

Intuition

Classic dfs problem on the tree.

Explanation

dfs(i) return the the longest path starting at the node i.

dfs on each node i, and for each node i,

we iterate on all its children,

and find all the path startint at the node i.

The 2 longest path can make up the longest path in subtree of node i,

we update the global result res,

and return the longest path length as result for dfs.

Complexity

Time $O(n)$

Space $O(n)$