



# [CS 11 25.1] Lab 1h – Sandwiches

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## My submissions

✓ Points: 160 (partial)

⌚ Time limit: 8.0s

💻 Memory limit: 1G

### ➤ Problem type

### ▼ Allowed languages

None, py3

## Problem Statement

Cooking Mama is still asking you to make a bunch of sandwiches!

This time, the sandwich ingredients will come from a conveyor belt. To make a sandwich, you need the following ingredients:

- a top bun (`top bun`),
- a bottom bun (`bottom bun`),
- two patties (each represented as `patty`), and
- a vegetable (`gulay`).

For each ingredient that comes in the conveyor belt, determine whether you can make a new sandwich with the ingredients you have at hand after obtaining that ingredient.

Note that once you make a sandwich, the ingredients you used to make it will be consumed; i.e., you can't use those same ingredients to make other sandwiches.

## Task Details

Your task is to implement a function named `can_make_sandwich`, which should have the following *signature*:

```
def can_make_sandwich(conveyor_belt):
```

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The above says that it has one argument `conveyor_belt`. Here, `conveyor_belt` is a tuple of strings denoting that come from the conveyor belt. Note that the first element in the tuple corresponds to the first ingredient that comes in, and so on.

The function must return a tuple of Booleans denoting whether for each ingredient, you can make a new sandwich with the ingredients you have after obtaining that ingredient.

## Restrictions

- assignment is allowed.
- recursion is allowed.
- comprehensions are **disallowed**.
- at most 8 functions can be defined.
- Your source code must have at most 1,500 bytes.

## Examples

### Example 1 Function Call

```
can_make_sandwich((  
    'top bun',  
    'bottom bun',  
    'top bun',  
    'patty',  
    'patty',  
    'patty',  
    'gulay',  
    'top bun',  
    'bottom bun',  
    'gulay',  
    'patty',  
    'patty',  
    'patty',  
( ))
```

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### Example 1 Return Value

```
(  
    False,  
    False,  
    False,  
    False,  
    False,  
    False,  
    True,  
    False,  
    False,  
    False,  
    True,  
    False,  
    False,  
)
```

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## Constraints

- The function `can_make_sandwich` will be called at most 150 times.
- The number of ingredients on the conveyor belt, denoted as  $n$ , is at most 80.
- Each ingredient is one of: `"top bun"`, `"bottom bun"`, `"patty"`, `"gulay"`.

## Scoring

**Note:** New tests may be added and all submissions may be rejudged at a later time. (All future tests will satisfy the constraints.)

- You get 160 🍔 points if you solve all test cases.

## Clarifications

No clarifications have been made at this time.

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