

# 99 questions/Solutions/72

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(\*) Construct the bottom-up order sequence of the tree nodes.

Write a predicate `bottom_up(Tree,Seq)` which constructs the bottom-up sequence of the nodes of the multiway tree `Tree`.

```
bottom_up :: Tree a -> [a]
bottom_up (Node x ts) = concatMap bottom_up ts ++ [x]
```

A more efficient version using an accumulator:

```
bottom_up :: Tree a -> [a]
bottom_up t = bottom_up_aux t []
  where bottom_up_aux :: Tree a -> [a] -> [a]
        bottom_up_aux (Node x ts) xs = foldr bottom_up_aux (x:xs) ts
```

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