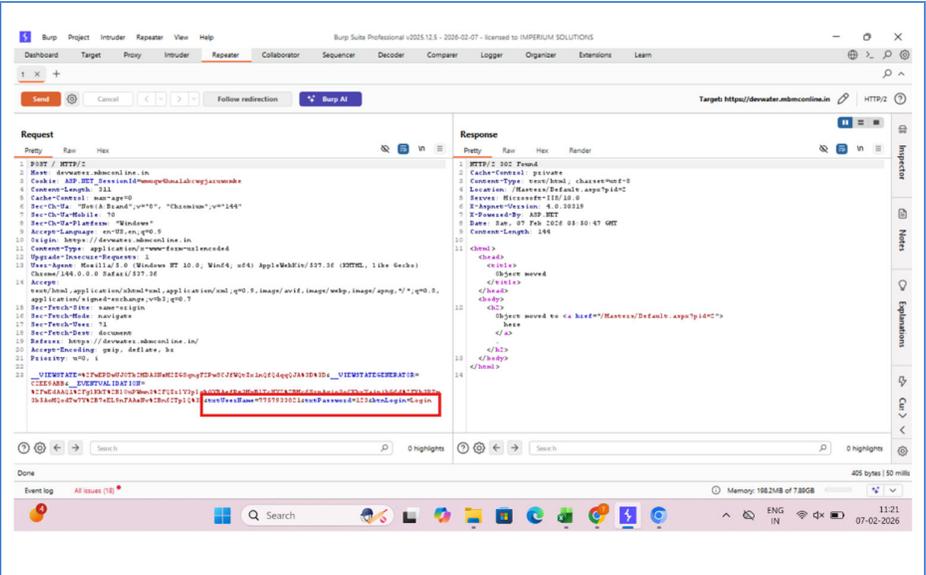
<p><b>Vulnerability Title</b></p>	<p><b>Affected URLs/IP</b></p>
<p>Missing Length Validation in Phone Numbers</p>	<p><a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a></p>
<p><b>Detailed Observation</b></p>	<p>The application does not enforce proper length validation on phone number input fields. As a result, users can submit phone numbers with invalid or excessive lengths, which may lead to improper input handling and increase the risk of injection, logic bypass, or application errors.</p>



## 5. Clear Text Password Transmission in Login Request

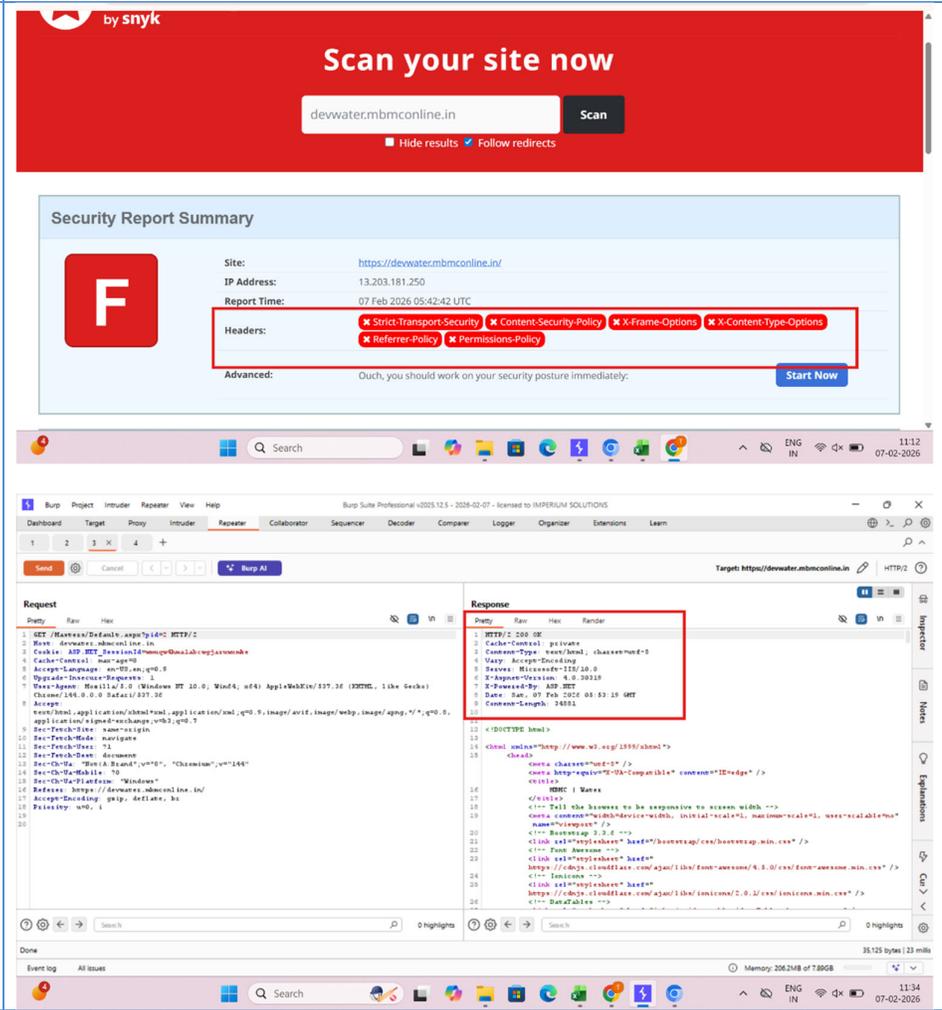
<i>Vulnerability Title</i>	<i>Affected URLs/IP</i>
Clear Text Password Transmission in Login Request	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<i>Detailed Observation</i>	Clear text password transmission occurs when user credentials are sent from the client to the server without proper encryption or protection. This allows attackers to view sensitive information such as usernames and passwords in readable format. During the security assessment, it was observed that the application transmits the password parameter in plain readable text within the HTTP request.
<i>Vulnerability Reference (CWE/CVE)</i>	CWE-319
<i>Severity</i>	<b>Medium</b>
<i>Recommendation</i>	It is strongly recommended to: Enforce HTTPS (TLS 1.2 or higher) across the application. Avoid transmitting passwords in clear text. Implement secure encryption mechanisms for data in transit. Ensure passwords are hashed and salted on the server side. Disable login access over HTTP. Use secure authentication frameworks (OAuth, SSO, etc.)
<i>Reference</i>	<a href="https://owasp.org/Top10/A02_2021-Cryptographic_Failures/">https://owasp.org/Top10/A02_2021-Cryptographic_Failures/</a>
<i>New/ Repeat Observation</i>	New Observation

