Password Security Evaluation Report

➔Objective

This report demonstrates how password complexity affects strength and resistance to attacks. It includes evaluation of multiple passwords using **passwordmeter.com**, analysis of feedback, and best practices for strong passwords.

➔ Passwords Evaluated

Password	Score	Complexity	Length	Notes
`aj61Ba`	47%	Good	6	Short; lacks symbol; repeated chars
`Hsd57^@a__27aG`	100%	Very Strong	14	High complexity; great character mix
`sty6`	18%	Very Weak	4	Too short; lacks upper/symbols

➔Evaluation Results

1. `aj61Ba` (Score: 47%)

- Mix of uppercase, lowercase, numbers
- No symbol, length < 8
- Repeat and consecutive character penalty
- Medium strength, susceptible to attacks

2. `Hsd57^@a__27aG` (Score: 100%)

- Length: 14 characters
- Contains uppercase, lowercase, numbers, multiple symbols
- Middle numbers/symbols improve score
- Slight deductions due to repeat/consecutive characters
- Very strong — hard to brute-force or guess

3. `sty6` (Score: 18%)

- Too short (4 chars)
- Lacks uppercase and symbols
- Weak entropy
- Easily brute-forced or guessed

→Summary of Best Practices

1. Use at least **12-14 characters**
2. Include **uppercase, lowercase, numbers, and symbols**
3. Avoid **dictionary words**, **common patterns**, and **repeating characters**
4. Never reuse passwords
5. Use a **password manager** to store strong, unique passwords
6. Update passwords regularly for sensitive accounts

→Common Password Attacks

Attack Type	Description
Brute Force	Attempts every combination — longer passwords = stronger defense
Dictionary Attack	Uses common words or leaked passwords
Credential Stuffing	Uses stolen credentials from data breaches
Phishing	Tricks users into entering credentials via fake websites
Keylogging	Captures keystrokes to steal passwords

→ Complexity vs. Security

- **Weak passwords** (e.g., `sty6`) can be cracked in seconds.
- **Moderate passwords** (e.g., `aj61Ba`) may survive simple attacks but fail against brute force.
- **Strong passwords** (e.g., `Hsd57^@a__27aG`) have high entropy and resist even advanced cracking methods.