# Mutating Methods of list

- Methods which mutate a list:
  - `append, extend, remove, insert, clear`
  - `__setitem__, __delitem__, __iadd__, __imul__`
- And `pop(),`
  - which — unlike others — also returns a value
- We must override all of these methods to clear cache.
  - A lot of code. But all very simple and similar
- Alternative
  - Override **`__getattribute__()`** to clear the cache for these methods only

# Eager Summing List

**`__setitem__`** is worst-case

- Subtract old value
- Add new value

```
class EagerSumList(list):
    def __init__(self, *args, **kw):
        super().__init__(*args, **kw)
        self._sum = sum(self)
    def __setitem__(self, position, value):
        self._sum -= self[position]
        super().__setitem__(position, value)
        self._sum += self[position]
    def sum(self):
        return self._sum
```