Task 6: Create a Strong Password and Evaluate Its Strength

1. Introduction & Objective

The objective of this task was to understand what makes a password strong and evaluate its strength using an online password strength checker (NordPass). By testing multiple passwords with varying complexity, we aimed to analyze their resistance against brute-force and dictionary attacks, and learn best practices for creating secure passwords.

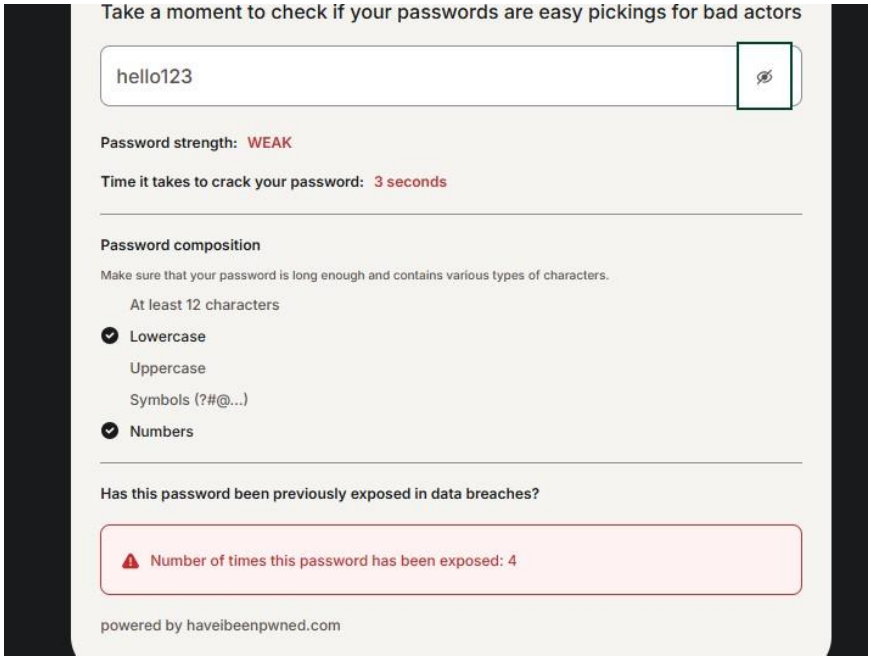
2. Methodology

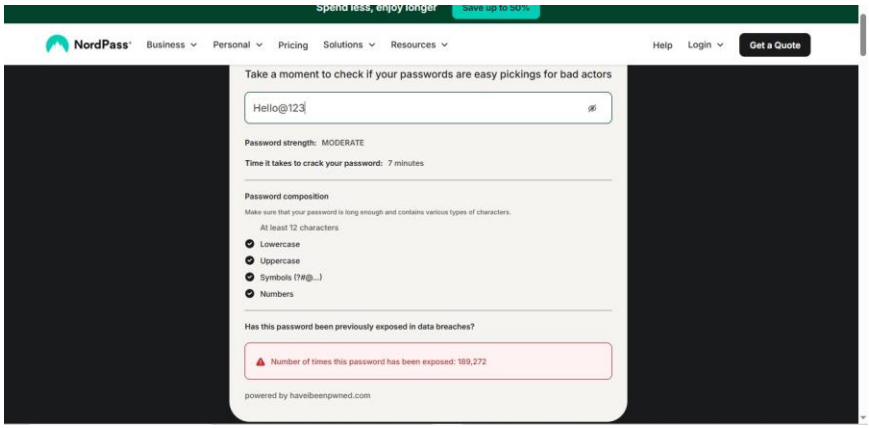
1. Created multiple passwords with different combinations of uppercase letters, lowercase letters, numbers, and special characters.
2. Tested each password using NordPass password checker.
3. Recorded password strength, estimated time to crack, and data breach status.
4. Analyzed the results to identify patterns and understand the impact of complexity on password strength.

