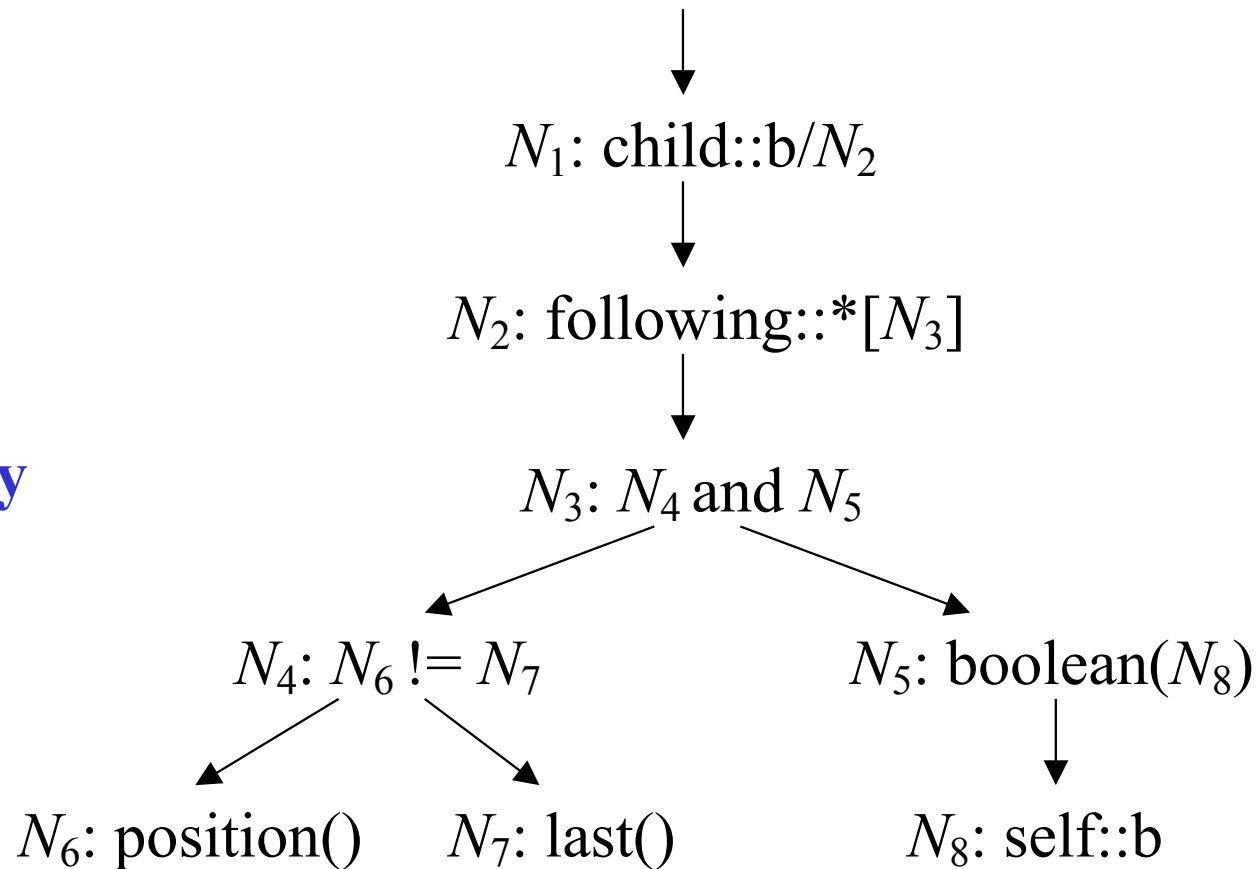


# Parse Tree of the Query

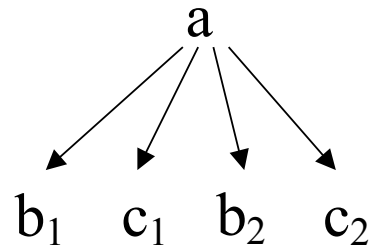
**Query:**

**child::b/following::\*[position() != last() and self::b]**

**Query  
Tree:**



<a> <b/> <c/> <b/> <c/></a>



$N_1$



$N_2$



$N_3$



$N_4: N_6 \neq N_7$

$N_5$



$N_6: \text{position()}$

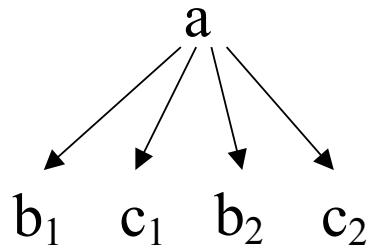
$N_7: \text{last()}$



$N_8$



<a> <b/> <c/> <b/> <c/></a>



$N_1$



$N_2$



$N_3$



$N_4: N_6 \neq N_7$

$N_5$



$N_6: \text{position}()$

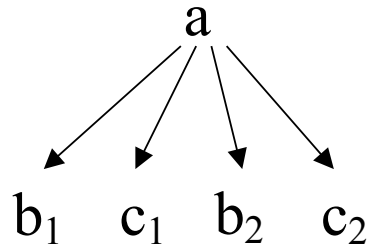
$N_7: \text{last}()$

$N_8$

$N_6: \text{position}()$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

(In fact, this is only a relevant subset of the full tables.)

<a> <b/> <c/> <b/> <c/></a>



$N_1$



