GHOST: Game Tree

A Small Example with a Picture and Some Code

TJHSST
December 2008

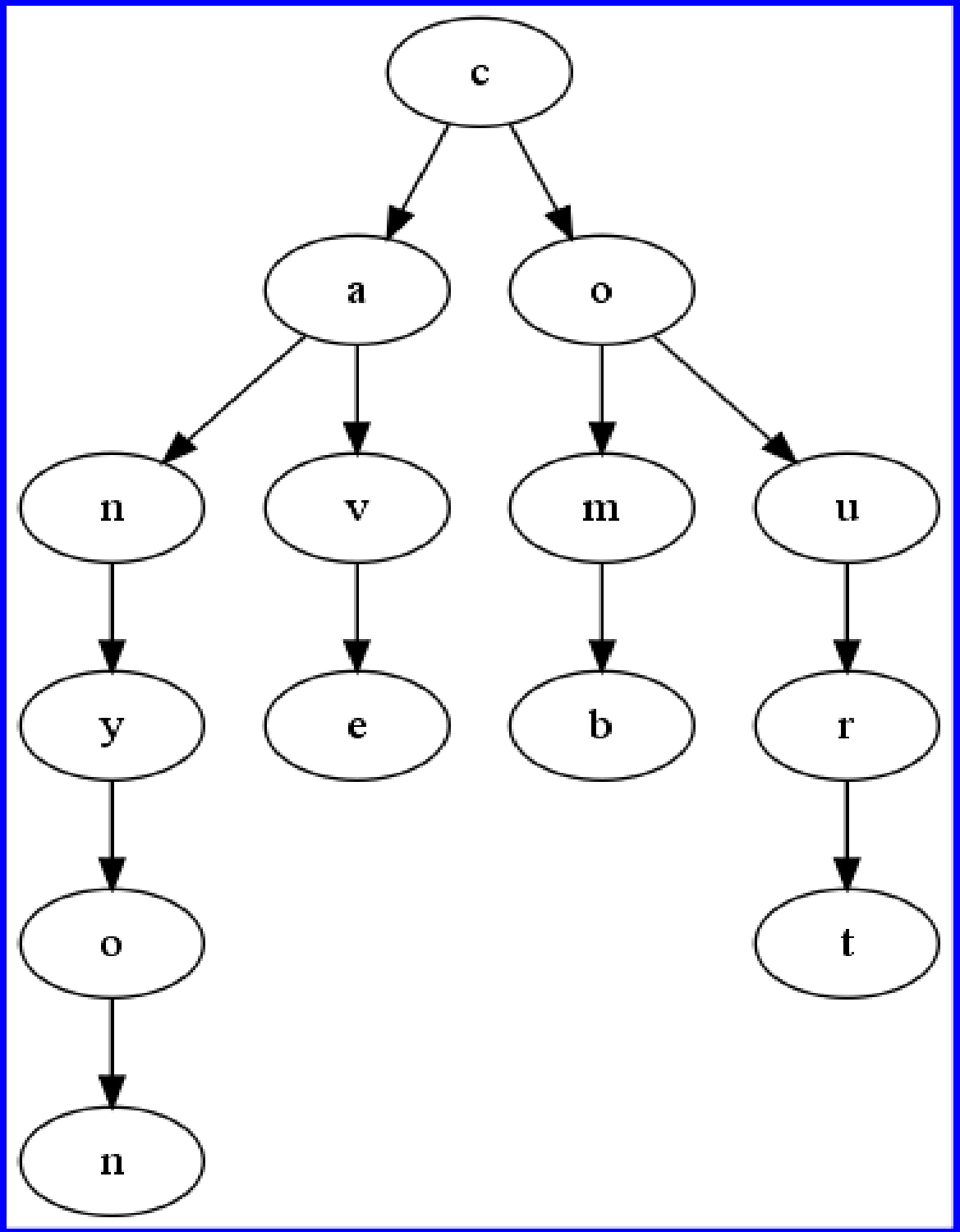
small.txt

canyon

