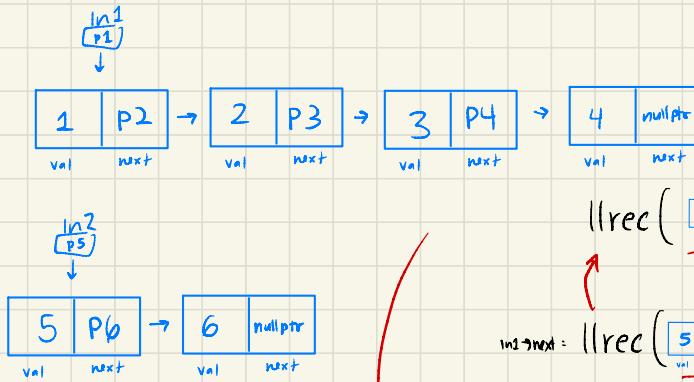


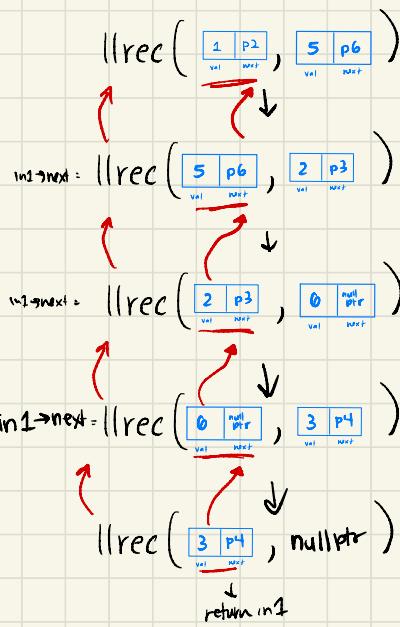
Problem 4: Linked Lists

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a)



continue to return $in1$ up while setting $in1 \rightarrow next$ to point to the correct node. Specifically, at the end of all the calls, we return $p3$ which then changes the 6 node's next to point to 3, then returns $p6$ up which changes the 2 node's next to point to 6 and so on. This creates the linked list below: 1,5,2,6,3,4



Trace function calls down to BC
return $in1$; in else if ($in2 == \text{nullptr}$)

$in1$ returns = 1,5,2,6,3,4

3 still points to 4

b) $in1 = \text{nullptr}$

$in2 = 2$ $\boxed{2} \boxed{\text{null}}$

$llrec(\text{nullptr}, \boxed{2} \boxed{\text{null}})$
↓ triggers if ($in1 == \text{nullptr}$)

return $in2$
 $\hookrightarrow = \boxed{2}$

triggers the if statement which returns $in2$, which in this case is 2 triggers the if statement