

Correction quick

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November 28, 2019

1 Typage

1.

$$\overline{(I, O) \vdash \varepsilon \mid (I, O)}$$

$$\frac{x \notin I \sqcup O \quad (I \sqcup \{x\}, O) \vdash (I, O')}{(I, O) \vdash \text{var } x \text{ in } ; dv \mid (I'', O')}$$

$$\frac{x \notin I \sqcup O \quad (I, O \sqcup \{x\}) \vdash (I, O')}{(I, O) \vdash \text{var } x \text{ in } ; dv \mid (I'', O')}$$

2.

$$\overline{(I, O) \vdash n}$$

$$\frac{x \in I}{(I, O) \vdash x}$$

$$\frac{(I, O) \vdash e1 \quad (I, O) \vdash e2}{(I, O) \vdash e1 \text{ op } e2}$$

3.

$$\overline{(I, O) \vdash \text{Skip}}$$

$$\frac{(I, O) \vdash e \quad x \in O}{(I, O) \vdash x := e}$$

$$\frac{(I, O) \vdash S1 \quad (I, O) \vdash S2}{(I, O) \vdash S1; S2}$$

4.

$$\frac{(I, O) \vdash e \quad (I, O) \vdash S1 \quad (I, O) \vdash S2}{(I, O) \vdash \text{if } e \text{ then } S1 \text{ else } S2 \text{ fi}}$$

$$\frac{(I, O) \vdash e \quad (I, O) \vdash S}{(I, O) \vdash \text{while } e \text{ do } S \text{ od}}$$

$$\frac{(\emptyset, \emptyset) \vdash dv \mid (I, O) \quad (I, O) \vdash S}{\vdash \text{begin } dv \text{ } S \text{ end}}$$

2 Optimisation

5.

•	Gen	Kill	Out	In	Out	In	Out	In
B1	\emptyset	a,c,x,y	\emptyset	\emptyset	c,x	\emptyset	a,c,x	\emptyset
B2	x,c	c,x,y	\emptyset	c,x	a,x,y	a,c,y	a,x,y	a,c,x
B3	a,x	a,c,y	\emptyset	a,x	c,x	a,x	a,c,x	a,x
B4	x,y	c	\emptyset	x,y	\emptyset	x,y	\emptyset	x,y

7.

$$\text{In}(b) = (\text{Out}(b) \setminus \text{Kill}(b)) \cup \text{Gen}(b)$$

8.

$$\text{Out}(b) = \bigcup_{b' \in \text{Suc}(b)} \text{In}(b')$$

10.

Lignes à supprimer:

7,10

On est D'accord ou pas ?