cave

comb

court



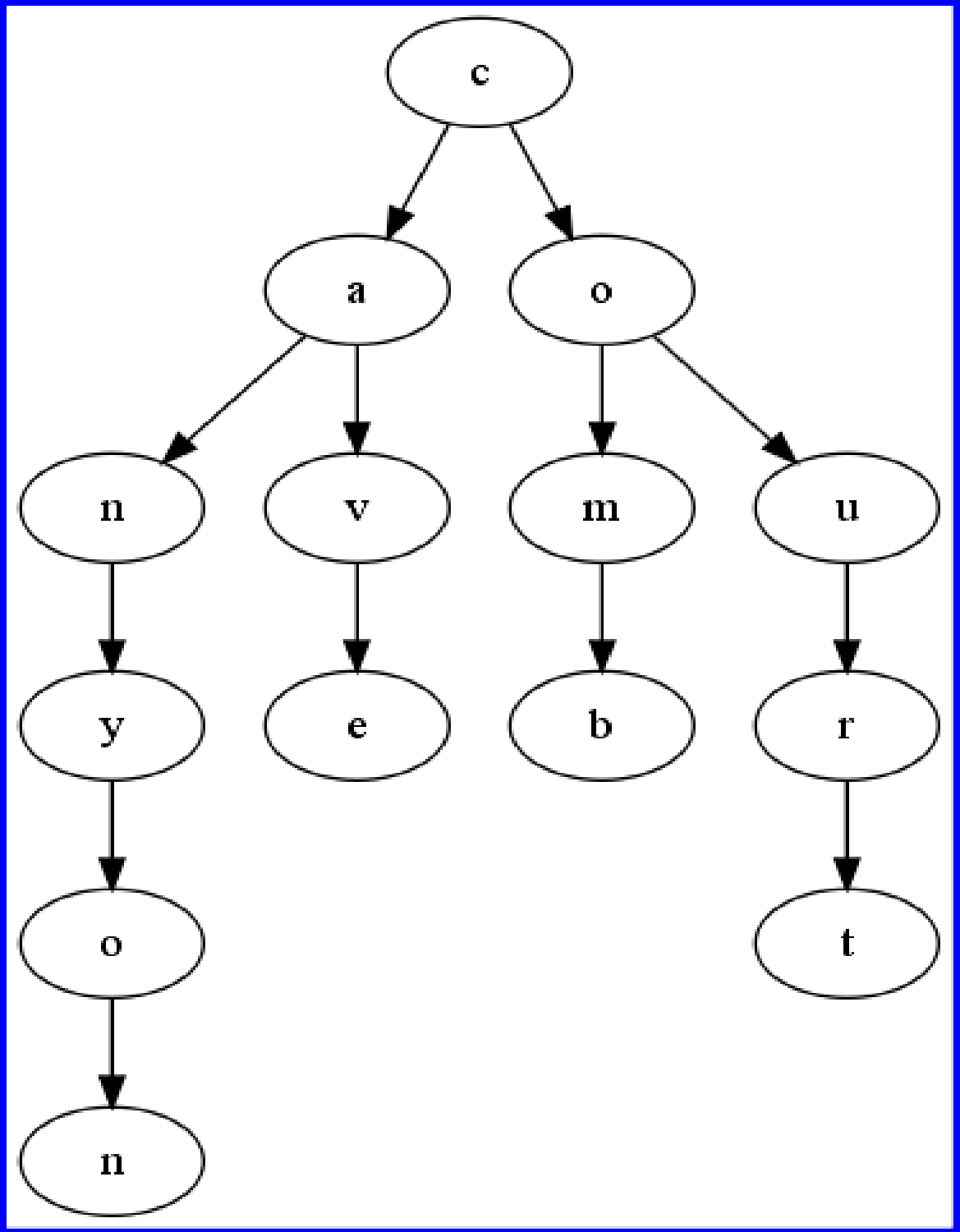
Player One: C

Player Two: O

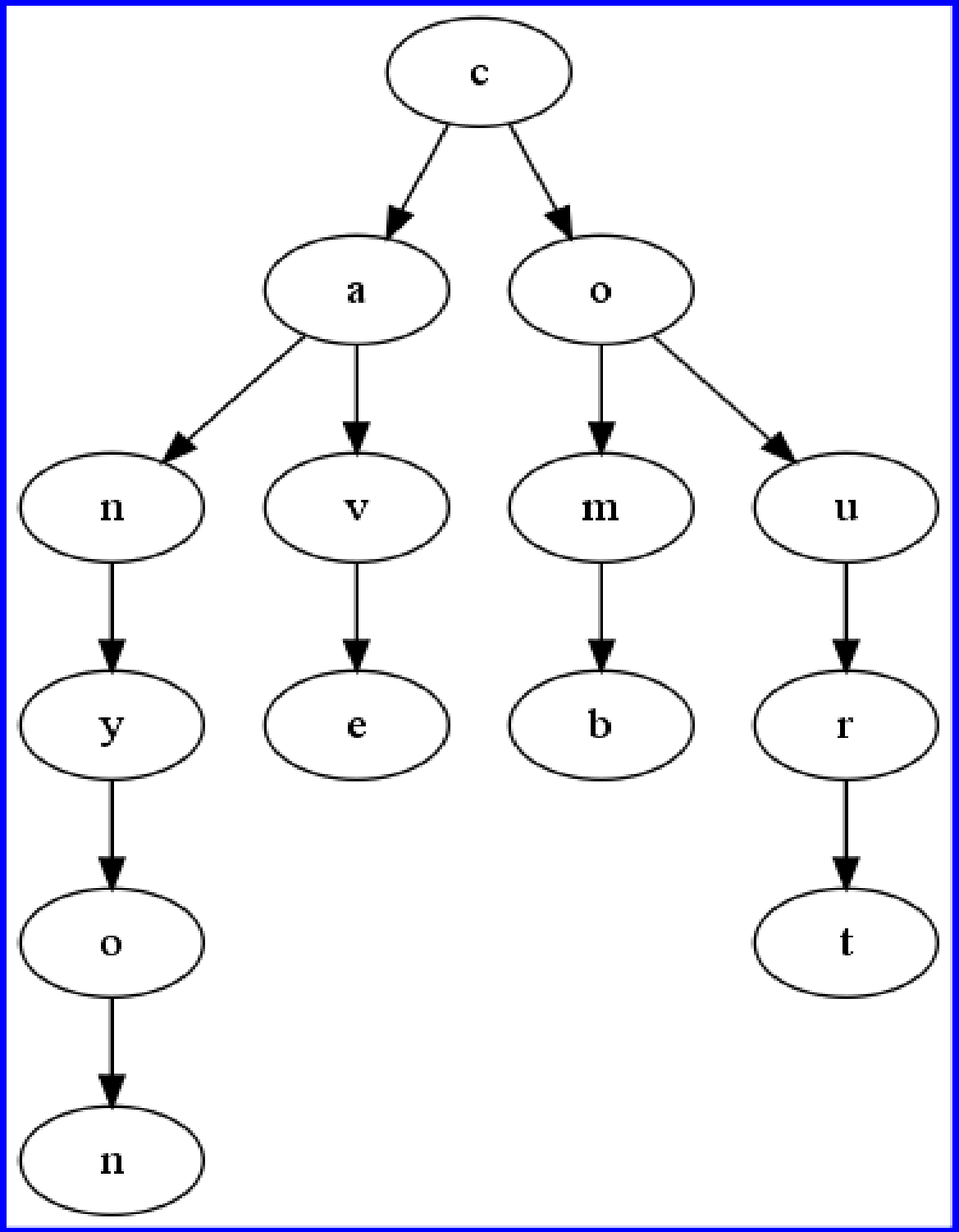
Player One: M

