

4. a) With  $n1 = 1, 2, 3, 4$  and  $n2 = 5, 6$  the code will start with the last if statement, in which  $n1 \rightarrow n2$  (ex. the instance of  $n1$  starting with  $2 \rightarrow 3, 4$  etc) and recursively call  $n1 \rightarrow n2$  but with  $n1$  as  $n2$  and  $n2$  as  $n1 \rightarrow n2$ . Thus, the next cases of  $n1$  will have values of  $n2$  superimposed on its next value and vice versa, ending with  $n1 = 1, 5, 2, 6, 3, 4$  and  $n2 = 5, 2, 6, 3, 4$ .

At the end, since  $n2$  will end with null ptr, it will return  $n1$ .

b) If  $n1 = \text{null ptr}$ , this will trigger the very first if statement, simply resulting in  $n2$  being returned regardless of  $n2$ .