```
is\_ancestor\_descendant\_relationship(ancestor, descendant, node\_state) \stackrel{\triangle}{=}
      @type: (\langle \$block, Bool \rangle, Int) \Rightarrow \langle \$block, Bool \rangle;
FindAncestor(last\_block\_and\_flag, slot) \stackrel{\triangle}{=}
     LET last\_block \triangleq last\_block\_and\_flag[1]IN
     LET flaq \triangleq last\_block\_and\_flaq[2]IN
     IF flag THEN Pair(last_block, TRUE)
      ELSE IF last\_block = node\_state.configuration.genesis
                  \vee \neg has\_parent(last\_block, node\_state)
          THEN Pair(last\_block, FALSE)
           ELSE LET parent \stackrel{\triangle}{=} get\_parent(last\_block, node\_state)IN
                   Pair(parent, parent = ancestor)
IN
ApaFoldSegLeft(FindAncestor,
                    Pair(descendant, descendant = ancestor),
                    MkSeq(MAX\_SLOT,
                               @type : Int \Rightarrow Int;
                              LAMBDA i:i)[2]
```