Player Two: B

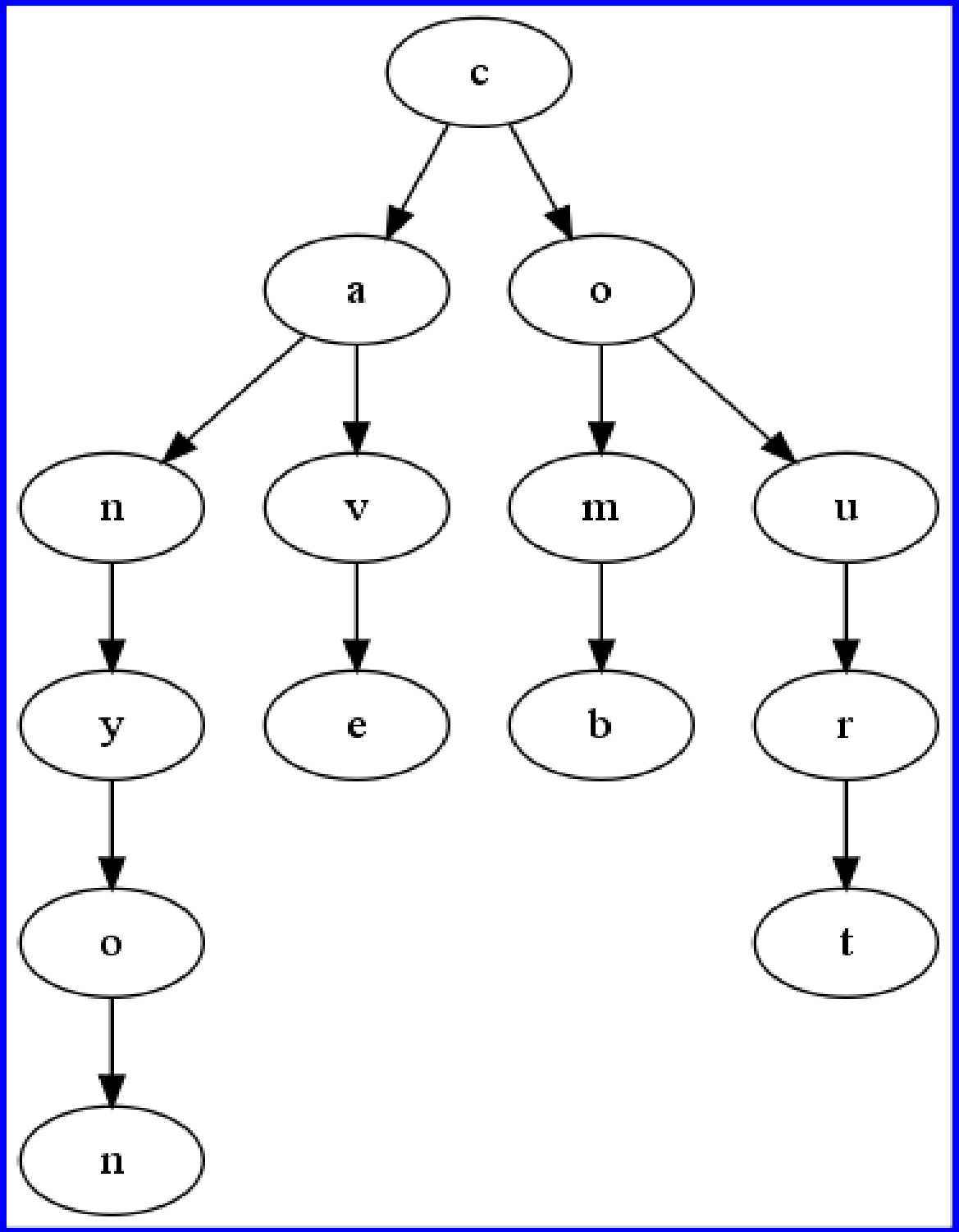
Player One wins.



Player Two can't force the game towards COURT because Player One gets to take its own turn.



So, the presence of a favorable outcome down a particular branch is, *by itself*, not good enough to win.



