Quiz 4: Abstract Data Types

Read the code for the function `unravel`.

```python
def unravel(nested: list) -> None:
    """Print elements of <L> and its nested sub-lists in "level order".
    ""
    q = Queue()
    for e in nested:
        q.enqueue(e)
    while not q.is_empty():
        i = q.dequeue()
        if not isinstance(i, list):
            print(i)
        else:
            for e in i:
                q.enqueue(e)
```

For this quiz, when asked to draw the state of a queue, draw it with the front labeled, and queue elements separated by vertical lines. For example, if we enqueue 10, then 20, then 30, draw the queue like this: \[\text{front} \rightarrow 10 \mid 20 \mid 30\]

Consider the following code snippet that uses a queue:

```python
>>> L = ['a', ['b', ['c', 'd'], 'e', 'f'], ['g', 'h', 'i'], 'j']
>>> unravel(L)
```

1. Draw the state of \(q\) during the function call `unravel(L)` at line 7 in `unravel`.

2. For each iteration of the `while` loop in `unravel`, write/draw two things:
   (i) What, if any, output is printed at line 11.
   (ii) The state of \(q\) at the end of the iteration (right after line 15).

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<th>Output (if any)</th>
<th>State of (q)</th>
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