

Single Number

Question: Given an array of integers, every element appears twice except for one. Find that single one.

Note:

Your algorithm should have a linear runtime complexity. Could you implement it without using extra memory?

Solutions:

```
class Solution:
```

```
    # @param A, a list of integer
```

```
    # @return an integer
```

```
    def singleNumber(self, A):
```

```
        result = 0
```

```
        for i in A:
```

```
            result ^= i
```

```
        return result
```

```
Solution().singleNumber([1, 2, 1, 2, 0])
```