

Initializer

```
def __init__(self):  
    self.previous = {}
```

- ◆ Creates a cache of values named **previous**
- ◆ This is a technique called "memoization"

Call Interface

```
def __call__(self, n: int) -> int:  
    if n not in self.previous:  
        self.previous[n] = self.compute(n)  
    return self.previous[n]
```

- ◆ Used like this

```
>>> fact= Factorial()  
>>> fact(5)  
120
```

- ◆ Checks memoization cache first. Otherwise computes it.