Input : X: attribute set; Γ: set of implications
Output: X^+: the closure of X with respect to Γ; Γ': the simplified set of implications

$\Gamma' := \Gamma \cup \{\varnothing \Rightarrow X\}$
$X_{\text{new}} := X$
$X_{\text{old}} := X$
repeat
  Replace $\{\varnothing \Rightarrow X_{\text{old}}\}$ with $\{\varnothing \Rightarrow X_{\text{new}}\}$ in Γ'
  $X_{\text{old}} = X_{\text{new}}$
  for *each* $A \Rightarrow B \in \Gamma' \setminus \{\varnothing \Rightarrow X_{\text{new}}\}$ **do**
    if $A \subseteq X_{\text{new}}$ **then**
      Replace $\{\varnothing \Rightarrow X_{\text{new}}\}$ with $\{\varnothing \Rightarrow X_{\text{new}} \cup B\}$
      $X_{\text{new}} := X_{\text{new}} \cup B$
    end
    if $B \subseteq X_{\text{new}}$ **then**
      Remove $A \Rightarrow B$ from Γ'
    end
    if $A \cap X_{\text{new}} \neq \varnothing$ *or* $B \cap X_{\text{new}} \neq \varnothing$ **then**
      Replace $A \Rightarrow B$ with $A \setminus X_{\text{new}} \Rightarrow B \setminus X_{\text{new}}$
    end
  end
until $X_{\text{old}} = X_{\text{new}}$
return X^+ *and* Γ'