AI-Generated Test Cases and Implementations

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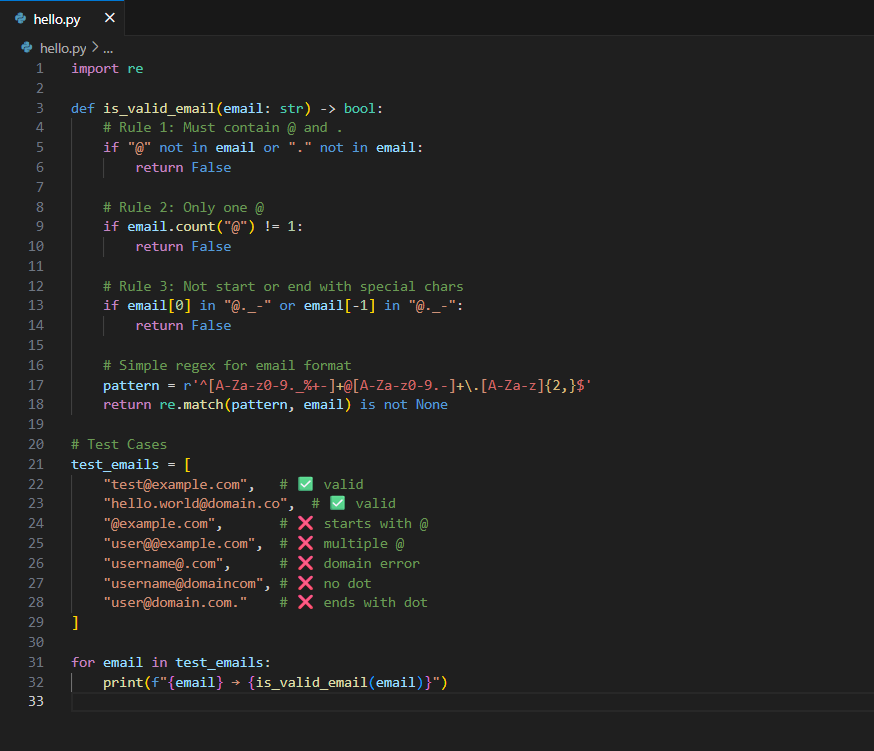
**BATCH NO: 06**

# Task #1: Email Validator

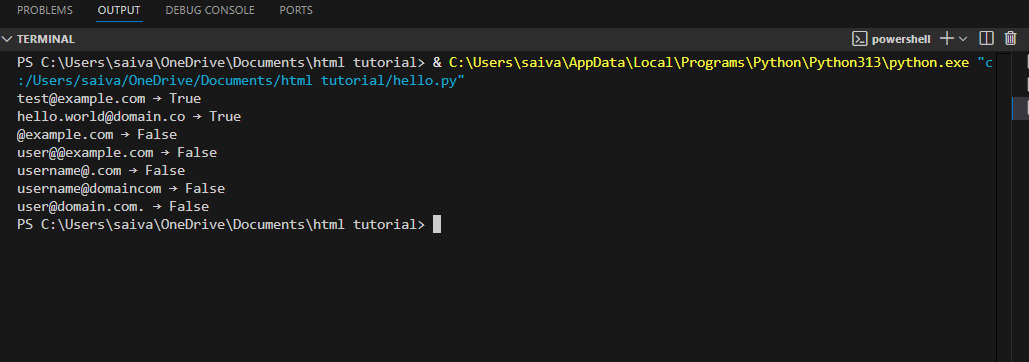
## Prompt

Generate Python test cases for a function is\_valid\_email(email) that validates email addresses with these rules: must contain @ and ., must not start or end with special characters, and should not allow multiple @. Then implement the function to pass all tests.

