

## Client-side authentication

Relevant code is on lines 26 and 49, where there's a hardcoded MD5 hash. To handle it:

1. Manipulate the backend response.
2. Use CrackStation to get the hash.

```
23 func (self XSS)SetRouter(r *httprouter.Router){
24     mw := middleware.New()
25     r.GET("/csa", mw.LoggingMiddleware(mw.CapturePanic(mw.AuthCheck(csaHandler))))
26     r.POST("/verify", mw.LoggingMiddleware(mw.CapturePanic(mw.AuthCheck(verifyHandler)))) 1
27 }
28
29 type JsonRes struct{
30     Code int `json:"code"`
31 }
32
33 func csaHandler(w http.ResponseWriter, r *http.Request, _ httprouter.Params){
34     s := session.New()
35     uid := s.GetSession(r, "id")
36
37     data := make(map[string]interface{})
38     data["title"] = "Client Side Authentication"
39
40     id := fmt.Sprintf("<script> var uid=%s </script>", uid)
41
42     data["js"] = util.ToHTML(id)
43
44     util.SafeRender(w,r, "template.csa", data)
45 }
46
47 func verifyHandler(w http.ResponseWriter, r *http.Request, _ httprouter.Params){
48     if r.Method == "POST"{
49         *  sotp := "a587cd6bf1e49d2c3928d1f8b86f248b" 2
50         otp := r.FormValue("otp")
51         res := JsonRes{}
52         if sotp != Md5Sum(otp){
53             res.Code = 0
54         }else{
55             res.Code = 1
56         }
57         util.RenderAsJson(w, res)
58     }
59 }
```