**References to evidences / Proof of Concept (POCs)**



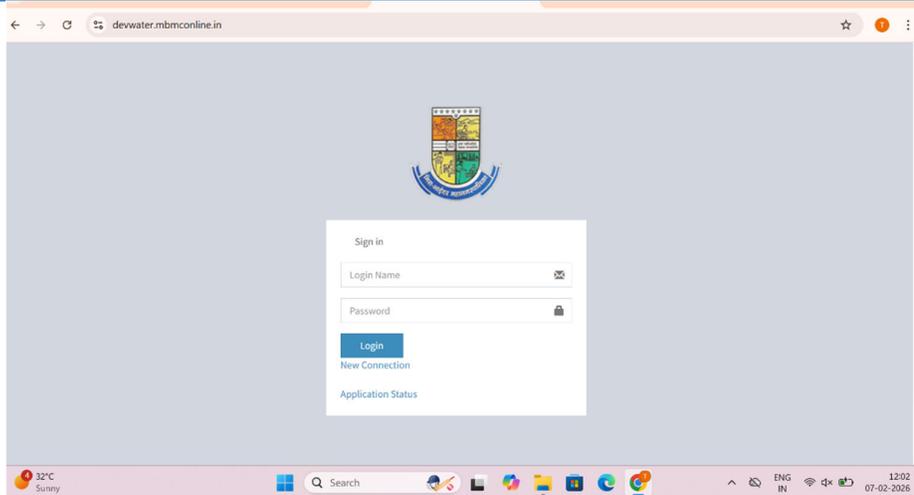
**6. Missing Security Headers**

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Missing Security Headers	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application does not implement one or more recommended HTTP security headers. Security headers help browsers enforce security controls that reduce the risk of common web attacks such as Cross-Site Scripting (XSS), Clickjacking, MIME-type sniffing, and information disclosure. Absence of these headers weakens the overall security posture of the application.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-693
<b>Severity</b>	<b>Medium</b>
<b>Recommendation</b>	<p>It is recommended to configure and enable the required HTTP security headers at the web server or application level. At a minimum, implement the following:</p> <ul style="list-style-type: none"> <li>Content-Security-Policy: default-src 'self';</li> <li>X-Content-Type-Options: nosniff</li> <li>Strict-Transport-Security: max-age=31536000; includeSubDomains</li> <li>Referrer-Policy: no-referrer</li> <li>Permissions-Policy: geolocation=(), camera=(), microphone=()</li> </ul>

<p><b>Reference</b></p>	<p><a href="https://www.invicti.com/blog/web-security/missing-http-security-headers">https://www.invicti.com/blog/web-security/missing-http-security-headers</a></p>
<p><b>New/ Repeat Observation</b></p>	<p>New Observation</p>
<p><b>References to evidences / Proof of Concept (POCs)</b></p>	 <p>The image shows a Snyk security report for the website <a href="https://devwater.mbmconline.in">https://devwater.mbmconline.in</a>. The report indicates a security posture that needs immediate attention, with a score of 'F'. A red box highlights the missing security headers: Strict-Transport-Security, Content-Security-Policy, X-Frame-Options, X-Content-Type-Options, Referrer-Policy, and Permissions-Policy. Below the report, a screenshot of Burp Suite Professional shows the HTTP response headers for the same URL, with a red box highlighting the missing headers: Cache-Control, Content-Type, Vary, Server, X-Response-Time, X-Forwarded-For, Date, and Connection.</p>

**7. Captcha Not Implemented**

<p><b>Vulnerability Title</b></p>	<p><b>Affected URLs/IP</b></p>
<p>Captcha Not Implemented</p>	<p><a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a></p>
<p><b>Detailed Observation</b></p>	<p>The application does not implement CAPTCHA protection on sensitive functionalities such as login, registration, password reset, or OTP requests. The absence of CAPTCHA increases the risk of automated bot attacks and brute-force attempts.</p>
<p><b>Vulnerability Reference (CWE/CVE)</b></p>	<p>CWE-307</p>

