

# 1 Grammar Sets

- Global Variables:  $\{a, b, r_2\}$
- Local Variables for Thread  $t_1$  :  $\{r_1\}$
- Value Set for Thread  $t_1$  :  $\{0, 1\}$
- Value Set for Thread  $t_2$  :  $\{1\}$
- Value Set for Thread  $t_3$  :  $\{1\}$

# 2 Configuration

| thread t1   | thread t2   | thread t3  |
|---|---|--|
| (i1)create 0<br>(i2)write a<br>(i3)write b $\rightarrow$ {t2}<br>(i4)read a<br>(i5)write r1<br>(i6)read r1<br>(i7)if(1)<br>(i8)create 1<br>(i9)write b<br>(i10)fi | (i11)read b<br>(i12)write r2 $\rightarrow$ {t3}<br>(i13)read r2<br>(i14)if(1)<br>(i15)create 1<br>(i16)write a<br>(i17)fi | (i18)read r2<br>(i19)if $\neg$ (1)<br>(i20)create 1<br>(i21)write a<br>(i22)fi |

# 3 Properties

| thread t1   | thread t2  | thread t3   |
|---|--|---|
| (i1){0}<br>(i2){0}<br>(i3){0}<br>(i4){0,1} $\leftarrow$ {i2,i16,i21}<br>(i5){0,1}<br>(i6){0,1} $\leftarrow$ {i5}<br>(i7){0,1}<br>(i8){1}<br>(i9){1}<br>(i10){1} | (i11){0,1} $\leftarrow$ {i3,i9}<br>(i12){0,1}<br>(i13){0,1} $\leftarrow$ {i12}<br>(i14){0,1}<br>(i15){1}<br>(i16){1}<br>(i17){1} | (i18){0,1} $\leftarrow$ {i12}<br>(i19){0,1}<br>(i20){1}<br>(i21){1}<br>(i22){1} |