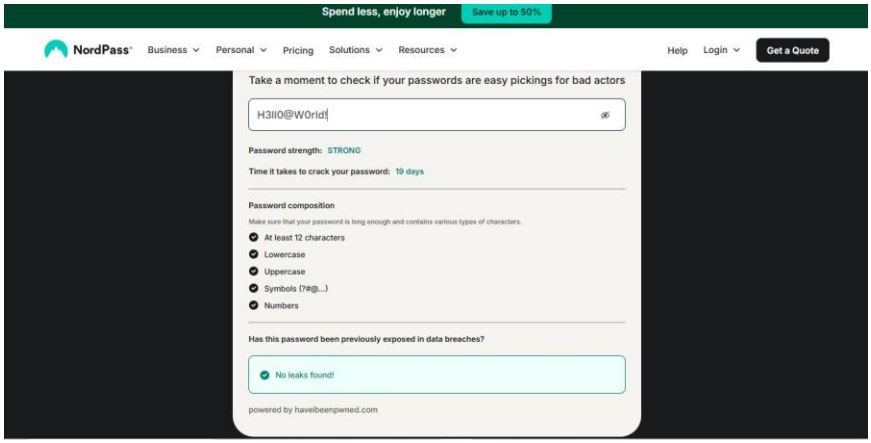
3. Results

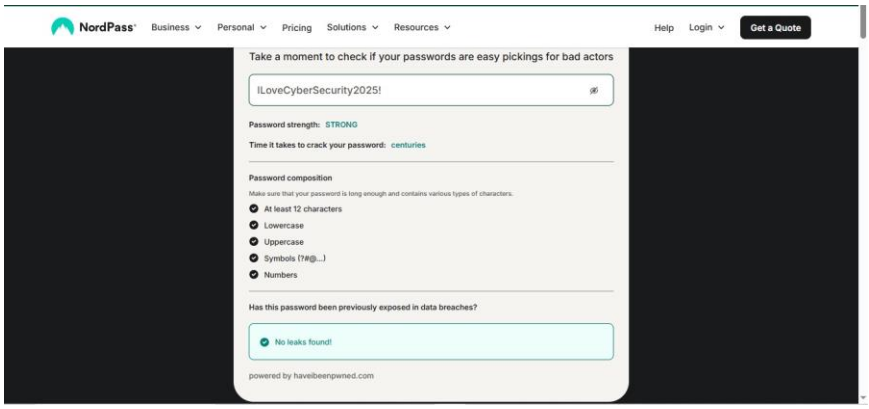
Password	Strength	Time to Crack	Composition	Data Breach Status
hello123	WEAK	3 seconds	Lowercase, Numbers	Exposed 4 times
Hello@123	MODERATE	7 minutes	Lowercase, Uppercase, Symbols, Numbers	Exposed 189,272 times
H3llO@W0rld	STRONG	19 days	Lowercase, Uppercase, Symbols, Numbers	No leaks found
#G%a9Qw7*Lz	STRONG	4 months	Lowercase, Uppercase, Symbols, Numbers	No leaks found
ILoveCyberSecurity2025!	STRONG	Centuries	Lowercase, Uppercase, Symbols, Numbers	No leaks found

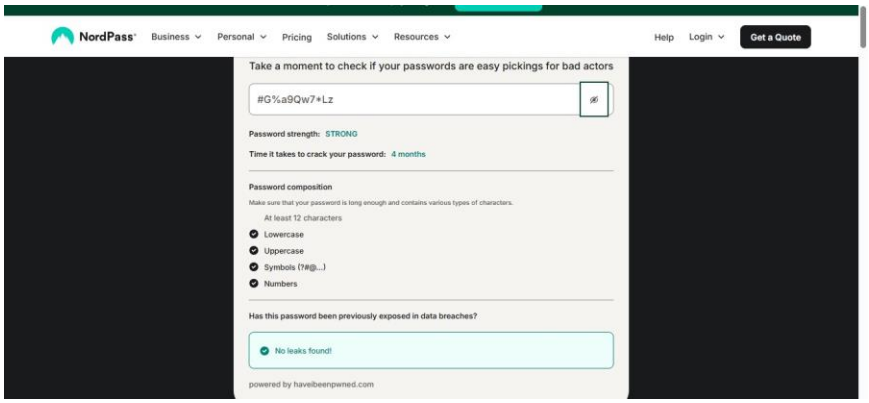
4. Screenshots











5. Best Practices for Strong Passwords

- Use at least 12–16 characters.
- Include uppercase, lowercase, numbers, and special characters.
- Avoid dictionary words or common phrases.
- Never reuse passwords across accounts.
- Use passphrases for better memorability and strength.
- Consider using a password manager.
- Enable Multi-Factor Authentication (MFA) wherever possible.

6. Conclusion

This exercise demonstrated that password complexity and length significantly impact security. Simple passwords are easily cracked within seconds or minutes, while strong passwords can take months or centuries to break. Adopting strong password creation habits and using tools like password managers can greatly enhance overall account security.