Dear Sir/Madam,

After cracking the leaked hashes or passwords given in the Virtual Internship Program, following the process that was stated using the password cracking tool Hashcat I found several vulnerabilities in your password policy which I stated in this email and also provided the suggestions for improving your password policies.

As we know Secure Hash Algorithm (SHA) and Message Digest (MD5) are the two standard cryptographic hash functions to provide data security for authentication.

All the passwords that were contained in the passwords dump file were using MD5 hashing algorithm which is weaker between the two and can be easily cracked using the password cracking tool Hashcat and the rockyou.txt wordlist file which contains the example passwords in the original form using terminal and basic Linux terminal coding in Kali Linux. While doing the cracking process, I found that the company has a very weak password policy and so want to highlight these points about the company’s password policy.

* Password minimum length is set to 6 characters long.
* There is no specific requirement for password creation. Users can use any type of combinations of either numbers or alphabets or both.

There are lots of new things which the organization can include to improve their password policy. Here are my recommendations:

* Avoid using common word or characters in your password.
* The minimum password length should be 8 which must be taken as the starting point.
* Don’t reuse your password which I have found in the given password dump file as it is a big vulnerability.
* The combination of password should include special characters, numbers, capital letters as well as small letters together to form a stronger password.
* Don’t let the users use their personal data as password such as username, first name, last name, date of birth, phone number, etc.
* Also, provide adequate measures and information in your website which the user must follow while creating their password.

Thanking You,

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