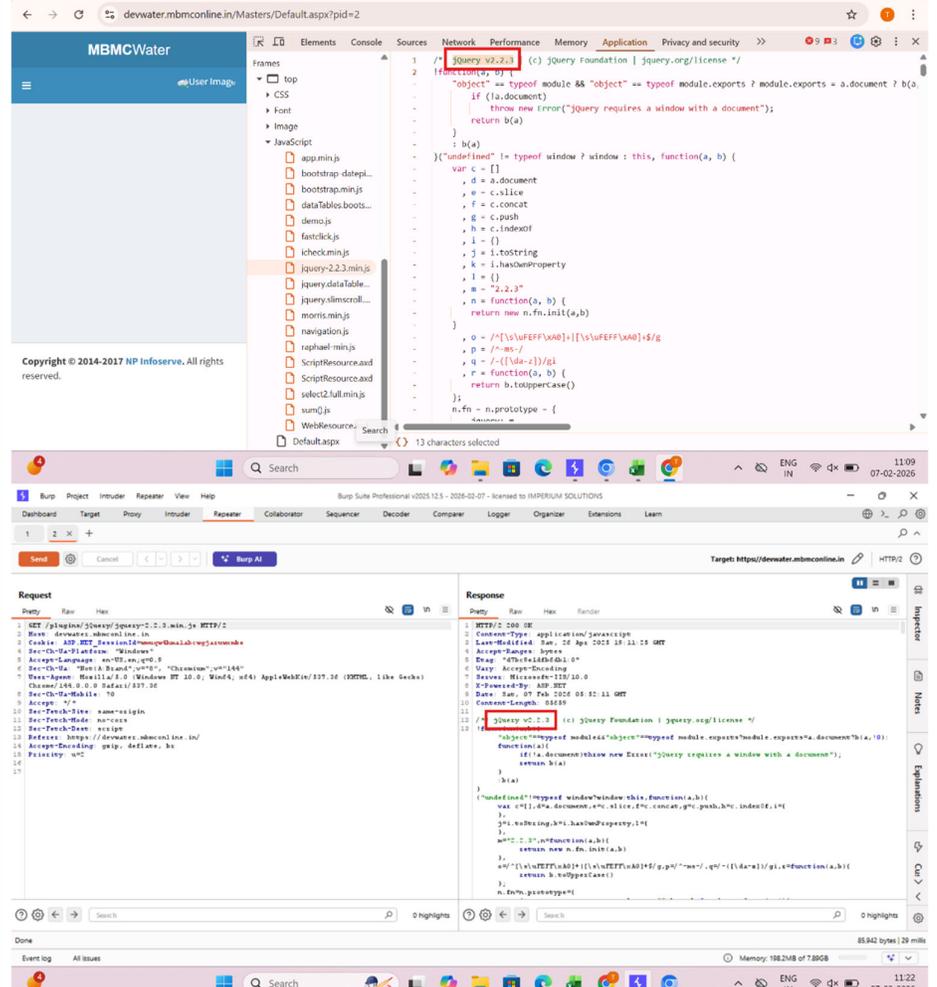
<b>Severity</b>	<b>Medium</b>
<b>Recommendation</b>	Implement CAPTCHA on authentication and sensitive transaction pages. Apply CAPTCHA after multiple failed login or OTP attempts. Use advanced bot detection mechanisms such as Google reCAPTCHA or equivalent solutions. Implement rate limiting along with CAPTCHA protection.
<b>Reference</b>	<a href="https://stackoverflow.com/questions/34016388/trying-to-implement-the-new-google-captcha">https://stackoverflow.com/questions/34016388/trying-to-implement-the-new-google-captcha</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	

## 8. Out of Date (jQuery Version)

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Out of date (jQuery Version)	<a href="http://dewater.mbmconline.in">dewater.mbmconline.in</a>
<b>Detailed Observation</b>	The web application is using jQuery version 2.2.3, which is an outdated JavaScript library. This version is affected by known security vulnerabilities, including issues related to Cross-Site Scripting (XSS), which have been addressed in later releases. Use of outdated client-side libraries may allow attackers to exploit known weaknesses in the application's front-end components.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-1104
<b>Severity</b>	<b>Medium</b>

<b>Recommendation</b>	Upgrade jQuery to the latest stable version (v3.7.1 or above). Remove unused or legacy jQuery functions. Regularly review third-party libraries for security updates. Implement dependency monitoring as part of the SDLC.
<b>Reference</b>	<a href="https://github.com/jquery/jquery/security/advisories">https://github.com/jquery/jquery/security/advisories</a>
<b>New/ Repeat Observation</b>	New Observation

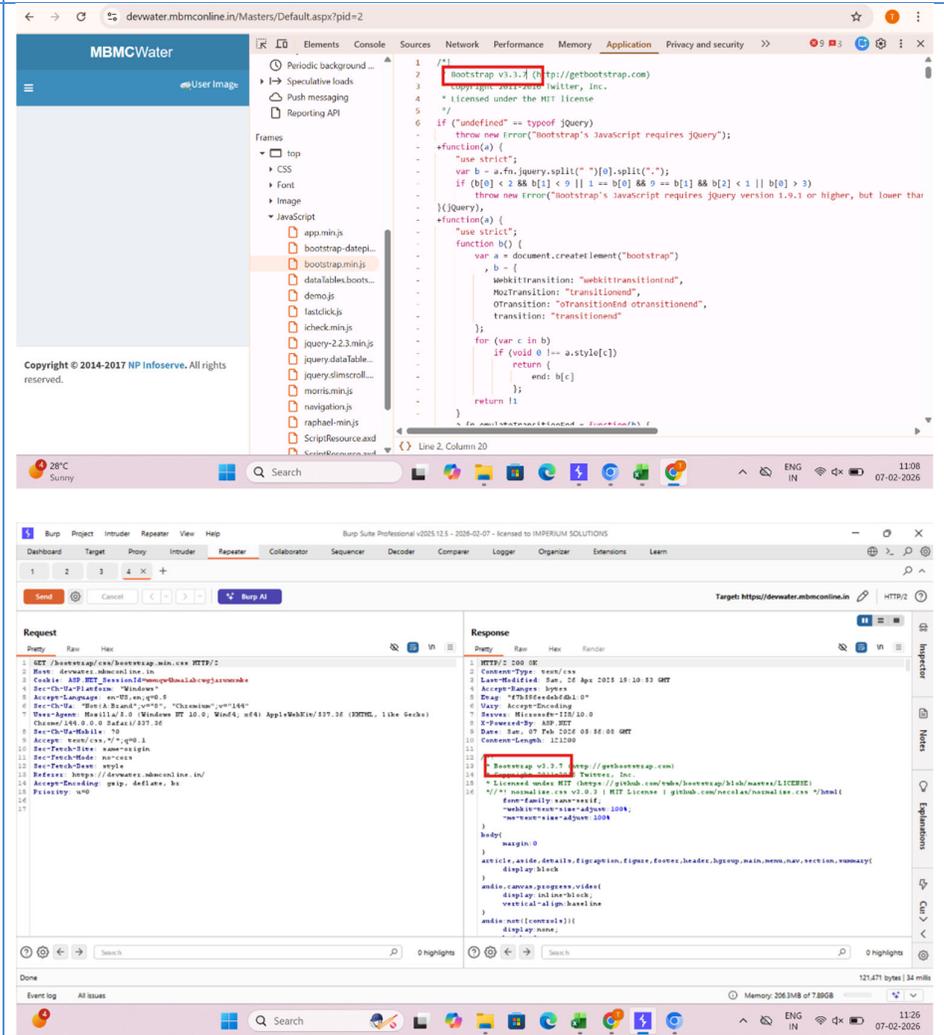
**References to evidences / Proof of Concept (POCs)**



