Create password & analyse its strength
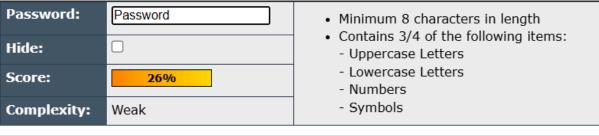
1. Very weak Password

Password:	pass
Hide:	☐
Score:	3%
Complexity:	Very Weak

- Minimum 8 characters in length
- Contains 3/4 of the following items:
  - Uppercase Letters
  - Lowercase Letters
  - Numbers
  - Symbols

Additions		Type	Rate	Count	Bonus
❌	Number of Characters	Flat	+(n*4)	4	+ 16
❌	Uppercase Letters	Cond/Incr	+((len-n)*2)	0	0
✴	Lowercase Letters	Cond/Incr	+((len-n)*2)	4	0
❌	Numbers	Cond	+(n*4)	0	0
❌	Symbols	Flat	+(n*6)	0	0
❌	Middle Numbers or Symbols	Flat	+(n*2)	0	0
❌	Requirements	Flat	+(n*2)	1	0
Deductions					
⚠	Letters Only	Flat	-n	4	– 4
✅	Numbers Only	Flat	-n	0	0
⚠	Repeat Characters (Case Insensitive)	Comp	-	2	– 3
✅	Consecutive Uppercase Letters	Flat	-(n*2)	0	0
⚠	Consecutive Lowercase Letters	Flat	-(n*2)	3	– 6
✅	Consecutive Numbers	Flat	-(n*2)	0	0
✅	Sequential Letters (3+)	Flat	-(n*3)	0	0
✅	Sequential Numbers (3+)	Flat	-(n*3)	0	0
✅	Sequential Symbols (3+)	Flat	-(n*3)	0	0

Here,the password only has lowercase letters and its length is less than 8.
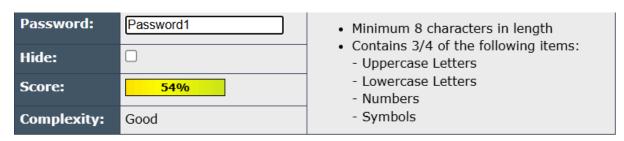
Hence,it is very weak.

2. Weak Passwords

Password:	Password
Hide:	☐
Score:	26%
Complexity:	Weak

- Minimum 8 characters in length
- Contains 3/4 of the following items:
  - Uppercase Letters
  - Lowercase Letters
  - Numbers
  - Symbols

Additions	Type	Rate	Count	Bonus
✅ Number of Characters	Flat	$+(n*4)$	8	+ 32
✅ Uppercase Letters	Cond/Incr	$+((len-n)*2)$	1	+ 14
✳ Lowercase Letters	Cond/Incr	$+((len-n)*2)$	7	+ 2
❌ Numbers	Cond	$+(n*4)$	0	0
❌ Symbols	Flat	$+(n*6)$	0	0
❌ Middle Numbers or Symbols	Flat	$+(n*2)$	0	0
❌ Requirements	Flat	$+(n*2)$	3	0
Deductions				
⚠ Letters Only	Flat	$-n$	8	− 8
✅ Numbers Only	Flat	$-n$	0	0
⚠ Repeat Characters (Case Insensitive)	Comp	-	2	− 2
✅ Consecutive Uppercase Letters	Flat	$-(n*2)$	0	0
⚠ Consecutive Lowercase Letters	Flat	$-(n*2)$	6	− 12
✅ Consecutive Numbers	Flat	$-(n*2)$	0	0
✅ Sequential Letters (3+)	Flat	$-(n*3)$	0	0
✅ Sequential Numbers (3+)	Flat	$-(n*3)$	0	0
✅ Sequential Symbols (3+)	Flat	$-(n*3)$	0	0

Here, the password contains uppercase and lowercase letters. It has a length of 8.

Hence, this password is weak.

3. Good Passwords

Password:	Password1
Hide:	☐
Score:	54%
Complexity:	Good

- Minimum 8 characters in length
- Contains 3/4 of the following items:
  - Uppercase Letters
  - Lowercase Letters
  - Numbers
  - Symbols

Additions		Type	Rate	Count	Bonus
⊛	Number of Characters	Flat	+(n*4)	9	+ 36
✓	Uppercase Letters	Cond/Incr	+((len-n)*2)	1	+ 16
⊛	Lowercase Letters	Cond/Incr	+((len-n)*2)	7	+ 4
✓	Numbers	Cond	+(n*4)	1	+ 4
✕	Symbols	Flat	+(n*6)	0	0
✕	Middle Numbers or Symbols	Flat	+(n*2)	0	0
✓	Requirements	Flat	+(n*2)	4	+ 8
Deductions					
✓	Letters Only	Flat	-n	0	0
✓	Numbers Only	Flat	-n	0	0
⚠	Repeat Characters (Case Insensitive)	Comp	-	2	– 2
✓	Consecutive Uppercase Letters	Flat	-(n*2)	0	0
⚠	Consecutive Lowercase Letters	Flat	-(n*2)	6	– 12
✓	Consecutive Numbers	Flat	-(n*2)	0	0
✓	Sequential Letters (3+)	Flat	-(n*3)	0	0
✓	Sequential Numbers (3+)	Flat	-(n*3)	0	0
✓	Sequential Symbols (3+)	Flat	-(n*3)	0	0