Some Tree Code

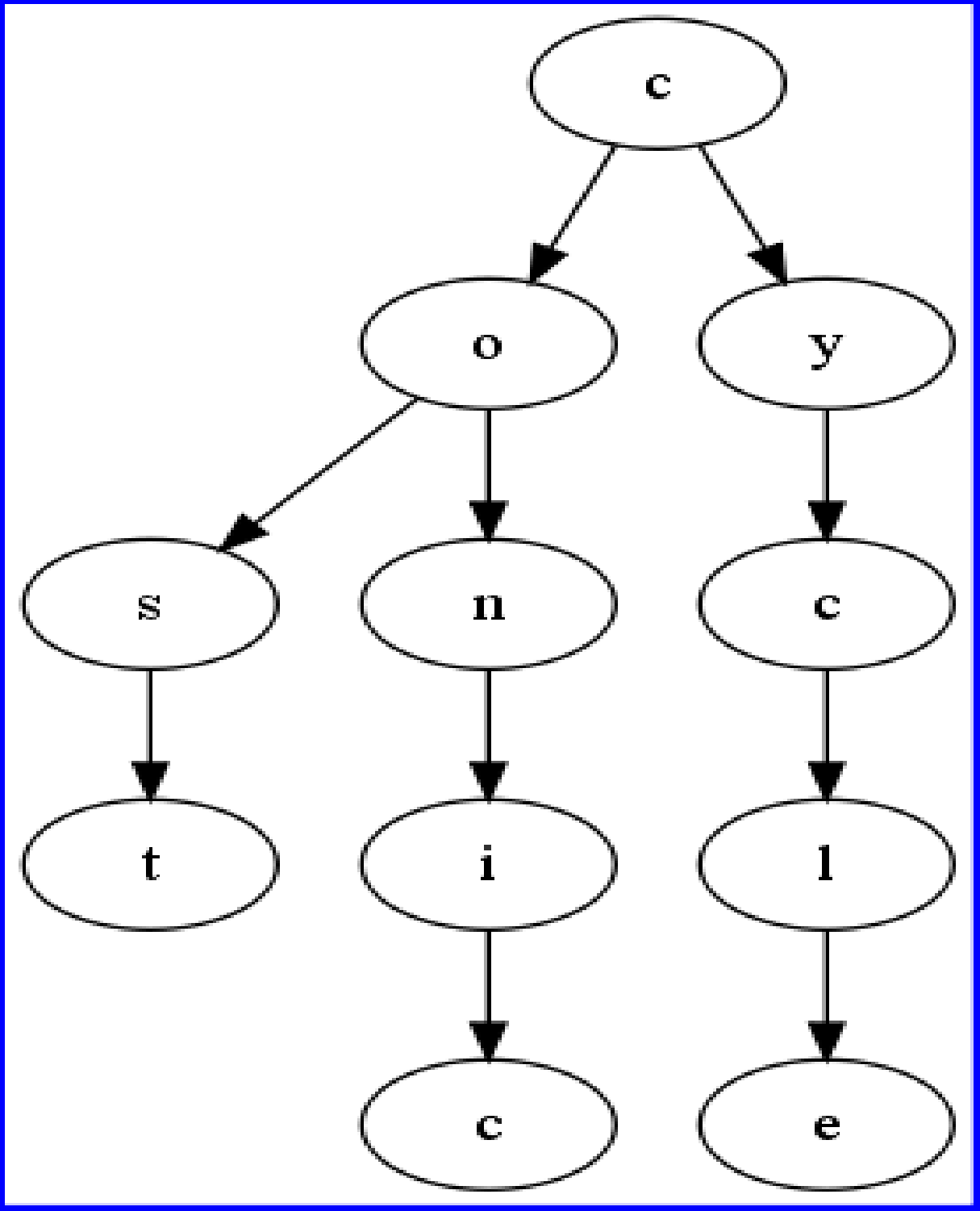
```
class Node:
    def __init__(self,val):
        self.val=val
        self.chldrn=[]

def display_tree(t,k):
    print '\t'*k,t.val
    for p in t.chldrn:
        display_tree(p,k+1)
```

