

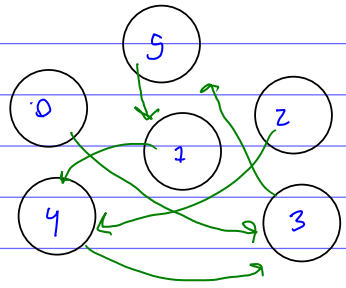
```

int Solution::repeatedNumber(const vector<int> &A) {
    // [3 4 1 4 1]
    int slow = A[0];
    int fast = A[A[0]];

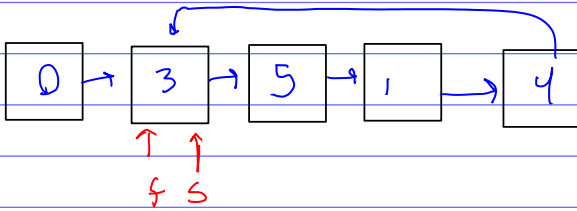
    while (slow != fast)
    {
        slow = A[slow];
        fast = A[A[fast]];
    }

    fast = 0;
    while (slow != fast) {
        slow = A[slow];
        fast = A[fast];
    }
    if (slow == 0) return -1;
    return slow;
}

```



3, 4, 4, 5, 3, 1
0 1 2 3 4 5



~~5~~ 3 4 → = 12 0
 1 5 8 = 14 1
~~6~~ 4 2 = 12 2
 15 " " " " 12 3
 7 0 5 4

8 paths



0 1 2 3 4 5 6 7
12, 14, 12, 12, 14, 12, 12, 15

Q0 → 0, 3, 6

Q1 → 0, 5,

Q2 →

5 3 4 = 12 ①

1 5

6 2

" " 12

12

8 3 4 = 15 ②

5

4

" 12

12

4

1 5

8 = 14 ⑤

2

" 14

14

4

9

6 4 2 = 15

" 15

15

8 3 4 = 12 ③

5

8

2

" 14

14

4

1

8

6 = 14 ⑥

4

2

" 15

15

4

1

8

6

4

2

" 15

15

8

11 5 8 = 14 ④

6

" 16

16

4

1

3

5

7 = 12 ⑦

0 4 2

" 12

12

4

9

6 4 2 = 15

" 15

15

4

9

6 4 2 = 15

" 15

15