$N_2$



$N_3$



$N_4: N_6 \neq N_7$

$N_5$



$N_6: \text{position}()$

$N_7: \text{last}()$

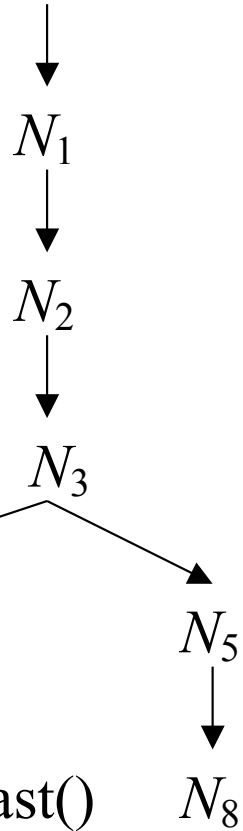
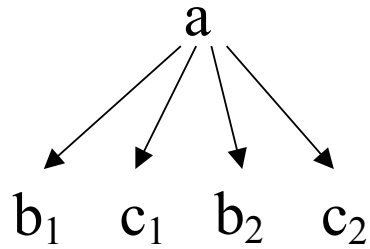
$N_8$

$N_6: \text{position}()$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

$N_7: \text{last}()$			
cn	cp	cs	res
c <sub>1</sub>	1	3	3
b <sub>2</sub>	2	3	3
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	2
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

(In fact, this is only a relevant subset of the full tables.)

<a> <b/> <c/> <b/> <c/></a>



$N_4: N_6 \neq N_7$

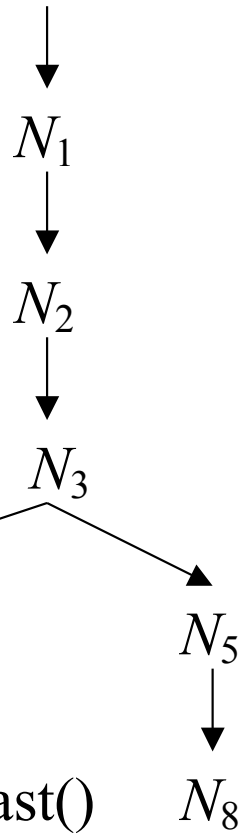
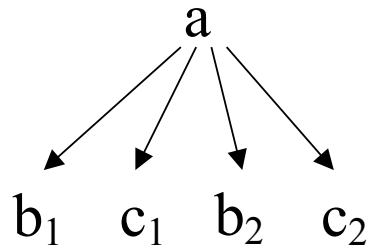
$N_6: \text{position()}$     $N_7: \text{last()}$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res

