Approach 1

Find number of occurences using for loops and then see which one is occuring odd number of times Time Complexity: O(n^2) Space Complexity: O(1)

Approach 2

Use Hash Table. Scan through the array and count number of occurences and increment at Hash Table index position. Then scan Hash Table and check which one is occuring odd number of times Complexity: Time : O(n) Space : O(n)

Approach 3

Use Exclusive OR a ^ a = 0 0 ^ a = a a ^ a ^ a = a a ^ b = b ^ a (commutative)

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In [ ]:  Complexity :
             Time : O(n)
             Space : O(1)
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In [2]:  def findOddOccurence(arr):
             ans = 0
             for i in arr:
                 ans = ans ^ i
             return ans
```

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In [3]:  arr = [2,1,3,2,3,1,1]
         findOddOccurence(arr)
         #ans 1
```

Out[3]: 1

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In [4]:  arr = [2,1,3,2,3,1,5]
         findOddOccurence(arr)
         #ans 5
```

Out[4]: 5

In [ ]: