

CSC120H Fall 2018 Worksheet: Function Design Recipe

1. Function Design Recipe

Following the Function Design Recipe, write a function that satisfies this description:

Given a number of coffee cups and the amount of coffee (in millilitres) that one cup can hold, the function should return the total possible amount of coffee all the cups can hold. (The amount in millilitres will be an integer).

Examples

Header

Description

Body

Test

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2. Function Design Recipe: Type Contract and Description

Consider this code:

```
def number_of_cents(change:          ) ->          :
    """

    >>> number_of_cents(1.25)
    25
    >>> number_of_cents(20.00)
    0
    """

    dollar_remainder = change % 1
    cents = dollar_remainder * 100
    return round(cents)
```

- (a) Add the missing *Type Contract* (parameter and return types) to the function **Header**.
- (b) The description of this function is poor:
The number of pennies left when you take away all the dollars from an amount of money.

In the space provided in the docstring, write a better function description.

3. Function Design Recipe

Following the Function Design Recipe, write the following function.

Function name: (parameter types) → return type	Description
calculate_tax: (float, float) → float	The first parameter represents a bill and the second represents a tax rate (a number between 0.0 and 1.0 inclusive). Return the amount of tax to be paid on this bill.