

Electromagnetics (II) Homework 6

411025020 莊奕賢

December 21, 2024

1. File Tree

- (a) The root of the tree is `"/user/rt/courses/"`.
- (b) Internal nodes is which nodes have at least one child.
- (c) `"cs016/"` have three children, `"homeworks/"`, `"programs/"` and `"grades"`.
And the nodes `"homeworks/"`, `"programs/"` each have three child nodes.
Therefore, the node `"cs016/"` have 9 descendant nodes.
- (d) The node `"cs016/"` have 1 ancestor node, `"/user/rt/courses/"`
- (e) The sibling nodes of `"homeworks/"` are `"programs/"` and `"grades"`
- (f) The nodes in the subtree rooted at `"projects/"` are `"papers/"`, `"demos/"`, `"buy-low/"`, `"sellhigh/"`, `"market/"`.
- (g) The depth of the node `"papers/"` is 3.
- (h) The height of the tree is 4.
- (i) The output of `preorderPrint(T,T.root())`
`/user/rt/courses/ cs016/ grades homeworks/ hw1 hw2 hw3 programs/ pr1 pr2 pr3 cs252/ projects/ papers/ buylow/ sellhigh/ demos/ market/ /grades`
- (j) The output of `postorderPrint(T,T.root())`
`grades hw1 hw2 hw3 homeworks/ pr1 pr2 pr3 programs/ cs016/ buylow sellhigh papers/ market demos/ projects/ grades cs252/ /user/rt/courses/`

2. Expressions Tree

$$(5 - (1 + 1)) \times 7 = 21$$

