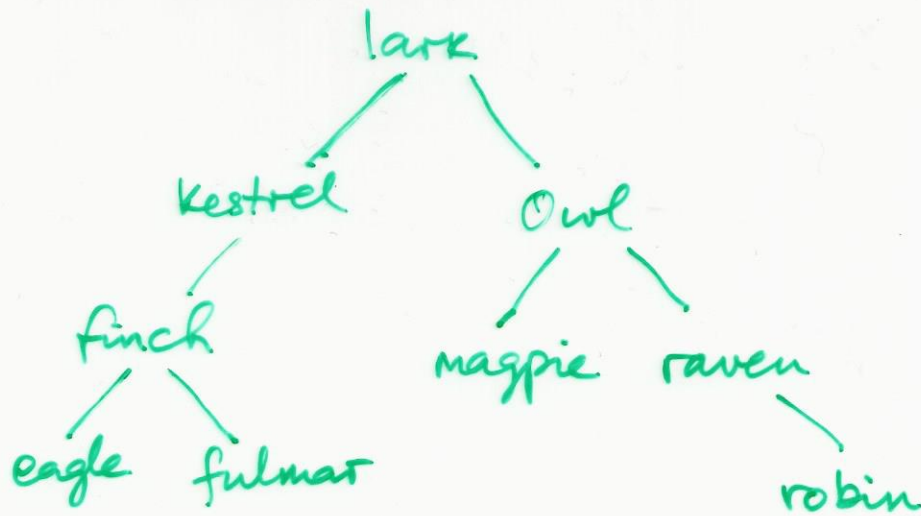lark, kestrel, finch, eagle, owl, magpie, raven, robin, fulmar

1/ create a binary tree

```
                        lark
                      /      \
                 kestrel      Owl
                    /        /    \
                finch    magpie   raven
                /   \                  \
            eagle   fulmar             robin
```

2/ traverse the tree using <u>pre order</u> traversal

lark, kestrel, finch, eagle, fulmar, Owl, magpie, raven, robin

traverse using <u>postorder</u>

eagle, fulmar, finch, kestrel, magpie, robin, raven, owl, lark

traverse using <u>inorder</u>

eagle, finch, fulmar, kestrel, lark, magpie, owl, raven, robin

3/ How many steps <u>IN THEORY</u> will it take to carry out a search

$n = 9$ $\log_2 n = \log_2 9 = \dfrac{\log_{10} 9}{\log_{10} 2} = 3.17$ ie 4 steps

4/ How many steps <u>IN PRACTICE</u> will it take to find "fulmar"

3 Steps