Algorithm AC-3 for Look Ahead

procedure AC3-LA(cv, (Z, D, C))

$Q \leftarrow \{(V_i, Vcv) \in arcs(G), i > cv\}$;

consistent $\leftarrow$ true;

       while Q not empty & consistent

             select and delete any arc (V_k, V_m) from Q;

             if REVISE((V_k, V_m), (Z, D, C)) then

                    $Q \leftarrow Q \cup \{(V_i, V_k)$ such that $(V_i, V_k) \in arcs(G), i \neq k, i \neq m, i > cv\}$

                    consistent $\leftarrow$ not D_k empty

             endif

       endwhile

return consistent

end AC3-LA

where,

- D_k is the domain of variable k
- V_i is the variable I
- cv is the consecutive number of the variable in the order of instantiating variables