Exceptions

Announcements

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Grace Hopper's Notebook, 1947, Moth found in a Mark II Computer

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(Exception handling tends to be slow.)

Raising Exceptions

Assert Statements

Assert statements raise an exception of type AssertionError

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(Demo)

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The <except suite> is executed, with <name> bound to the exception

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def invert(x):
    inverse = 1/x  # Raises a ZeroDivisionError if x is 0
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Example: Reduce

Reducing a Sequence to a Value

Reducing a Sequence to a Value

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def reduce(f, s, initial):
    """Combine elements of s pairwise using f, starting with initial.

    E.g., reduce(mul, [2, 4, 8], 1) is equivalent to mul(mul(mul(1, 2), 4), 8).

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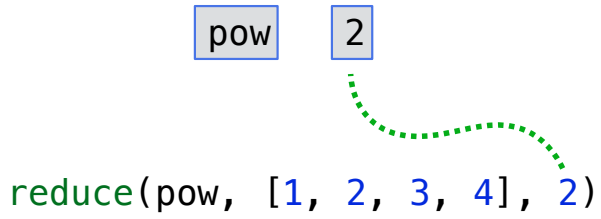

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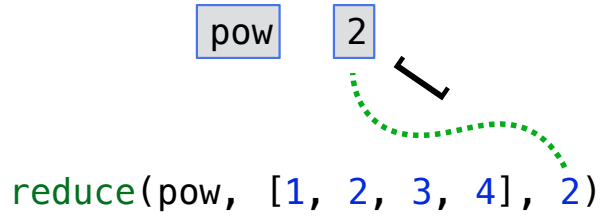

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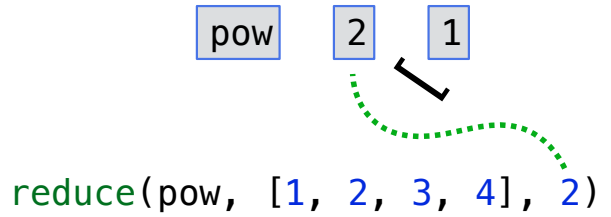

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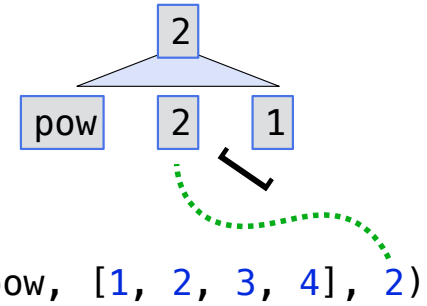

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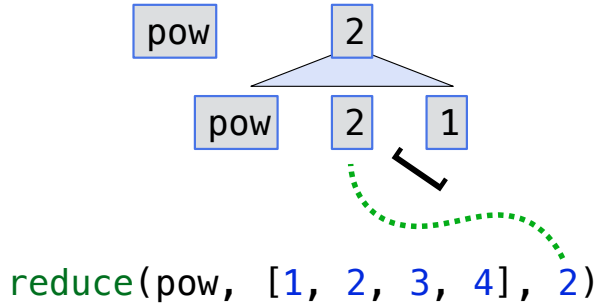

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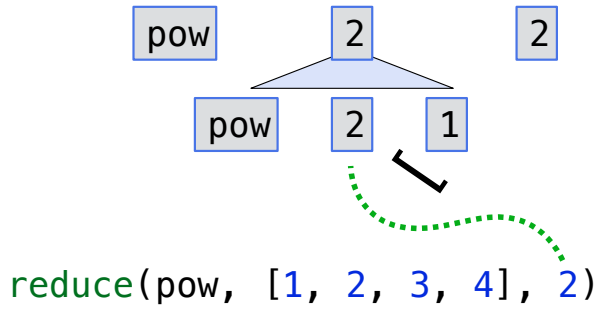

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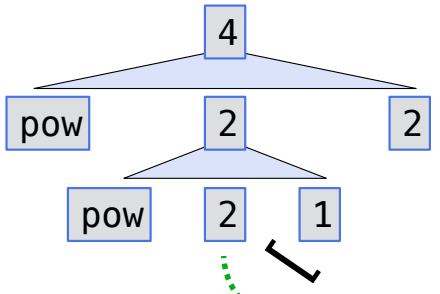