$N_6: \text{position()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	3
b <sub>2</sub>	2	3	3
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	2
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

<a> <b/> <c/> <b/> <c/></a>



$N_4: N_6 \neq N_7$

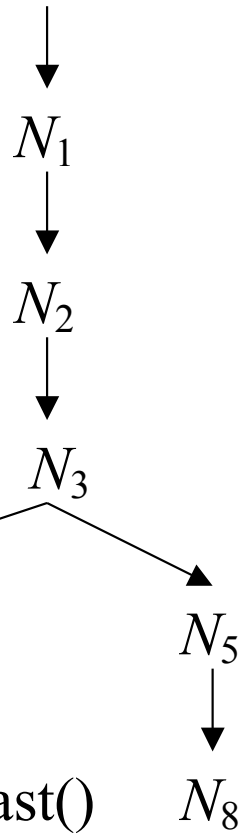
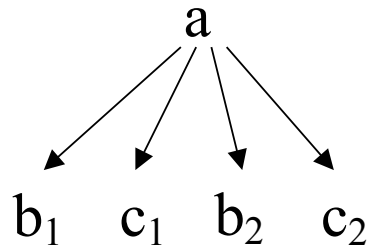
$N_6: \text{position()}$     $N_7: \text{last()}$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
c1	1	3	true

$N_6: \text{position()}$			
cn	cp	cs	res
c1	1	3	1
b2	2	3	2
c2	3	3	3
b2	1	2	1
c2	2	2	2
c2	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
c1	1	3	3
b2	2	3	3
c2	3	3	3
b2	1	2	2
c2	2	2	2
c2	1	1	1

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_4: N_6 \neq N_7$

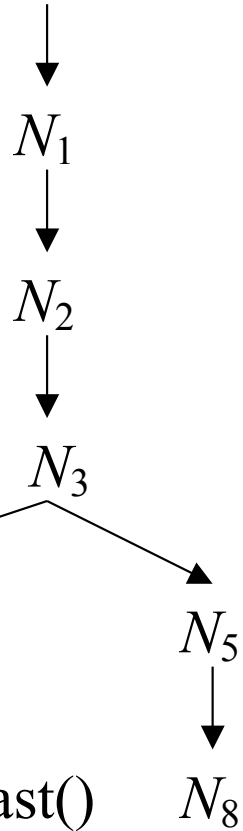
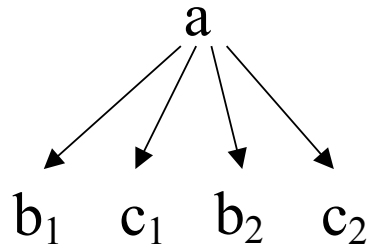
$N_6: \text{position()}$     $N_7: \text{last()}$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
$c_1$	1	3	true
$b_2$	2	3	true

$N_6: \text{position()}$			
cn	cp	cs	res
$c_1$	1	3	1
$b_2$	2	3	2
$c_2$	3	3	3
$b_2$	1	2	1
$c_2$	2	2	2
$c_2$	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
$c_1$	1	3	3
$b_2$	2	3	3
$c_2$	3	3	3
$b_2$	1	2	2
$c_2$	2	2	2
$c_2$	1	1	1