In main:

```
root=Node('*')
for k in a:
    print k
    # add k to tree
display_tree(root,0)
```

cost,conic,cycle

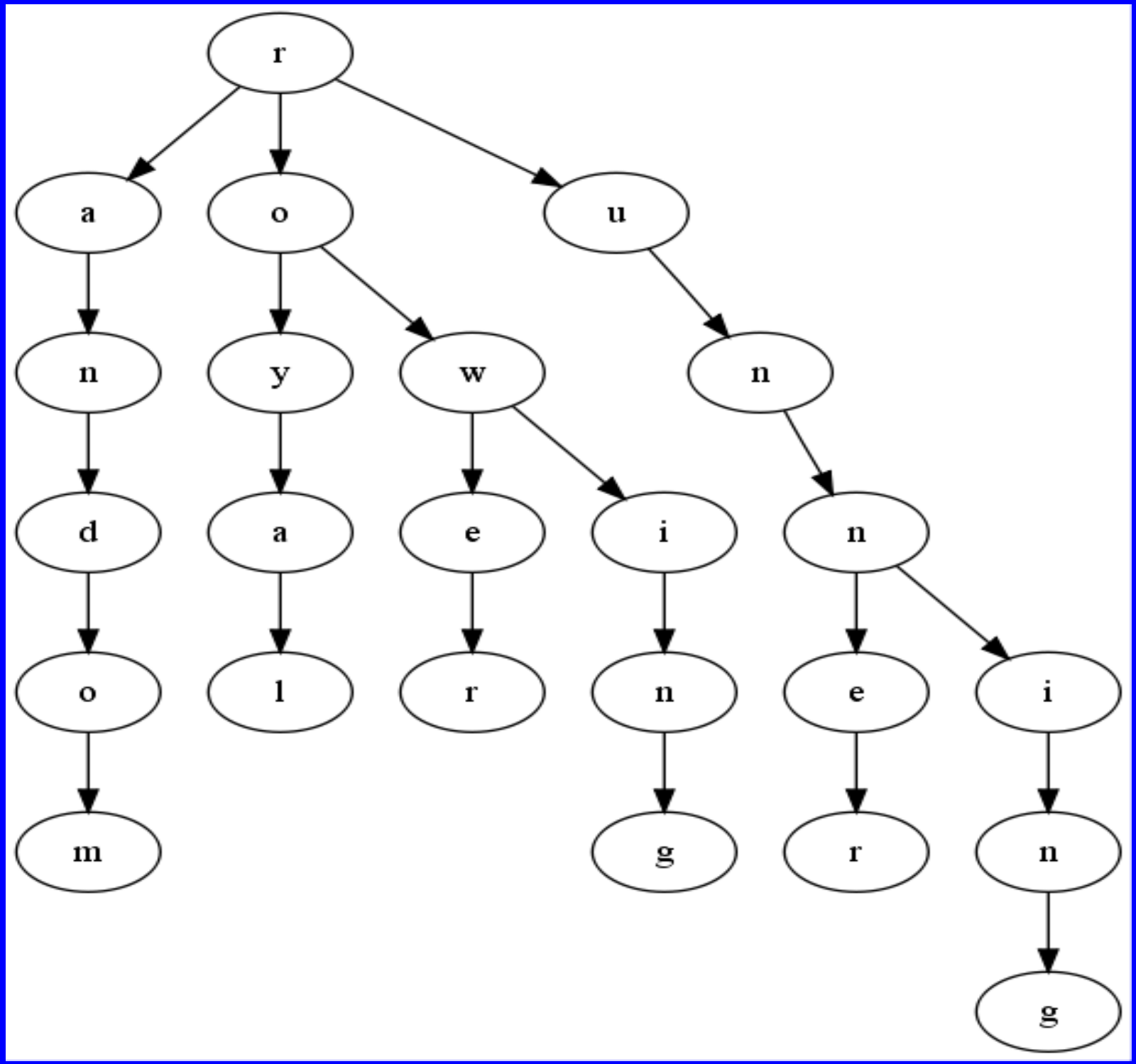
Player Two can win, but not by going towards any favorable path it likes.



Keep in Mind

- All of this is more complicated with three or four or five or six players
- Each player gets to make its own move
- Assume each player chooses moves in their own favor (i.e., no one is trying to lose)
- But, could include random mistakes and/or teaming up against a really good player

random
royal
rower
rowing
runner
running



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