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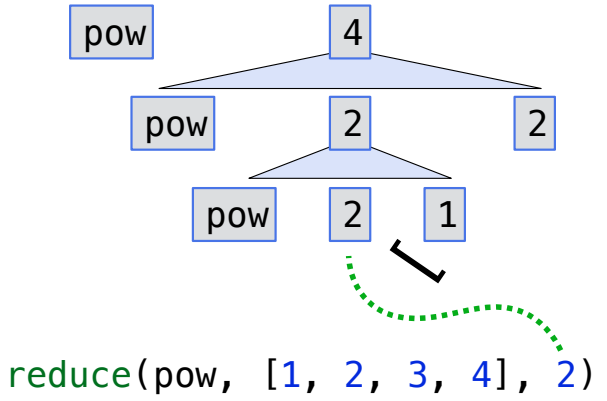

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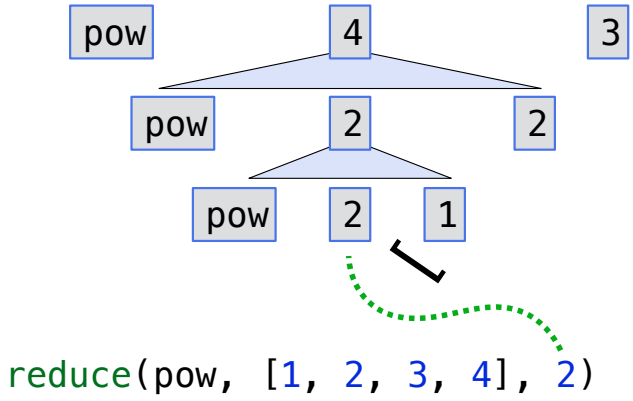

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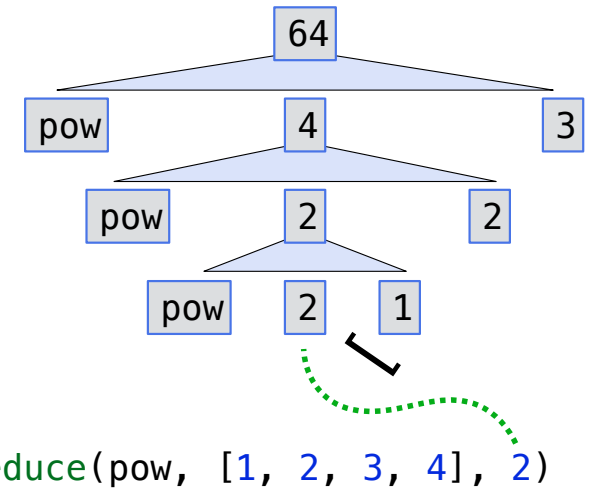

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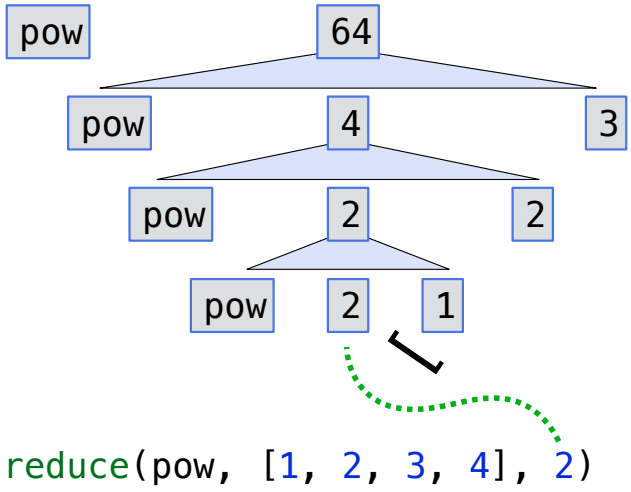

Reducing a Sequence to a Value

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def reduce(f, s, initial):
    """Combine elements of s pairwise using f, starting with initial.

    E.g., reduce(mul, [2, 4, 8], 1) is equivalent to mul(mul(mul(1, 2), 4), 8).