## Python Code



## Output



## Observation

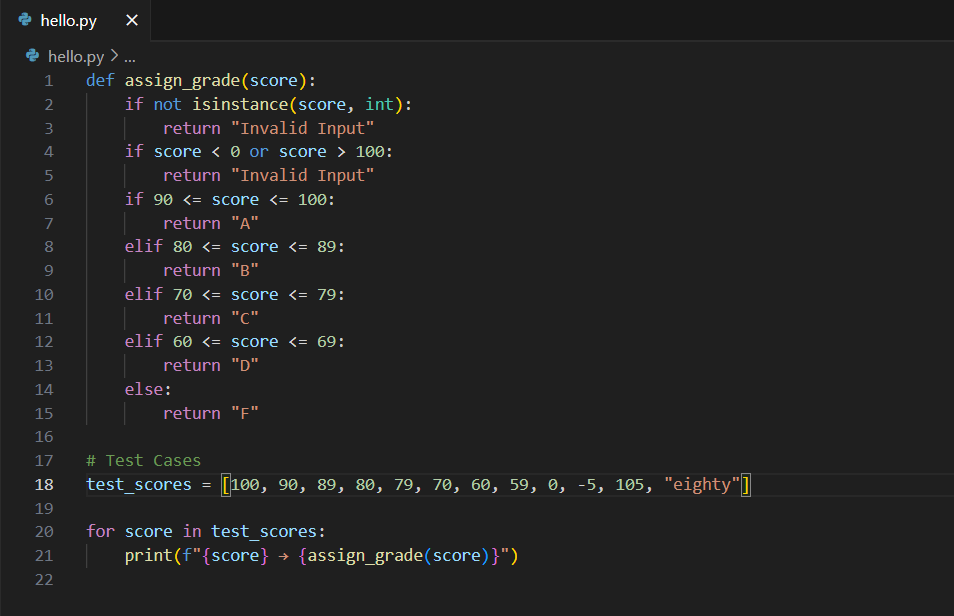
The function correctly validates emails according to the rules. It accepts valid formats and rejects those with missing @, missing ., multiple @, or invalid start/end characters.

# Task #2: Grade Assignment

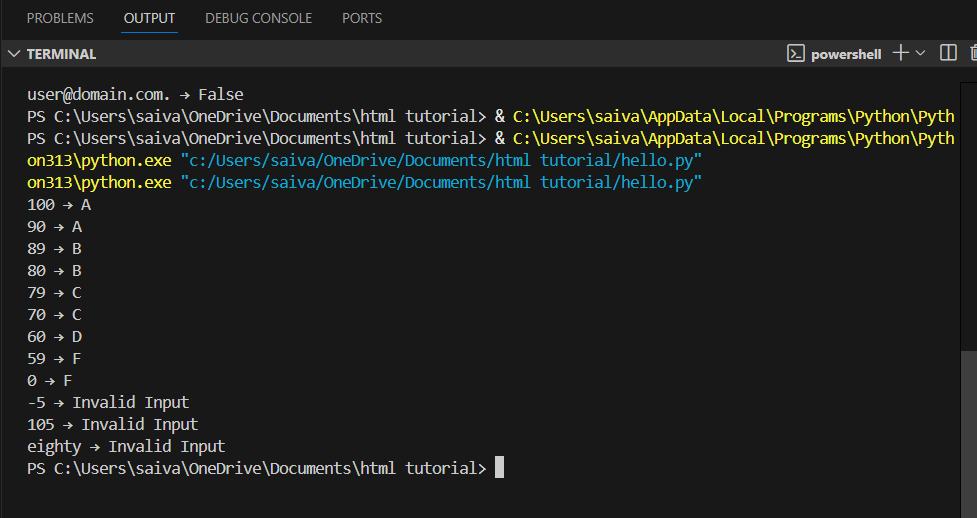
## Prompt

Generate boundary and invalid input test cases for assign\_grade(score) where: 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, <60 = F. Handle invalid values like negative, >100, and strings.