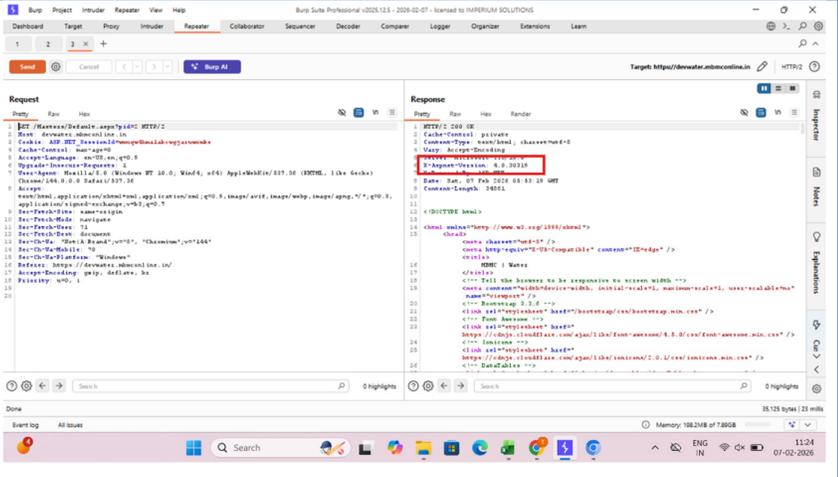
The screenshot displays a web browser window with the URL `deewater.mbmconline.in/Masters/Default.aspx?pid=2`. The browser's developer tools are open, showing the 'Sources' tab with the file `jquery-2.2.3.min.js` selected. The code for this file is visible, showing the jQuery library's initialization and various utility functions. Below the browser, the Burp Suite interface is shown, displaying a request and response for the same file. The response content is highlighted in red, showing the jQuery v2.2.3 min.js code. The Burp Suite interface also shows the 'Request' and 'Response' tabs, with the response content visible in the 'Response' tab.

### 9. Out of Date (Bootstrap Version)

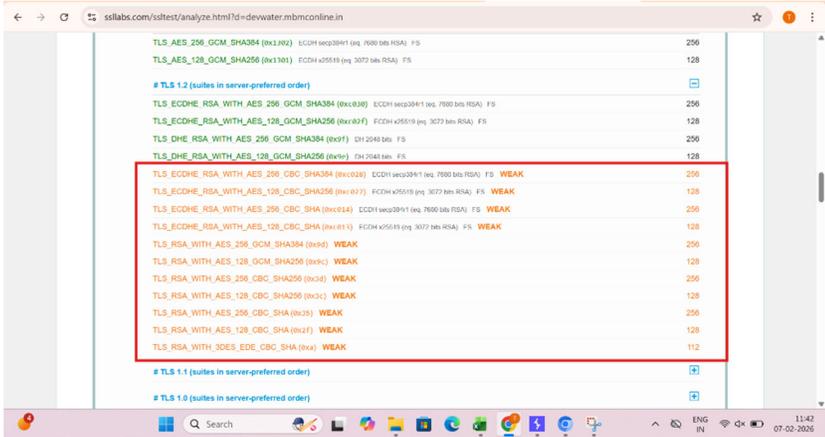
<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Out of date (Bootstrap Version)	<a href="http://deewater.mbmconline.in">deewater.mbmconline.in</a>

<p><b>Detailed Observation</b></p>	<p>The application is using an outdated version of the Bootstrap framework. Older Bootstrap versions contain known security vulnerabilities and bugs that have been publicly disclosed. Attackers may exploit these weaknesses to perform client-side attacks such as Cross-Site Scripting (XSS), UI manipulation, or denial of service.</p>
<p><b>Vulnerability Reference (CWE/CVE)</b></p>	<p>CWE-1104</p>
<p><b>Severity</b></p>	<p><b>Medium</b></p>
<p><b>Recommendation</b></p>	<p>Upgrade Bootstrap to the latest stable and supported version. Remove unused or deprecated Bootstrap components. Regularly monitor third-party libraries for security updates. Implement a dependency management and patching process.</p>
<p><b>Reference</b></p>	<p><a href="https://www.invicti.com/web-vulnerability-scanner/vulnerabilities/out-of-date-version-bootstrap">https://www.invicti.com/web-vulnerability-scanner/vulnerabilities/out-of-date-version-bootstrap</a></p>
<p><b>New/ Repeat Observation</b></p>	<p>New Observation</p>
<p><b>References to evidences / Proof of Concept (POCs)</b></p>	 <p>The image contains two screenshots. The top screenshot shows a web browser's developer tools with the 'Sources' tab open, displaying the Bootstrap v3.3.7 JavaScript file. A red box highlights the version number '3.3.7'. The bottom screenshot shows the Burp Suite interface with a request and response captured. The response body contains the Bootstrap v3.3.7 license information, with a red box highlighting the version number '3.3.7'.</p>