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_4: N_6 \neq N_7$

$N_6: \text{position()}$     $N_7: \text{last()}$

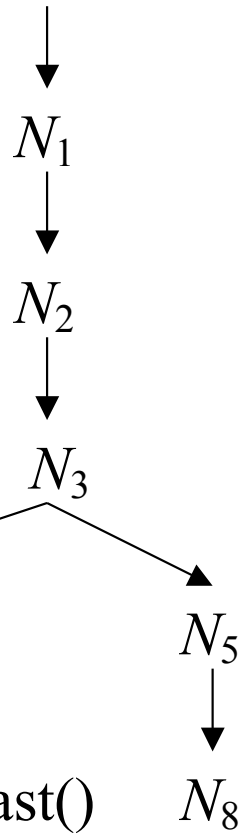
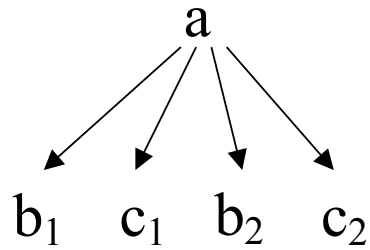
$N_4: N_6 \neq N_7$			
cn	cp	cs	res
$c_1$	1	3	true
$b_2$	2	3	true
$c_2$	3	3	false

$N_6: \text{position()}$			
cn	cp	cs	res
$c_1$	1	3	1
$b_2$	2	3	2
$c_2$	3	3	3
$b_2$	1	2	1
$c_2$	2	2	2
$c_2$	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
$c_1$	1	3	3
$b_2$	2	3	3
$c_2$	3	3	3
$b_2$	1	2	2
$c_2$	2	2	2
$c_2$	1	1	1



<a> <b/> <c/> <b/> <c/></a>



$N_4: N_6 \neq N_7$

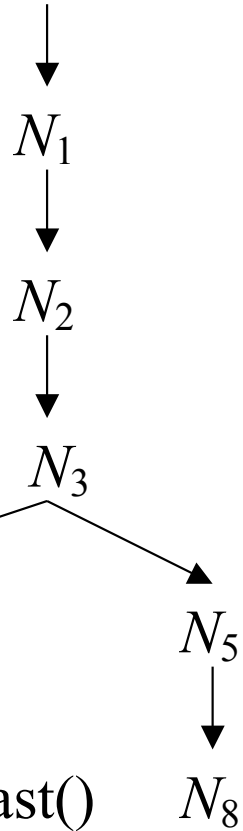
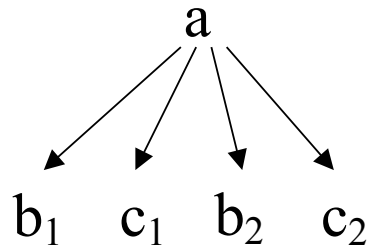
$N_6: \text{position()}$     $N_7: \text{last()}$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true

$N_6: \text{position()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	3
b <sub>2</sub>	2	3	3
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	2
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

<a> <b/> <c/> <b/> <c/></a>



$N_4: N_6 \neq N_7$

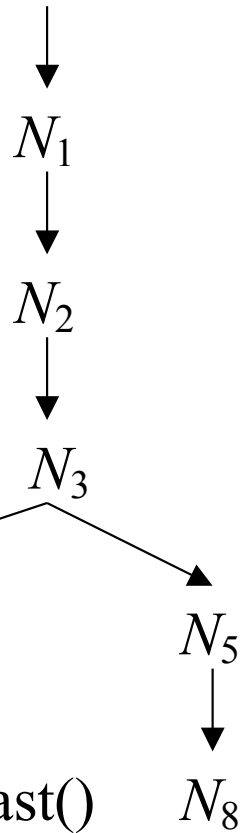
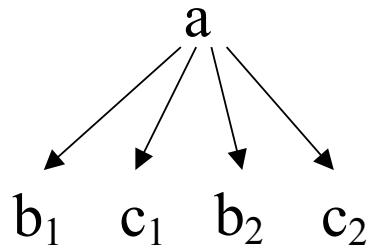
$N_6: \text{position()}$     $N_7: \text{last()}$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false

$N_6: \text{position()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

$N_7: \text{last()}$			
cn	cp	cs	res
c <sub>1</sub>	1	3	3
b <sub>2</sub>	2	3	3
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	2
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

