```python
def memo(f):
    cache = {}
    def memoized(n):
        if n not in cache:
            cache[n] = f(n)
        return cache[n]
    return memoized

@memo
def g(x):
    if x == 1:
        return 1
    return g(x-1) + g(x-1)

g(2)
```

**Notes:**
- Memoized is called three times
- g is only called twice, once for each unique argument
- The gray box represents a dictionary; we don't have a "standard" way of depicting dictionaries in environment diagrams in this course.