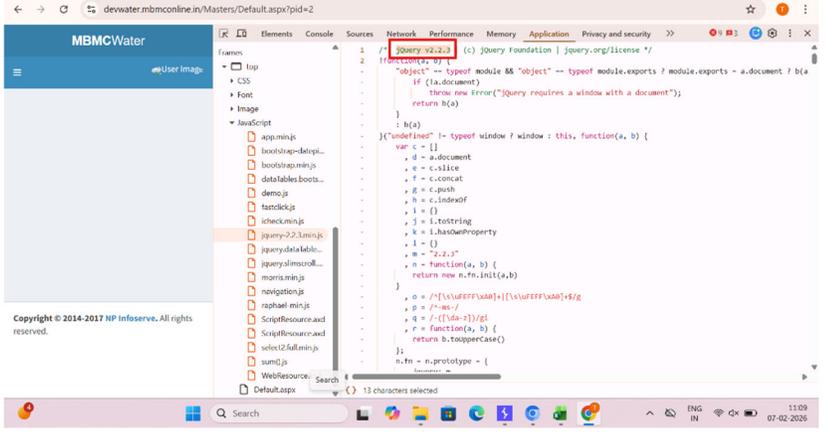
## 10. Out of Date (X-Asp.Net)

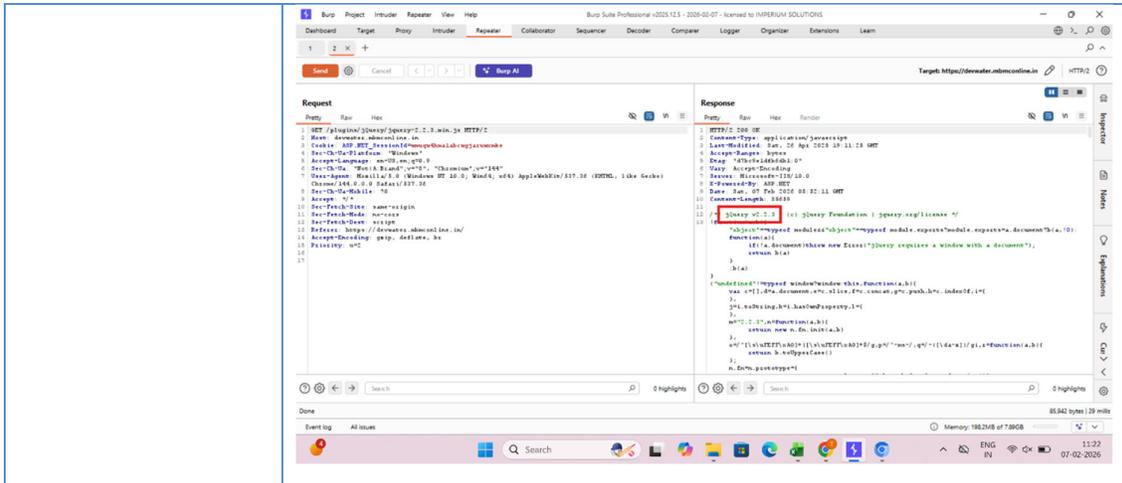
Vulnerability Title	Affected URLs/IP
Out of Date (X-Asp.Net)	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application discloses and uses an outdated version of the ASP.NET framework (X-AspNet-Version: 4.0.30319). Older ASP.NET versions contain publicly known security vulnerabilities that may be exploited by attackers to compromise the application.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-1104
<b>Severity</b>	Low
<b>Recommendation</b>	Upgrade the application to the latest supported ASP.NET / .NET Framework version. Apply the latest security patches from Microsoft. Disable version disclosure headers (X-AspNet-Version, X-Powered-By). Regularly monitor and update application frameworks and dependencies.
<b>Reference</b>	<a href="https://stackoverflow.com/questions/12561370/how-to-expire-a-link">https://stackoverflow.com/questions/12561370/how-to-expire-a-link</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	 <p>The screenshot shows a Burp Suite interface with a request and response view. The response header 'X-AspNet-Version: 4.0.30319' is highlighted in red, indicating the outdated ASP.NET version. The response also shows 'X-Powered-By: ASP.NET'.</p>