<a> <b/> <c/> <b/> <c/></a>



$N_4: N_6 \neq N_7$

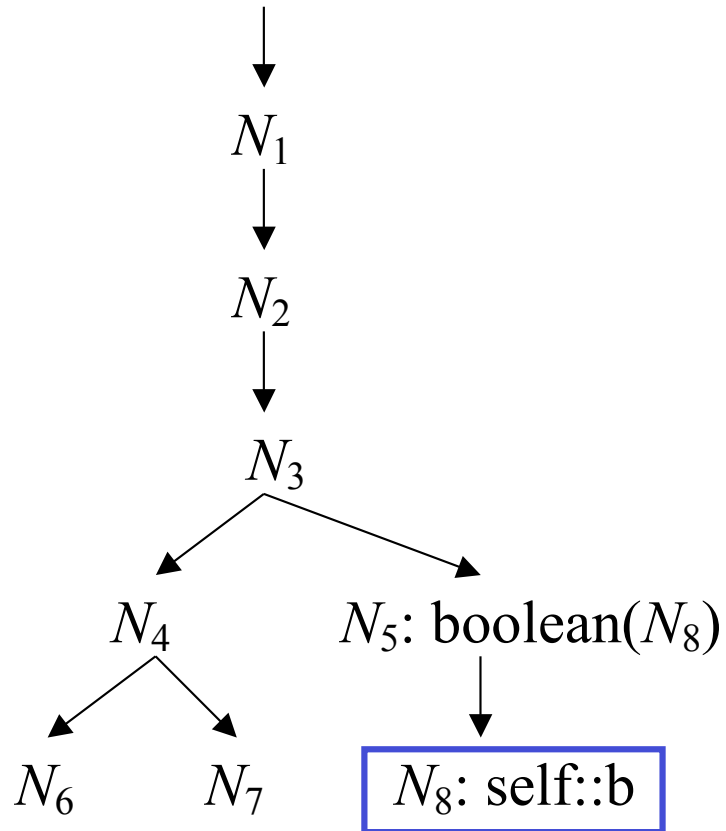
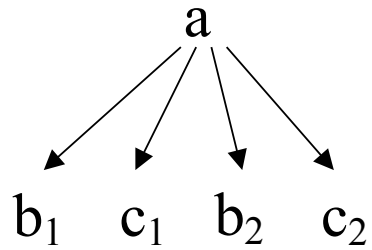
$N_6: \text{position}()$     $N_7: \text{last}()$

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$N_6: \text{position}()$			
cn	cp	cs	res
c <sub>1</sub>	1	3	1
b <sub>2</sub>	2	3	2
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	1
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

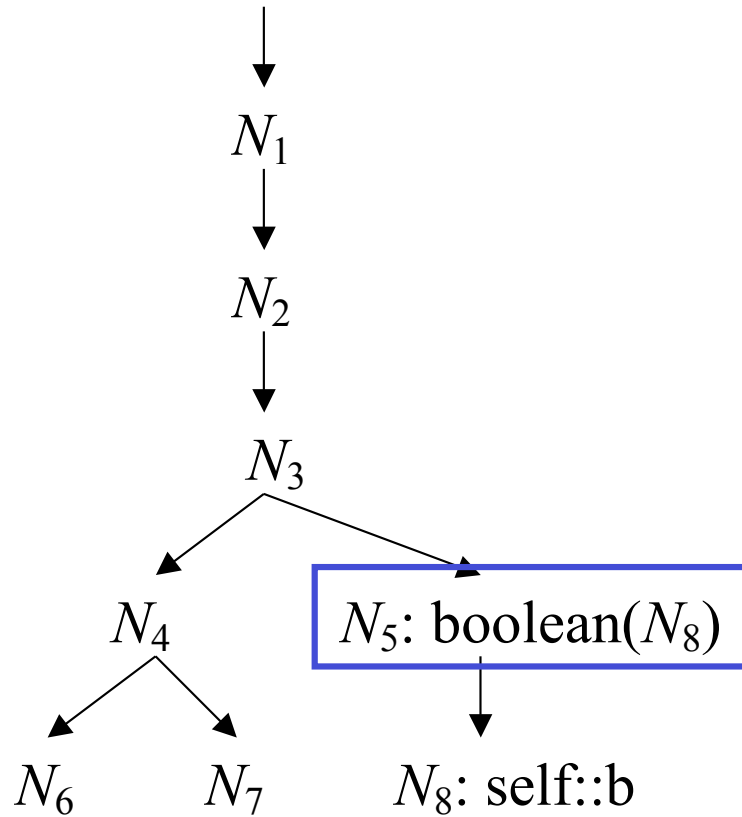
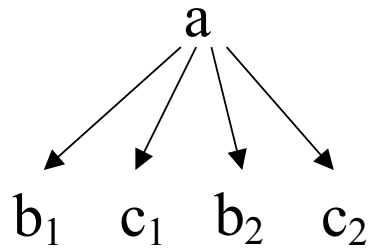
$N_7: \text{last}()$			
cn	cp	cs	res
c <sub>1</sub>	1	3	3
b <sub>2</sub>	2	3	3
c <sub>2</sub>	3	3	3
b <sub>2</sub>	1	2	2
c <sub>2</sub>	2	2	2
c <sub>2</sub>	1	1	1