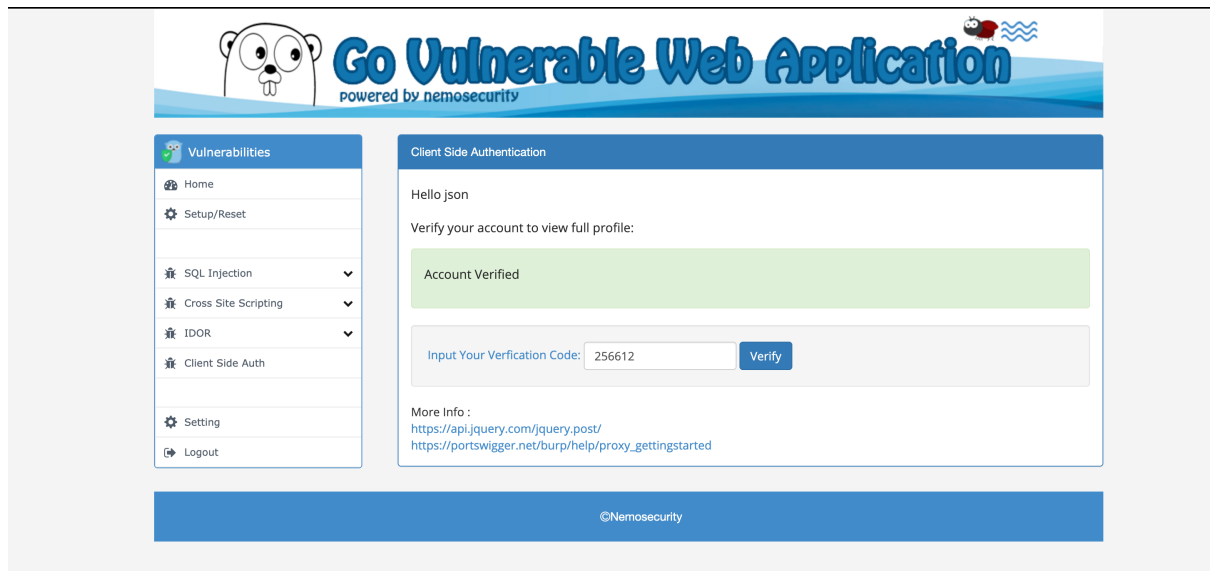
## Option A

Consider the modified reply, and change the number 0 to 1.

```
Request
Pretty Raw Hex
1 POST /verify HTTP/1.1
2 Host: localhost:8888
3 Content-Length: 10
4 sec-ch-ua-platform: "macOS"
5 Accept-Language: en-GB,en;q=0.9
6 sec-ch-ua: "Not:A-Brand";v="24", "Chromium";v="134"
7 sec-ch-ua-mobile: ?0
8 X-Requested-With: XMLHttpRequest
9 User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36
  (KHTML, like Gecko) Chrome/134.0.0.0 Safari/537.36
10 Accept: */*
11 Content-Type: application/x-www-form-urlencoded; charset=UTF-8
12 Origin: http://localhost:8888
13 Sec-Fetch-Site: same-origin
14 Sec-Fetch-Mode: cors
15 Sec-Fetch-Dest: empty
16 Referer: http://localhost:8888/csa
17 Accept-Encoding: gzip, deflate, br
18 Cookie: govwa=
  MTc0MjYzNDI1NHxEWDhFQVFMX2dBQUJFQUVRQUFCZV80QUFBd1p6ZEhKcGJtY01Cd0FGZFc1aGJXVUdjM1J5Y
  Vc1bkRBY0FCWZ6WlhJeEJuTjBjbWx1Wnd3RUFBSnBaQVp6ZEhKcGJtY01Bd0FTWdaemRISnB1bWNNRHdBTL
  oyOTJkMkZmYzJWemMybHZiZ1JpYjI5c0FnSUFBU09fLm956H_yxL1Pyin8LXzQXj0S6z1wu1hKxzFhWD8FE
  I; Uid=2; Level=Low
19 Connection: keep-alive
20
21 otp=123456

Edited response
Pretty Raw Hex Render
1 HTTP/1.1 200 OK
2 Access-Control-Allow-Credentials: true
3 Access-Control-Allow-Methods: POST, GET
4 Access-Control-Allow-Origin: *
5 Content-Type: application/json
6 Date: Sat, 22 Mar 2025 09:10:03 GMT
7 Content-Length: 12
8
9 [
10   {
11     "code":1
12   }
13 ]
```

Account will subsequent be verified based on the edited response.



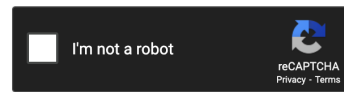
## Option B

Visit Crack station and input the hash. This underscores the need for salting and hashing, as pre-computed tables can reveal results instantly.

## Free Password Hash Cracker

Enter up to 20 non-salted hashes, one per line:

a587cd6bf1e49d2c3928d1f8b86f248b



Crack Hashes

**Supports:** LM, NTLM, md2, md4, md5, md5(md5\_hex), md5-half, sha1, sha224, sha256, sha384, sha512, ripeMD160, whirlpool, MySQL 4.1+ (sha1 sha1\_bin), QubesV3.1BackupDefaults

Hash	Type	Result
a587cd6bf1e49d2c3928d1f8b86f248b	md5	256612

**Color Codes:** Green Exact match, Yellow Partial match, Red Not found.

## Download CrackStation's Wordlist

### How CrackStation Works

CrackStation uses massive pre-computed lookup tables to crack password hashes. These tables store a mapping between the hash of a password, and the correct password for that hash. The hash values are indexed so that it is possible to quickly search the database for a given hash. If the hash is present in the database, the password can be recovered in a fraction of a second. This only works for "unsalted" hashes. For information on password hashing systems that are not vulnerable to pre-computed lookup tables, see our [hashing security page](#).

Crackstation's lookup tables were created by extracting every word from the Wikipedia databases and adding with every password list we could find. We also applied intelligent word mangling (brute force hybrid) to our wordlists to make them much more effective. For MD5 and SHA1 hashes, we have a 190GB, 15-billion-entry lookup table, and for other hashes, we have a 19GB 1.5-billion-entry lookup table.

You can download CrackStation's dictionaries [here](#), and the lookup table implementation (PHP and C) is available [here](#).