

Weekly Coding Challenge – Assignment Sheet

Week 1 Challenge: The Secret Message Encoder

Problem Statement

A secret organization encodes their messages by **rotating each word** in a sentence.

- For the **i-th word** in the sentence (1-based index), rotate its letters to the **right by i positions**.

Example

Input Sentence: HELLO WORLD PYTHON

Encoded Output: OHELL DLRWO NPYTHO

Explanation:

- 1st word → "HELLO" → rotate right by 1 → "OHELL"
 - 2nd word → "WORLD" → rotate right by 2 → "DLRWO"
 - 3rd word → "PYTHON" → rotate right by 3 → "NPYTHO"
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Task Requirements

1. Write a Python program that:
 - Takes a **sentence** as input.
 - Encodes it using the rotation rule.
 - Prints the **secret encoded message**.
 2. The program should work for any number of words in a sentence.
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Extra Challenge (Bonus Marks)

- Write a **decoder function** that takes the encoded message and retrieves the original sentence.
 - Ensure the program works with sentences of varying lengths.
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Input Format

- A single line sentence (words separated by spaces).

Output Format

- The encoded secret message as a string.
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Sample Test Cases

Test Case 1

Input:

HELLO WORLD PYTHON

Output:

OHELL DLRWO NPYTHO

Test Case 2

Input:

OPENAI CHATGPT IS GREAT

Output:

IOPENA TPCHATG ISG REATG