<a> <b/> <c/> <b/> <c/></a>



N8: self::b			
cn	cp	cs	res
c1	1	3	{ }
b2	2	3	{ b2 }
c2	3	3	{ }
b2	1	2	{ b2 }
c2	2	2	{ }
c2	1	1	{ }

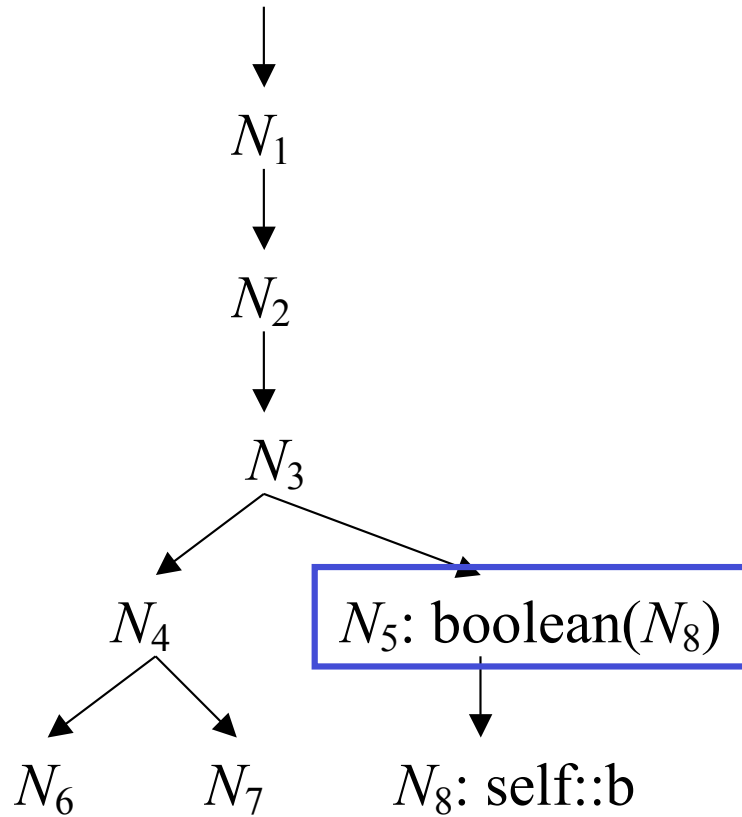
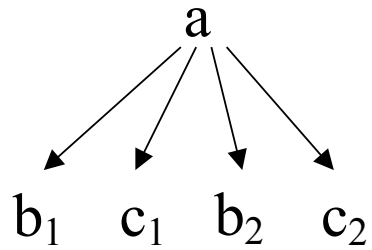
<a> <b/> <c/> <b/> <c/></a>