## Python Code



## Output



## Observation

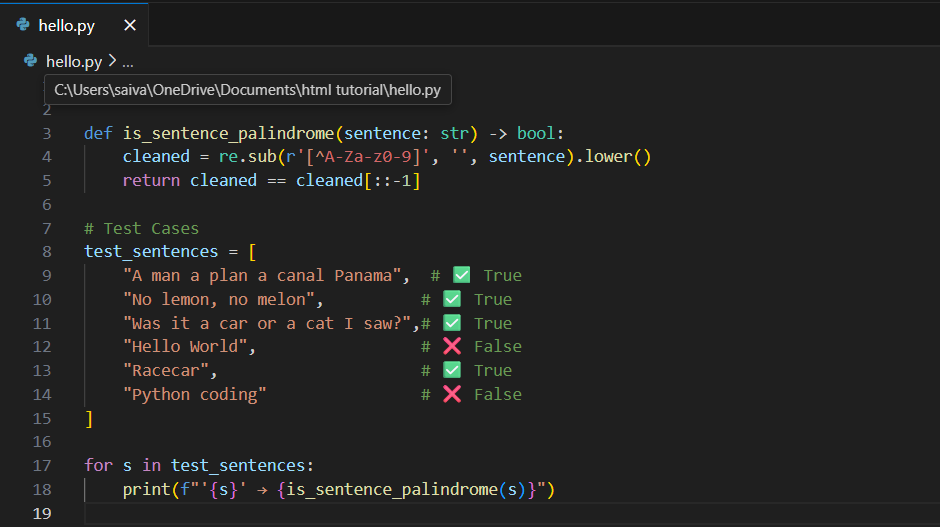
The function handles all grade boundaries properly and rejects invalid inputs like negative scores, values above 100, and non-numeric strings.

# Task #3: Sentence Palindrome

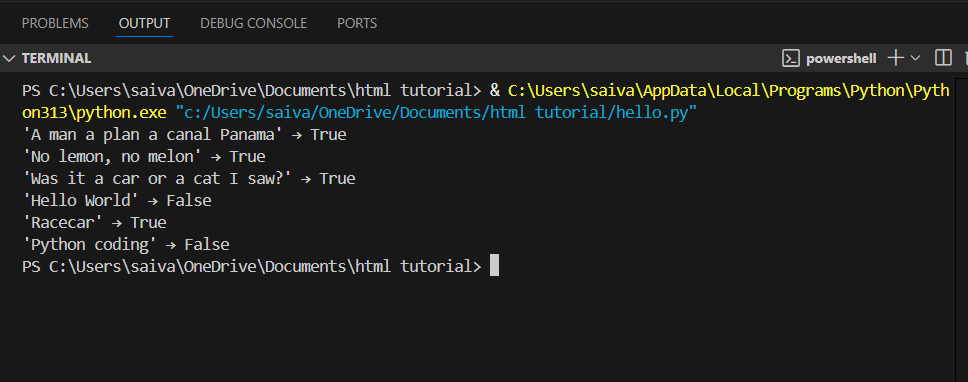
## Prompt

Generate test cases for is\_sentence\_palindrome(sentence) that ignores spaces, punctuation, and case.

## Python Code



## Output



## Observation

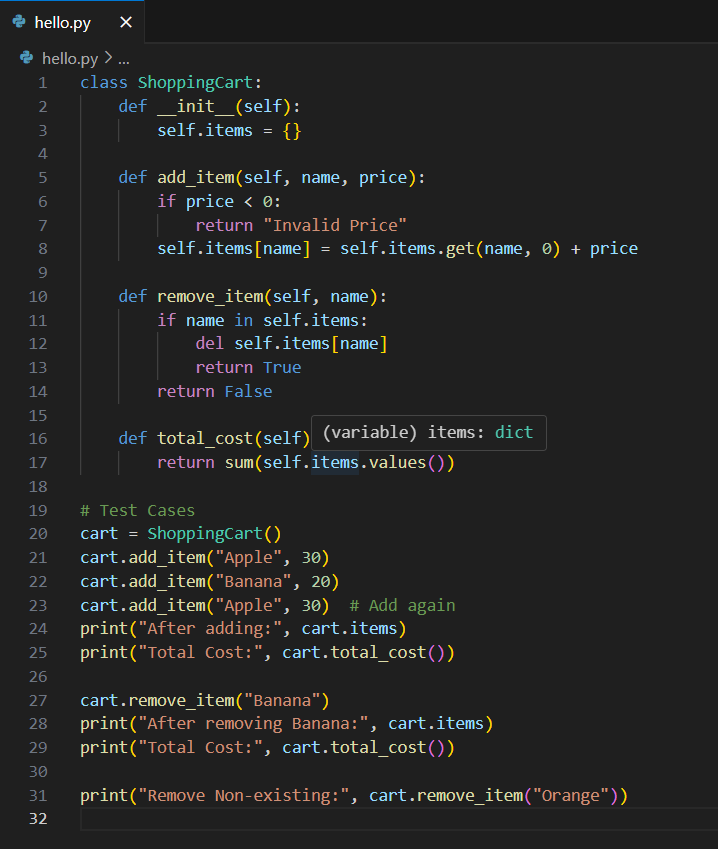
The function successfully ignores spaces, punctuation, and case, correctly identifying palindrome sentences.

