

**Dear Sir/Ma'am,**

I discovered multiple flaws in your password policy after attempting to break all of the stolen hashes, and this summary is all of my findings and recommendations for improving your password policy.

The main cryptographic hash algorithms for data security and authentication are Secure Hash Algorithm (SHA) and Message Digest (MD5).

**MD5**, a weaker hash technique prone to collisions, was used in all of the passwords that were hacked.

Using md5online.org and the rockyou.txt wordlist via terminal and online browsers, it was fairly simple to break.

To generate hashes for the password, I recommend using a highly strong password encryption technique based on SHA.

After breaking the passwords, we get the following information about the organization:

- The password must be at least six characters long.
- There are no precise requirements for creating a password. To construct a password, users can use any combination of words and characters.

You may add a few extra features to your password policy. My suggestions are as follows:

- In your password, avoid using popular phrases and character combinations.
- Longer passwords are preferable; 8 characters is a good start.
- Passwords should not be reused.
- In your password, include unusual characters, capital and small letters, and digits.
- Allow users to create passwords without using their username, real name, date of birth, or other sensitive information.
- To keep their passwords safe, teach your users to follow these principles.

Thanking you !

Rahul Kumar

B.tech Civil Engineering

## Security Algorithms used:

experthead:e10adc3949ba59abbe56e057f20f883e – MD5  
interestec:25f9e794323b453885f5181f1b624d0b – MD5  
ortspoon:d8578edf8458ce06fbc5bb76a58c5ca4 –MD5  
reallychel:5f4dcc3b5aa765d61d8327deb882cf99 –MD5  
simmson56:96e79218965eb72c92a549dd5a330112 – MD5  
bookma:25d55ad283aa400af464c76d713c07ad – MD5  
popularkiya7:e99a18c428cb38d5f260853678922e03 – MD5  
eatingcake1994:fcea920f7412b5da7be0cf42b8c93759 – MD5  
heroanhart:7c6a180b36896a0a8c02787eeafb0e4c – MD5  
edi\_tesla89:6c569aabbf7775ef8fc570e228c16b98 – MD5  
liveltekah:3f230640b78d7e71ac5514e57935eb69 – MD5  
blikimore:917eb5e9d6d6bca820922a0c6f7cc28b – MD5  
johnwick007:f6a0cb102c62879d397b12b62c092c06 – MD5  
flamesbria2001:9b3b269ad0a208090309f091b3aba9db – MD5  
oranolio:1Fxu7L83m1qDUM84fvsrQN3iwEjaxeRLEy - MD5  
spuffyffet:1f5c5683982d7c3814d4d9e6d749b21e - MD5  
moodie:8d763385e0476ae208f21bc63956f748 - MD5  
nabox:defebde7b6ab6f24d5824682a16c3ae4 - MD5  
bandalls:bdda5f03128bcbdfa78d8934529048cf - MD5

## Cracked Passwords:

| MD5 Hash                           | Status  | Result         |
|------------------------------------|---------|----------------|
| e10adc3949ba59abbe56e057f20f883e   | Cracked | 123456         |
| 25f9e794323b453885f5181f1b624d0b   | Cracked | 123456789      |
| d8578edf8458ce06fbc5bb76a58c5ca4   | Cracked | qwerty         |
| 5f4dcc3b5aa765d61d8327deb882cf99   | Cracked | password       |
| 96e79218965eb72c92a549dd5a330112   | Cracked | 111111         |
| 25d55ad283aa400af464c76d713c07ad   | Cracked | 12345678       |
| e99a18c428cb38d5f260853678922e03   | Cracked | abc123         |
| fcea920f7412b5da7be0cf42b8c93759   | Cracked | 1234567        |
| 7c6a180b36896a0a8c02787eeafb0e4c   | Cracked | password1      |
| 6c569aabbf7775ef8fc570e228c16b98   | Cracked | password!      |
| 3f230640b78d7e71ac5514e57935eb69   | Cracked | qazxsw         |
| 917eb5e9d6d6bca820922a0c6f7cc28b   | Cracked | Pa\$\$word1    |
| f6a0cb102c62879d397b12b62c092c06   | Cracked | bluered        |
| 9b3b269ad0a208090309f091b3aba9db   | Cracked | Flamesbria2001 |
| 1Fxu7L83m1qDUM84fvsrQN3iwEjaxeRLEy | Cracked | Spuffyffet12   |
| 8d763385e0476ae208f21bc63956f748   | Cracked | moodie00       |
| defebde7b6ab6f24d5824682a16c3ae4   | Cracked | nAbox!1        |
| bdda5f03128bcbdfa78d8934529048cf   | Cracked | Banda11s       |