N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }

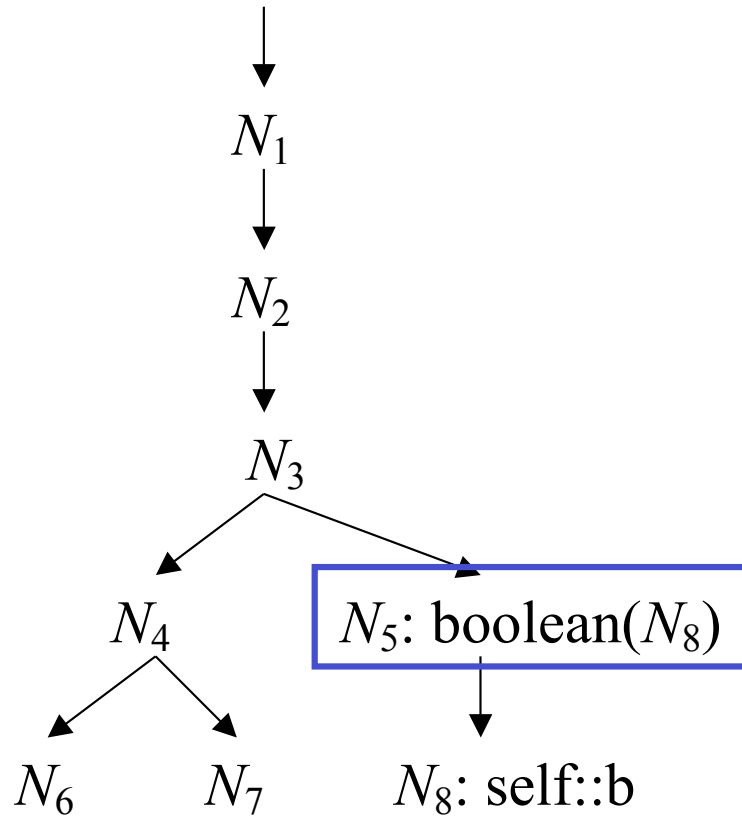
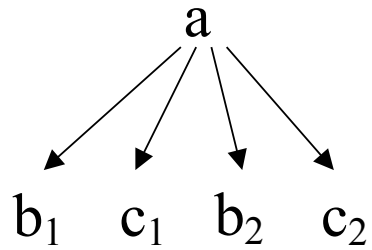
<a> <b/> <c/> <b/> <c/></a>



N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }

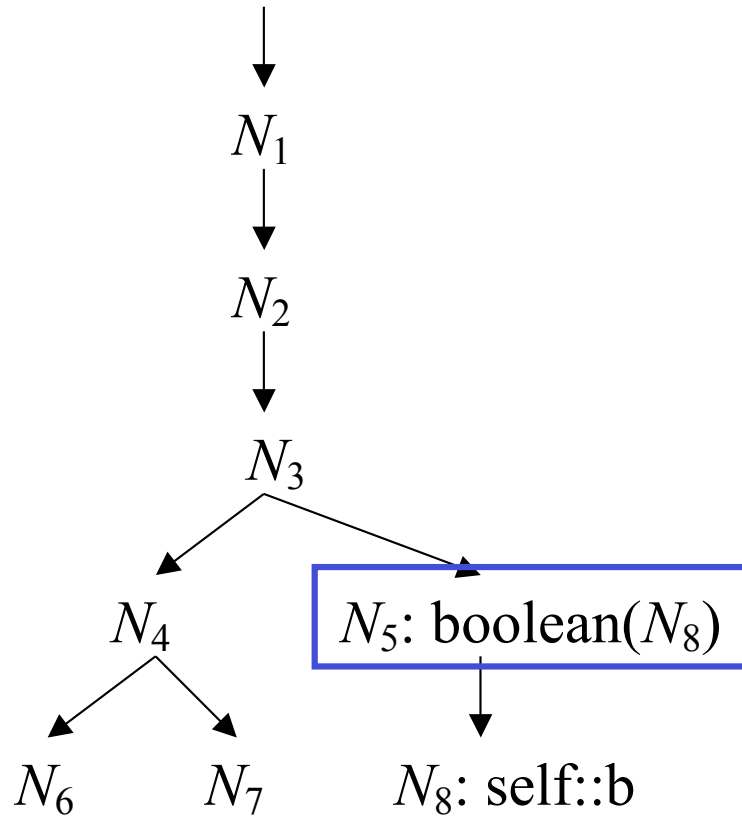
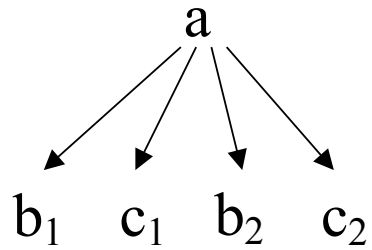
<a> <b/> <c/> <b/> <c/></a>