## 11. Weak Ciphers

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Weak Ciphers	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application server is configured to support multiple weak SSL/TLS cipher suites under TLS 1.2. These cipher suites rely on outdated cryptographic mechanisms such as CBC mode encryption and RSA key exchange, which are vulnerable to known cryptographic attacks. The presence of these weak cipher suites may allow an attacker to downgrade the encryption strength and potentially compromise the confidentiality and integrity of data transmitted between the client and the server.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-326
<b>Severity</b>	<b>Medium</b>
<b>Recommendation</b>	Disable all weak and legacy cipher suites. Remove CBC-based and RSA key exchange cipher suites. Allow only strong modern cipher suites such as: AES-GCM, CHACHA20-POLY1305. Enforce TLS 1.2 (secure ciphers only) and TLS 1.3. Regularly review SSL/TLS configurations Recommended Cipher Examples: TLS_AES_256_GCM_SHA384 TLS_CHACHA20_POLY1305_SHA256 TLS_AES_128_GCM_SHA256
<b>Reference</b>	<a href="https://owasp.org/Top10/A02_2021-Cryptographic_Failures/">https://owasp.org/Top10/A02_2021-Cryptographic Failures/</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	 <p>The screenshot shows a list of TLS cipher suites in a browser window. A red box highlights the following weak cipher suites:</p> <ul style="list-style-type: none"> <li>TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 (0xc030)</li> <li>TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc02f)</li> <li>TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 (0xc031)</li> <li>TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 (0xc030)</li> <li>TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 (0xc030)</li> <li>TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc02f)</li> <li>TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 (0xc031)</li> <li>TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 (0xc030)</li> <li>TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc031)</li> <li>TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc030)</li> <li>TLS_RSA_WITH_AES_256_GCM_SHA384 (0xc032)</li> <li>TLS_RSA_WITH_AES_128_GCM_SHA256 (0xc031)</li> <li>TLS_RSA_WITH_AES_256_CBC_SHA256 (0xc02c)</li> <li>TLS_RSA_WITH_AES_128_CBC_SHA256 (0xc02b)</li> <li>TLS_RSA_WITH_AES_256_GCM_SHA384 (0xc032)</li> <li>TLS_RSA_WITH_AES_128_GCM_SHA256 (0xc031)</li> <li>TLS_RSA_WITH_3DES_EDE_CBC_SHA (0xc02a)</li> </ul>

## 12. Version Disclosure (jQuery)

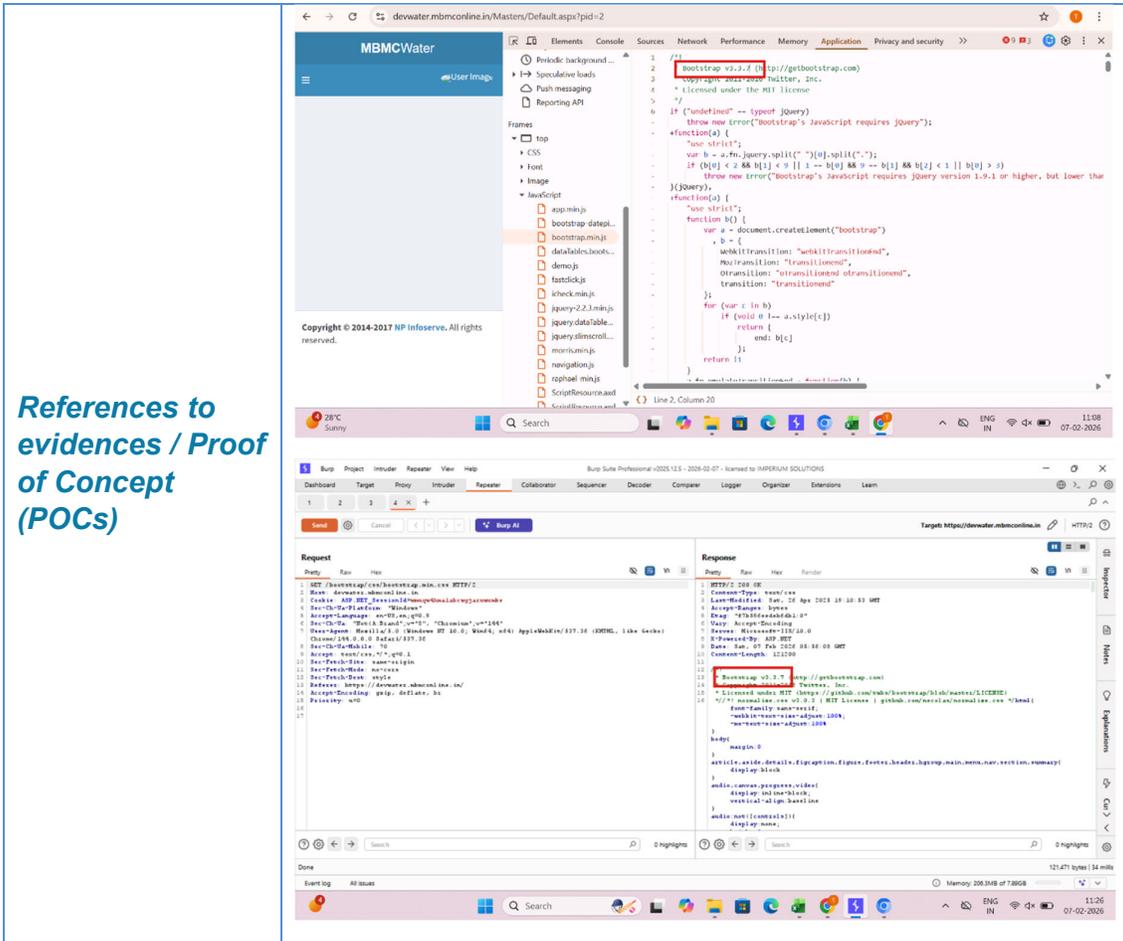
Vulnerability Title	Affected URLs/IP
Version Disclosure (jQuery)	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	it was observed that the application discloses the jQuery library version information within client-side JavaScript files or page source code. Exposing the exact jQuery version allows attackers to fingerprint the application technology stack and identify known vulnerabilities associated with that specific version, which may aid in targeted attacks.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-200
<b>Severity</b>	Low
<b>Recommendation</b>	Avoid exposing exact jQuery version details in production environments. Minify and bundle JavaScript files. Remove version comments and banners from client-side resources. Keep jQuery updated to the latest stable version.
<b>Reference</b>	<a href="https://owasp.org/www-community/attacks/Information_Disclosure">https://owasp.org/www-community/attacks/Information_Disclosure</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	 <p>The screenshot shows a browser window with the URL 'devwater.mbmconline.in/Masters/Default.aspx?pid=2'. The developer console is open, displaying the source code of a JavaScript file. A comment at the top of the file reads: '/*! jQuery v2.2.3   (c) jQuery Foundation   jquery.org/license */'. The version number '2.2.3' is highlighted with a red box. Below the comment, the jQuery library code is visible, including the 'jQuery.fn' namespace and the 'jQuery' function definition.</p>



