```
Java
class Solution {
    public int longestZigZag(TreeNode root) {
 * Definition for a binary tree node.
  public class TreeNode {
      int val;
      TreeNode left;
      TreeNode right;
 *
      TreeNode() {}
      TreeNode(int val) { this.val = val; }
      TreeNode(int val, TreeNode left, TreeNode right) {
 *
          this.val = val;
          this.left = left;
           this.right = right;
```

JavaScript

```
/**
  * @param {TreeNode} root
  * @return {number}
  */
var longestZigZag = function(root) {
```

```
};
/**
 * Definition for a binary tree node.
 * function TreeNode(val, left, right) {
       this.val = (val===undefined ? 0 : val)
      this.left = (left===undefined ? null : left)
       this.right = (right===undefined ? null : right)
 * }
 */
C++
class Solution {
public:
    int longestZigZag(TreeNode* root) {
};
/**
 * Definition for a binary tree node.
 * struct TreeNode {
       int val;
      TreeNode *left;
      TreeNode *right;
       TreeNode() : val(0), left(nullptr), right(nullptr) {}
 *
       TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
       TreeNode(int x, TreeNode *left, TreeNode *right) : val(x), left(left), right(right) {}
* };
```