    >>> reduce(mul, [2, 4, 8], 1)
    64
    """
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`f` is ...
  a two-argument function
`s` is ...
  a sequence of values that can be the second argument
`initial` is ...
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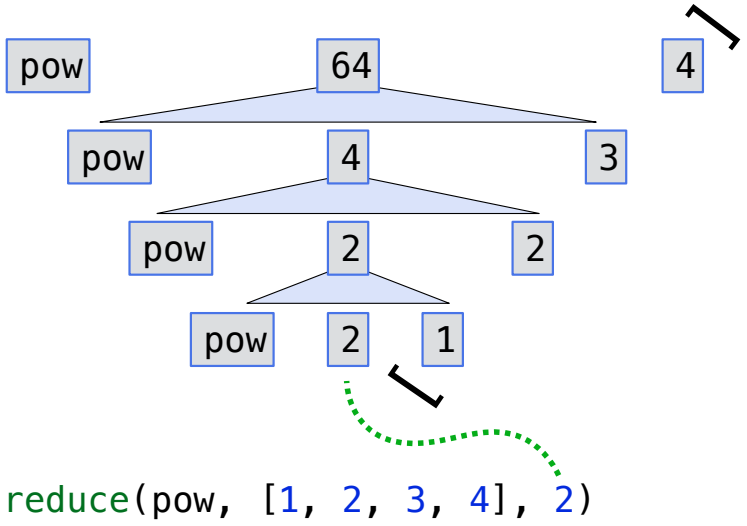

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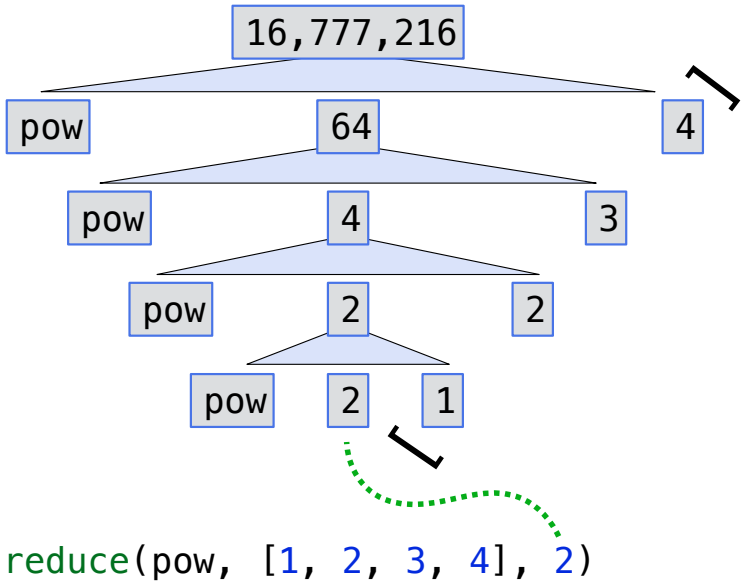

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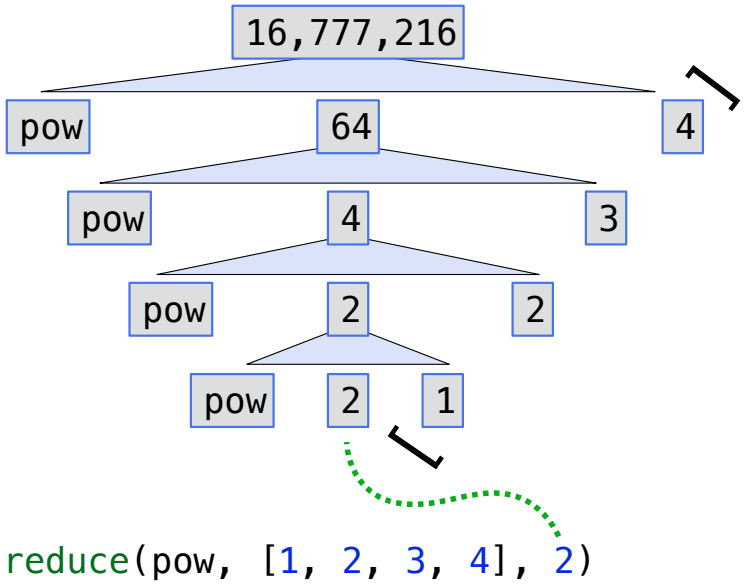

(Demo)