

## Program

```
1 x = np.add(a, b)
2 x[0] = 0
3 x = np.add(x, c)
4 a[0] = 0
```



Redirected API



Lazy Object

## Lazy IR

```
L1 = np._add(a, b)
L1[0] = 0
L2 = np._add(L1, c)
del L1
```

## Optimized Lazy IR

```
L1 = np._add(a, b)
L1[0] = 0
L2 = np._add(L1, c, out=L1)
del L1
```

Python  
GC

LVP

MIN-  
watch

Evaluator

Optimizer

notify

invoke

8

6

7

1

4

4

-1

-1

-2

-3

-5