Going In Blind

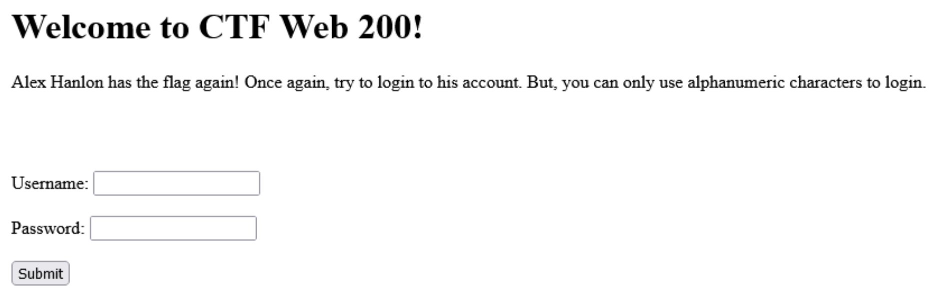
Points: 200
Topics: web

Description

Ok, the developers got smart, and figured out a way to prevent SQLi in the login page. Plus, they decided the flag shouldn't be hardcoded in the web application anymore. How could anyone get to it now?

http://chals.2022.squarectf.com:4103

Website



Welcome to CTF Web 200!

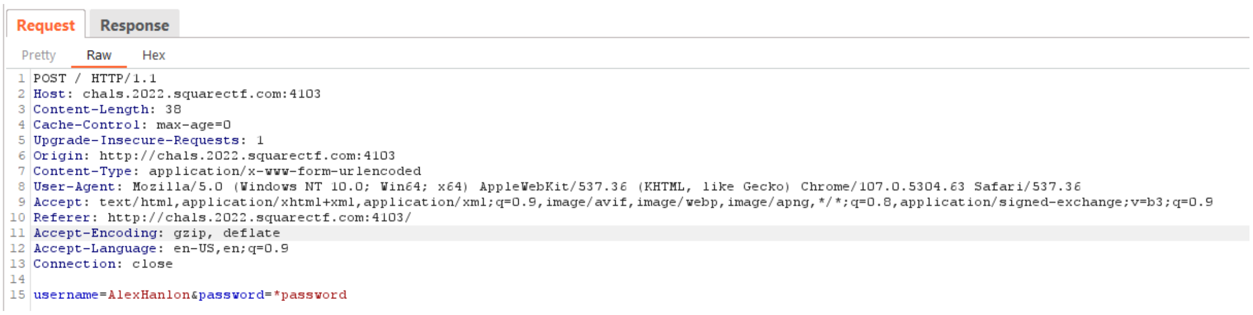
Alex Hanlon has the flag again! Once again, try to login to his account. But, you can only use alphanumeric characters to login.

Username:

Password:

When adding pointer as input:

Request



```
POST / HTTP/1.1
Host: chals.2022.squarectf.com:4103
Content-Length: 38
Cache-Control: max-age=0
Upgrade-Insecure-Requests: 1
Origin: http://chals.2022.squarectf.com:4103
Content-Type: application/x-www-form-urlencoded
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.5304.63 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9
Referer: http://chals.2022.squarectf.com:4103/
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9
Connection: close

username=AlexHanlon&password=*password
```

Response

```
HTTP/1.1 500
Content-Type: text/html;charset=UTF-8
Content-Language: en-US
Content-Length: 5158
Date: Sat, 19 Nov 2022 17:08:36 GMT
Connection: close

<html><body><h1>Whitelabel Error Page</h1><p>This application has no explicit mapping for /error, so you are seeing this as a fallback.</p><div
id='created'>Sat Nov 19 17:08:36 UTC 2022</div><div>There was an unexpected error (type=Internal Server Error, status=500).</div><div>password
must contain alphanumeric characters only</div><div style='white-space:pre-wrap;'>java.lang.RuntimeException: password must contain alphanumeric
characters only
    at com.example.goinginblind.MainController.postLogin(MainController.java:32)
    at jdk.internal.reflect.GeneratedMethodAccessor35.invoke(Unknown Source)
    at java.base/jdk.internal.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
    at java.base/java.lang.reflect.Method.invoke(Method.java:568)
    at org.springframework.web.method.support.InvocableHandlerMethod.doInvoke(InvocableHandlerMethod.java:205)
    at org.springframework.web.method.support.InvocableHandlerMethod.invokeForRequest(InvocableHandlerMethod.java:150)
    at
org.springframework.web.servlet.mvc.method.annotation.ServletInvocableHandlerMethod.invokeAndHandle(ServletInvocableHandlerMethod.java:117)
    at
org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.invokeHandlerMethod(RequestMappingHandlerAdapter.java
:895)
    at
org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter.handleInternal(RequestMappingHandlerAdapter.java:808)
    at org.springframework.web.servlet.mvc.method.AbstractHandlerMethodAdapter.handle(AbstractHandlerMethodAdapter.java:87)
    at org.springframework.web.servlet.DispatcherServlet.doDispatch(DispatcherServlet.java:1071)
    at org.springframework.web.servlet.DispatcherServlet.doService(DispatcherServlet.java:964)
    at org.springframework.web.servlet.FrameworkServlet.processRequest(FrameworkServlet.java:1006)
    at org.springframework.web.servlet.FrameworkServlet.doPost(FrameworkServlet.java:909)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:696)
    at org.springframework.web.servlet.FrameworkServlet.service(FrameworkServlet.java:883)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:779)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:227)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:162)
    at org.apache.tomcat.websocket.server.WsFilter.doFilter(WsFilter.java:53)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:189)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:162)
    at org.springframework.web.filter.RequestContextFilter.doFilterInternal(RequestContextFilter.java:100)
    at org.springframework.web.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:189)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:162)
    at org.springframework.web.filter.FormContentFilter.doFilterInternal(FormContentFilter.java:93)
    at org.springframework.web.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:189)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:162)
    at org.springframework.web.filter.CharacterEncodingFilter.doFilterInternal(CharacterEncodingFilter.java:201)
    at org.springframework.web.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:117)
    at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:189)
    at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:162)
    at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:197)
    at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:97)
    at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:541)
    at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:135)
    at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:92)
    at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:78)
    at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:360)
    at org.apache.coyote.http11.Http11Processor.service(Http11Processor.java:399)
    at org.apache.coyote.AbstractProcessorLight.process(AbstractProcessorLight.java:65)
    at org.apache.coyote.AbstractProtocol$ConnectionHandler.process(AbstractProtocol.java:893)
    at org.apache.tomcat.util.net.NioEndpoint$SocketProcessor.doRun(NioEndpoint.java:1789)
    at org.apache.tomcat.util.net.SocketProcessorBase.run(SocketProcessorBase.java:49)
    at org.apache.tomcat.util.threads.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1191)
    at org.apache.tomcat.util.threads.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:659)
    at org.apache.tomcat.util.threads.TaskThread$WrappingRunnable.run(TaskThread.java:61)
    at java.base/java.lang.Thread.run(Thread.java:833)
</div></body></html>
```

This means that Java manages the HTTP request present in the page and that SQL injections are not possible for this method.

Post Challenge Edit

When looking at write-ups after the challenge it came to my attention that I was in the right path but needed to generate a GET request with an SQL injection as parameter to get the answer.