### 13. Version Disclosure (Bootstrap)

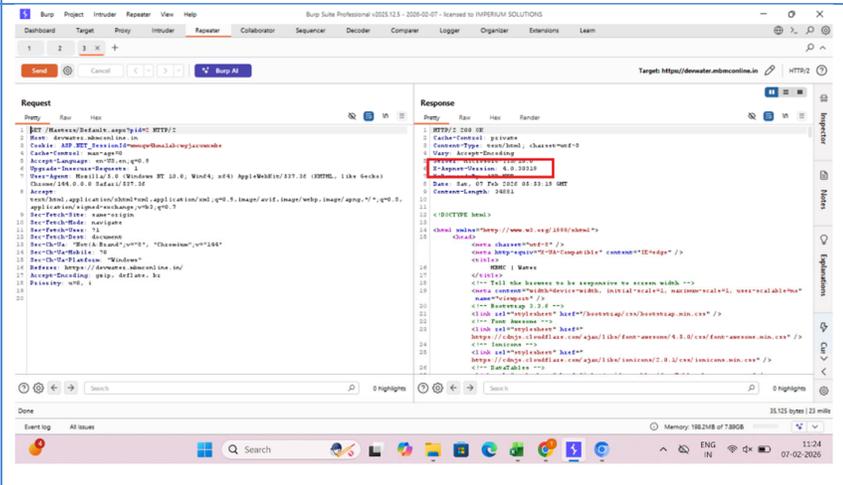
Vulnerability Title	Affected URLs/IP
Version Disclosure (Bootstrap)	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application discloses the Bootstrap framework version through client-side files or HTML source code. Version disclosure allows attackers to identify the exact library version in use, which can help them target known vulnerabilities associated with that version.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-200
<b>Severity</b>	Low
<b>Recommendation</b>	Remove or obfuscate version comments and metadata from HTML/JS files. Upgrade to the latest Bootstrap version. Avoid exposing framework versions in client-side responses.
<b>Reference</b>	<a href="https://owasp.org/www-community/attacks/Information_Disclosure">https://owasp.org/www-community/attacks/Information_Disclosure</a>
<b>New/ Repeat Observation</b>	New Observation

**References to evidences / Proof of Concept (POCs)**



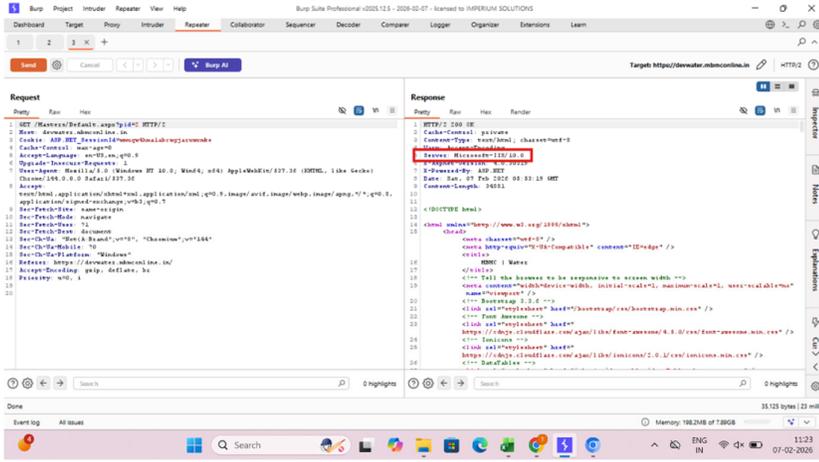
**14. Version Disclosure (X-Asp.Net)**

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Version Disclosure (X-Asp.Net)	<a href="http://deewater.mbmconline.in">deewater.mbmconline.in</a>
<b>Detailed Observation</b>	The application discloses the ASP.NET framework version through HTTP response headers. The X-AspNet-Version header reveals internal technology details, which can aid attackers during reconnaissance to identify known vulnerabilities associated with the disclosed version.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-200
<b>Severity</b>	<b>Low</b>

<b>Recommendation</b>	Remove or disable the X-AspNet-Version HTTP header. Remove the X-Powered-By header if enabled. Ensure server and framework configurations do not expose internal version details.
<b>Reference</b>	<a href="https://stackoverflow.com/questions/12561370/how-to-expire-a-link">https://stackoverflow.com/questions/12561370/how-to-expire-a-link</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	

