

## COM1001 LAB4 Q2

Write a Python function:

```
def check_password_strength(password):
```

This function should analyze a given password and determine whether it is **strong** or **weak** according to specific rules.

At the end, the program should print one of the following messages:

- "Password is strong."
- "Password is weak."

### Password Strength Rules:

A password is considered **strong** if it satisfies **all** of the following conditions:

1. It contains **at least 8 characters**.
2. It includes **at least one uppercase letter (A–Z)**.
3. It includes **at least one lowercase letter (a–z)**.
4. It includes **at least one digit (0–9)**.

If any of these conditions are not met, the password is considered **weak**.

### Hint:

- Use a **for loop** to check each character one by one.
- You can determine the character type by comparing ranges:
  - $'A' \leq ch \leq 'Z'$  → uppercase letter
  - $'a' \leq ch \leq 'z'$  → lowercase letter
  - $'0' \leq ch \leq '9'$  → digit
- Use Boolean variables (True / False) to keep track of whether each condition is satisfied
- In the end, combine these conditions using logical **and** to decide the final result.

Example 1:

Enter a password: Python123  
Password is strong

Example 2 :

Enter a password: python  
Password is weak