Algorithm Unification; // Chang & Lee
   input non-empty set of expressions W;
   output $\theta = \text{MGU}(W)$ or failure;
begin
  1. $k := 0; W_0 := W; \theta_0 := \{\ \};$

  2. **if** W_k is singleton **then return** θ_k
     else $DS_k := \text{Disagreement\_Set}(W_k);$

  3. **if** $(\exists\ \text{var } v_k,\ \text{term } t_k \in DS_k)[v_k \text{ does not occur in } t_k]$
            // "occurs-check"
    then begin
        $\theta_{k+1} := \theta_k \cdot \{t_k/v_k\};$
        $W_{k+1} := W_k\{t_k/v_k\};$
            // i.e., apply substitution to each member of W_k
            // N.B.: $W_{k+1} = W\theta_{k+1}$
        $k := k+1;$
         goto 2
        end
    else return failure
end.