

Algo & Treasures

Ques

↗ To return

$[(1, 2), (1, 4), (-1, 0)]$

$\downarrow \sqrt{5}$ $\downarrow \sqrt{17}$ $\downarrow \sqrt{1}$

$3 = 2$

class Pair implements Comparable < Pair > {

int first;

int second;

Pair (int x, int y) {

first = x, second = y;

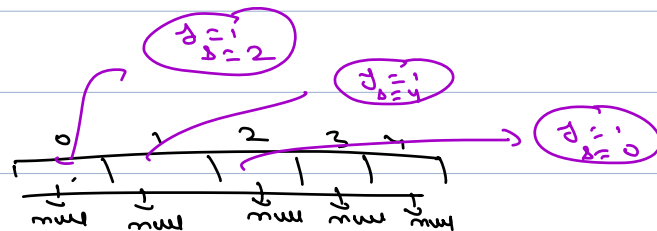
public int compareTo (Pair o) {

$x_1 = \text{first};$ $x_2 = o.\text{first}$

$y_1 = \text{second};$ $y_2 = o.\text{second};$

$\text{dist1} = x_1 * x_1 + y_1 * y_1$, $\text{dist2} = x_2 * x_2 + y_2 * y_2$
return $\text{dist1} - \text{dist2};$

0 →	1	2
1 →	1	4
2 →	-1	0



Pair[] pairs = new Pair[5];

0	1	2	3	4
0	1	0	1	0

int[] arr = new int[5];

```
int [][] solve (int [][] arr, int B) {
```

```
    int n = arr.length;
```

```
    Pair[] pairs = new Pair[n]; // array of pairs
```

```
    for (i = 0; i < n; i++) {
```

```
        | Pair[i] = new Pair (arr[i][0], arr[i][1]);
```

```
    Arrays.sort (pairs);
```

```
    int [][] ans = new int [B][2];
```

```
    // return B no. of pairs from last;
```

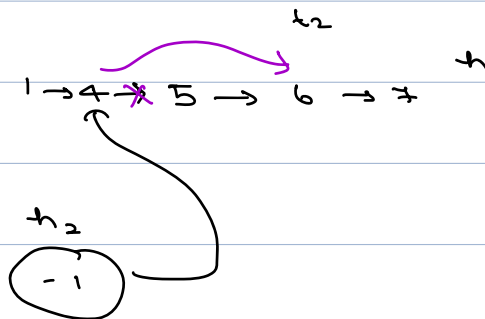
```
    }
```

Ques Alice and Even values.

1 → 4 → 5 → 6 → 7

↓

4 → 6



while ($h \neq \text{null}$) {

$t_2.\text{next} = h$
 $t_2 = t_2.\text{next}$
 $h = h.\text{next}$
}

$h_2 = h_2.\text{next};$

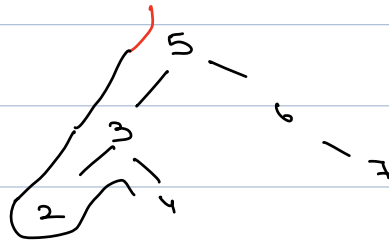
$t_2.\text{next} = \text{null};$

return h_2 ;

Ques)

Two Sum Bst

T.C $\rightarrow O(m)$, S.C $\rightarrow O(m)$



Set 5 3
2

k = 9

```
public class Solution {  
    public int t2Sum(TreeNode A, int B) {  
        HashSet<Integer> hset = new HashSet<>();  
        return helper(A, B, hset);  
    }  
    public int helper(TreeNode node, int k, HashSet<Integer> hset) {  
        if (node == null) {  
            return 0;  
        }  
        if (hset.contains(k - node.val)) {  
            return 1;  
        }  
        hset.add(node.val);  
        return helper(node.left, k, hset) | helper(node.right, k, hset);  
    }  
}
```

imp node = null | temp.next = null

"if(tempNode.next != null &&
((tempNode.next.val)%2 == 0)){" throws null
pointer exception but if split it in 2 different 'if'
condition, it works

