Sémantique Des
Langages Informatiques TP4 : Heidi Diego Luis

Syntaxe abstraite

Heidi :

hOrder = {deponer ; dretg ; sanester ; davent ; davos ; plaun ; returnar ; sa fermar}

$$\frac{}{x \in hOrder}$$

$$\frac{x \in hOrder}{x \in listhOrder}$$

$$\frac{h \in hOrder,\ t \in listhOrder}{h :: t \in listhOrder}$$

Tita

tOrder = {Court; Whee ; Wheeo ; Wheeo ; Hee ; Long}

$$\frac{}{pause \in t\_pause}$$

$$\frac{}{x \in tOrder}$$

$$\frac{}{x \in t\_pause}$$

Condition d'arrêt

$$\frac{h \in t\_pause}{t \in work}$$

$$\frac{h \in tOrder}{t \in work}$$

$$\frac{h \in tOrder, t \in work}{h :: t \in work}$$

$$\frac{h \in t\_pause, t \in work}{h :: t \in work}$$

Sémantique

Heidi vers Tita (h_to_t)

$$\frac{Deponer \in hOrder, Court \in tOrder}{Deponer\ -h\ to\ t->\ Court :: Court}$$

$$\frac{Dregt \in hOrder, \{Whee, Who\} \in tOrder}{Dregt\ -h\ to\ t->\ Whee :: Who}$$

$$\frac{Sanester \in hOrder, \{\ Wheet\ , Wheet\ \} \in tOrder}{Sanester\ -h\ to\ t->\ Wheet :: Wheet}$$

$$\frac{Davent \in hOrder, \{\ Wheet\ , Wheeo\ \} \in tOrder}{Davent\ -h\ to\ t->\ Wheet :: Wheeo :: Wheet :: Wheet\ ;}$$

$$\frac{Davos \in hOrder, \{\ Who, Hee\ \} \in tOrder}{Davos\ -h\ to\ t->\ Who :: Hee :: Who}$$

$$\frac{Plaun \in hOrder, Hee \in tOrder}{Plaun\ -h\ to\ t->\ Hee :: Hee :: Hee :: Hee}$$

$$\frac{Retunar \in hOrder, \{Whee\ , Wheet\ \} \in tOrder}{Retunar\ -h\ to\ t->\ Whee :: Whee :: Wheet}$$

$$\frac{Sa\ fermar \in hOrder, Long \in tOrder}{Sa\ fermar\ -h\ to\ t->\ Long}$$

Tita vers Heidi

$$\frac{order \in Order, Whistle \in Whistles, order\ -h\ to\ t->\ order}{Whitsle\ -t\ to\ h->\ order}$$

Optimization

Rédefiniton tOrder

tOrder = { Wheeo ; Hee ; Wheet}

$$\frac{Deponer \in hOrder, \{Wheeo, Hee, Wheet\} \in tOrder}{Deponer\ -h\ to\ t->\ Wheeo\ --Hee\ --Wheet}$$

$$\frac{Dregt \in hOrder, \{Hee, Wheet\} \in tOrder}{Dregt\ -h\ to\ t->\ Hee\ --Wheet}$$

$$\frac{Sanester \in hOrder, \{\ Wheet\ , Wheeo\ \} \in tOrder}{Sanester\ -h\ to\ t->\ Wheet\ --Wheeo}$$

$$\frac{Davent \in hOrder, \{\ Wheet\ , Hee\ \} \in tOrder}{Davent\ -h\ to\ t->\ Wheet\ --Hee\ --Wheet}$$

$$\frac{Davos \in hOrder, \{\ Wheet, Wheeo\ \} \in tOrder}{Davos\ -h\ to\ t->\ Wheet\ --Wheeo\ --Wheet}$$

$$\frac{Plaun \in hOrder, \{Wheet, Wheeo\} \in tOrder}{Plaun\ -h\ to\ t->\ Wheet\ --Wheeo\ --Wheeo}$$

$$\frac{Retunar \in hOrder, \{Wheeo\ , Wheet\ \} \in tOrder}{Retunar\ -h\ to\ t->\ Wheeo - Wheet}$$

$$\frac{Sa\ fermar \in hOrder, \{Wheeo\} \in tOrder}{Sa\ fermar\ -h\ to\ t->\ Wheeo\ --Wheeo}$$

$$\frac{order \in hOrder, tOrder \in tOrders, tOrder\ -h\ to\ t->\ tOrder}{tOrder - t\ to\ h-> hOrder}$$

Preuve

Pas d'ambiguité entre les orders

Ordres séparés par une pause

⇨ Chaque élément est traduit sans erreur

Accélération

traduction

h_to_t([plaun, dretg, plaun, deponer, safermar], X).

traduction2

t_to_h([wheet, wheeo, wheeo, hee, wheet, wheet, wheeo, wheeo, wheeo, hee, wheet, wheeo, wheeo], X).

résultat
X = [sanester, deponer, sanester, safermar, dretg, safermar]
X = [sanester, deponer, plaun, deponer, safermar]
X = [plaun, dretg, sanester, safermar, dretg, safermar]
X = [plaun, dretg, plaun, deponer, safermar]

On remarque qu'il est possible d'interpréter différemment les ordres car les pauses sont absentes.
On a eu 4 interprétations pour l'exemple du sujet

Problèmes

Oui, c'est possible

CODE permettant d'avoir toute les possibilités qui renvoi un élément diffèrent quand il y a 3 ordres à la suite:

h_to_t([A, B, C], Y), t_to_h (Y, [D, E, F]), not(A = D), not(B = E), not(C = F).