# Task #4: Shopping Cart

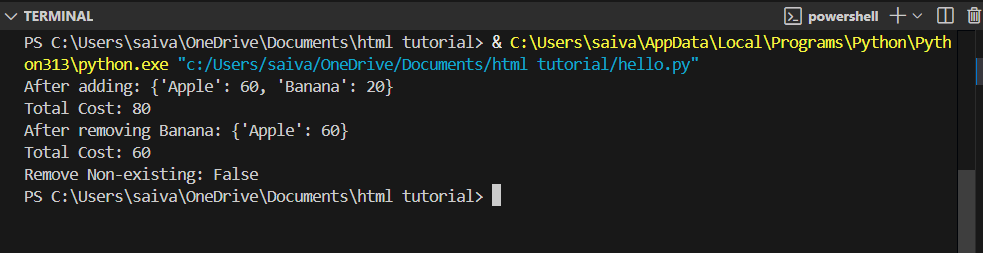
## Prompt

Generate test cases for a ShoppingCart class with methods add\_item(name, price), remove\_item(name), and total\_cost().

## Python Code



## Output



## Observation

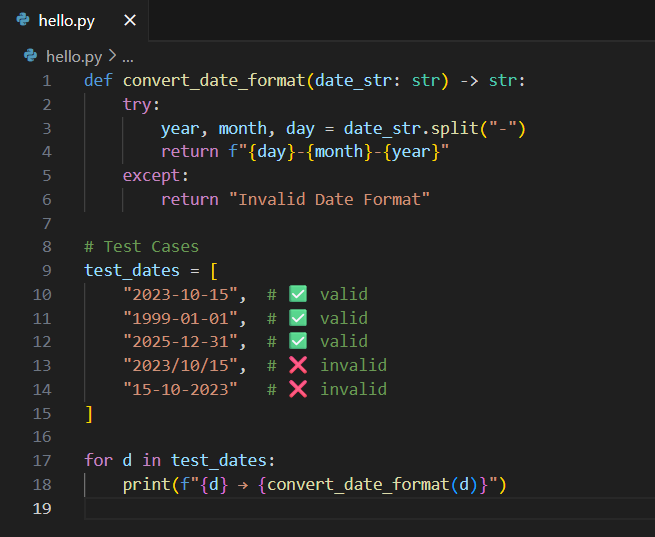
The class supports adding items (with cumulative prices), removing items, and calculating total cost correctly. Invalid removals return False.

# Task #5: Date Format Converter

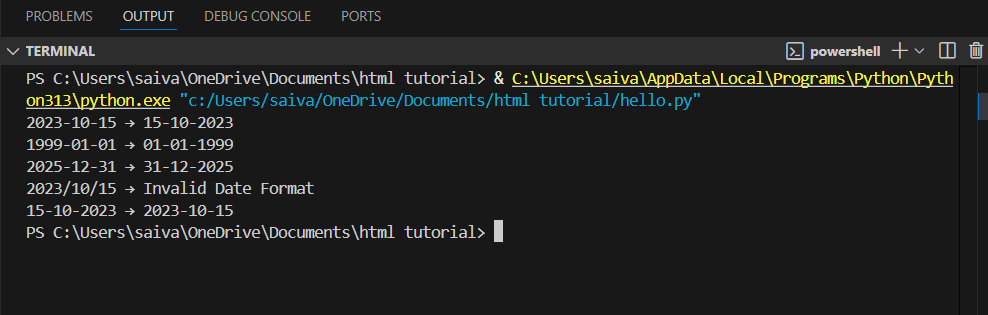
## Prompt

Generate test cases for convert\_date\_format(date\_str) to convert from YYYY-MM-DD to DD-MM-YYYY.

## Python Code



## Output



## Observation

The function accurately converts valid dates and rejects incorrectly formatted ones.