### 15. Server Version Disclosure

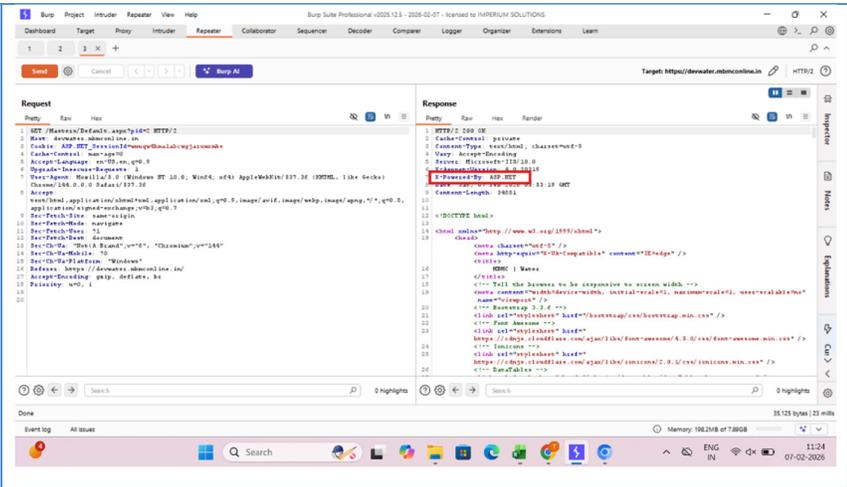
<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Server Version Disclosure	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application discloses the web server type and version in HTTP response headers. The Server header reveals internal infrastructure details (Microsoft-IIS/10.0), which can assist attackers during reconnaissance to identify server-specific vulnerabilities and tailor attacks accordingly.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-200
<b>Severity</b>	Low
<b>Recommendation</b>	Remove or obfuscate the Server HTTP response header. Apply latest security patches to the web server. Implement secure header configurations.

<b>Reference</b>	<a href="https://serverfault.com/questions/991045/remove-modify-iis-10-server-header-which-discloses-iis-version">https://serverfault.com/questions/991045/remove-modify-iis-10-server-header-which-discloses-iis-version</a>
<b>New/ Repeat Observation</b>	New Observation
<b>References to evidences / Proof of Concept (POCs)</b>	

## 16. Stack Disclosure

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Stack Disclosure	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application discloses backend technology details through the X-Powered-By HTTP response header. This header reveals that the application is built using ASP.NET, which provides attackers with useful information during reconnaissance to identify framework-specific vulnerabilities.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-200
<b>Severity</b>	Low
<b>Recommendation</b>	Disable the X-Powered-By HTTP response header. Avoid exposing internal technology details in HTTP responses. Apply secure server hardening and header management.
<b>Reference</b>	<a href="https://learn.microsoft.com/en-us/aspnet/core/security/headers">https://learn.microsoft.com/en-us/aspnet/core/security/headers</a>
<b>New/ Repeat Observation</b>	New Observation

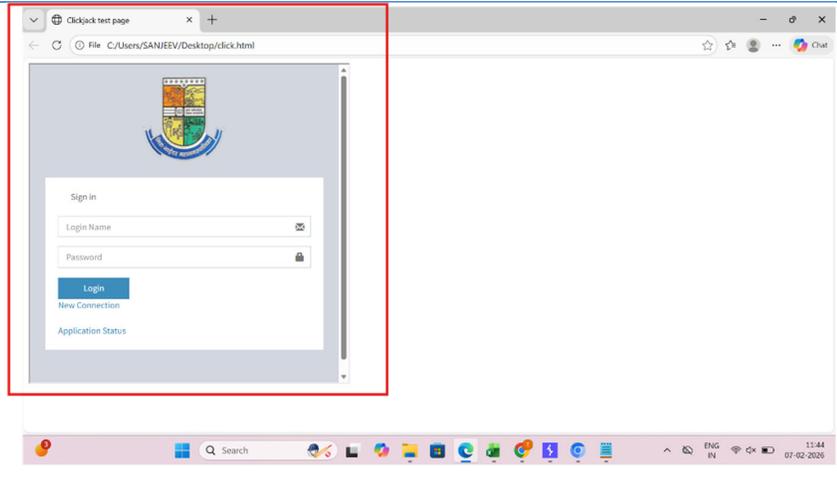
**References to evidences / Proof of Concept (POCs)**



**17. Clickjacking**

Vulnerability Title	Affected URLs/IP
Clickjacking	<a href="https://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application does not implement proper frame-busting protections, allowing it to be embedded within an iframe on a malicious website. This could enable clickjacking attacks, where users are tricked into clicking on hidden or disguised elements, potentially leading to unauthorized actions.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-1021
<b>Severity</b>	Low
<b>Recommendation</b>	Implement X-Frame-Options header (DENY or SAMEORIGIN). Configure Content-Security-Policy with frame-ancestors 'self'. Validate frame usage only for trusted domains if framing is required.
<b>Reference</b>	<a href="https://learn.microsoft.com/en-us/aspnet/core/security/headers">https://learn.microsoft.com/en-us/aspnet/core/security/headers</a>
<b>New/ Repeat Observation</b>	New Observation

**References to evidences / Proof of Concept (POCs)**



## 18. Cookies Not Marked Secure

<b>Vulnerability Title</b>	<b>Affected URLs/IP</b>
Cookies Not Marked Secure	<a href="http://devwater.mbmconline.in">devwater.mbmconline.in</a>
<b>Detailed Observation</b>	The application sets cookies without the Secure attribute. Cookies missing this flag may be transmitted over unencrypted HTTP connections, making them vulnerable to interception by attackers through man-in-the-middle (MITM) attacks.
<b>Vulnerability Reference (CWE/CVE)</b>	CWE-614
<b>Severity</b>	<b>Low</b>
<b>Recommendation</b>	Set the Secure flag on all cookies, especially session and authentication cookies. Ensure cookies are transmitted only over HTTPS. Additionally, enable HttpOnly and SameSite attributes for better protection.  Set-Cookie: sessionid=abc123; Secure; HttpOnly; SameSite=Strict
<b>Reference</b>	<a href="https://owasp.org/www-community/controls/SecureCookieAttribute">https://owasp.org/www-community/controls/SecureCookieAttribute</a>
<b>New/ Repeat Observation</b>	New Observation