Here,the password has uppercase,lowercase and a number. It also has a length of 9.
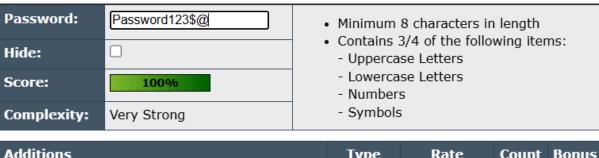
Hence, it is a good password.

4. Strong Passwords

Password:	Password1&				
Hide:	☐				
Score:	72%				
Complexity:	Strong				

- Minimum 8 characters in length
- Contains 3/4 of the following items:
  - Uppercase Letters
  - Lowercase Letters
  - Numbers
  - Symbols

Additions	Type	Rate	Count	Bonus
✱ Number of Characters	Flat	+(n*4)	10	+ 40
✅ Uppercase Letters	Cond/Incr	+((len-n)*2)	1	+ 18
✱ Lowercase Letters	Cond/Incr	+((len-n)*2)	7	+ 6
✅ Numbers	Cond	+(n*4)	1	+ 4
✅ Symbols	Flat	+(n*6)	1	+ 6
✅ Middle Numbers or Symbols	Flat	+(n*2)	1	+ 2
✱ Requirements	Flat	+(n*2)	5	+ 10
Deductions				
✅ Letters Only	Flat	-n	0	0
✅ Numbers Only	Flat	-n	0	0
⚠ Repeat Characters (Case Insensitive)	Comp	-	2	- 2
✅ Consecutive Uppercase Letters	Flat	-(n*2)	0	0
⚠ Consecutive Lowercase Letters	Flat	-(n*2)	6	- 12
✅ Consecutive Numbers	Flat	-(n*2)	0	0
✅ Sequential Letters (3+)	Flat	-(n*3)	0	0
✅ Sequential Numbers (3+)	Flat	-(n*3)	0	0
✅ Sequential Symbols (3+)	Flat	-(n*3)	0	0

Here,the password has uppercase,lowercase,number and special characters. It also exceeds the minimum character length of 8

5. Very Strong Passwords

Password:	Password123$@	
Hide:	☐	
Score:	100%	
Complexity:	Very Strong	

- Minimum 8 characters in length
- Contains 3/4 of the following items:
  - Uppercase Letters
  - Lowercase Letters
  - Numbers
  - Symbols

Additions	Type	Rate	Count	Bonus
✱ Number of Characters	Flat	+(n*4)	13	+ 52
✓ Uppercase Letters	Cond/Incr	+((len-n)*2)	1	+ 24
✱ Lowercase Letters	Cond/Incr	+((len-n)*2)	7	+ 12
✱ Numbers	Cond	+(n*4)	3	+ 12
✱ Symbols	Flat	+(n*6)	2	+ 12
✱ Middle Numbers or Symbols	Flat	+(n*2)	4	+ 8
✱ Requirements	Flat	+(n*2)	5	+ 10
Deductions				
✓ Letters Only	Flat	-n	0	0
✓ Numbers Only	Flat	-n	0	0
⚠ Repeat Characters (Case Insensitive)	Comp	-	2	- 2
✓ Consecutive Uppercase Letters	Flat	-(n*2)	0	0
⚠ Consecutive Lowercase Letters	Flat	-(n*2)	6	- 12
⚠ Consecutive Numbers	Flat	-(n*2)	2	- 4
✓ Sequential Letters (3+)	Flat	-(n*3)	0	0
⚠ Sequential Numbers (3+)	Flat	-(n*3)	1	- 3
✓ Sequential Symbols (3+)	Flat	-(n*3)	0	0

Here,the password has uppercase,lowercase,numbers and special characters . The length of the password is 13 characters which is more than enough for a password to be secure.

Hence, this password is very strong.

The Best Practices

- Use a minimum of 12 characters.
- Use uppercase,lowercase,numbers and symbols.
- Avoid names,dictionary words and repeat patterns.
- Use a passphrase (eg. Blue_Sky2025Rocks!).
- Use multifactor authentication.

Research Attacks and Security concepts

- Brute force attack : Tries every password combination.
- Dictionary Attack : Uses common words or passwords to find others.
- Credential Stuffing : Uses stolen passwords from other sites.
- Phishing : Tricks the user into revealing passwords.