N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }

<a> <b/> <c/> <b/> <c/></a>

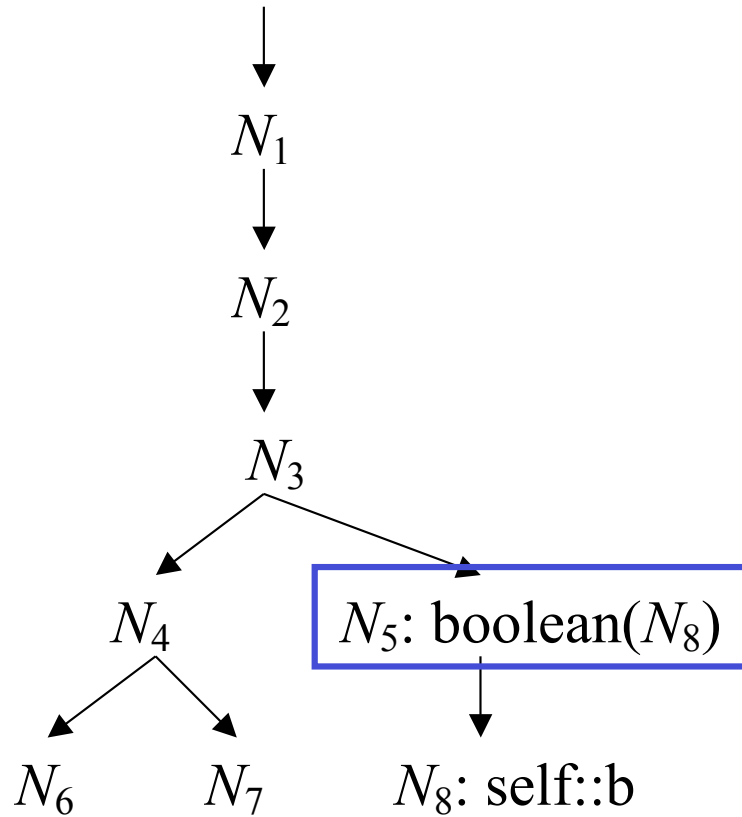
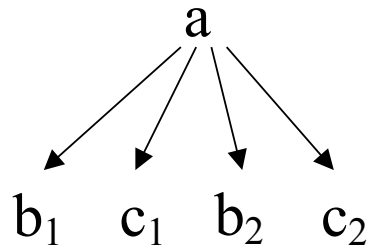


N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }



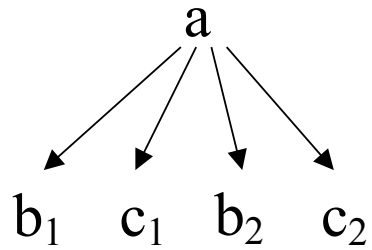
<a> <b/> <c/> <b/> <c/></a>



N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }

<a> <b/> <c/> <b/> <c/></a>



$N_1$



$N_2$



$N_3$



$N_4$

$N_5: \text{boolean}(N_8)$



$N_6$



$N_7$

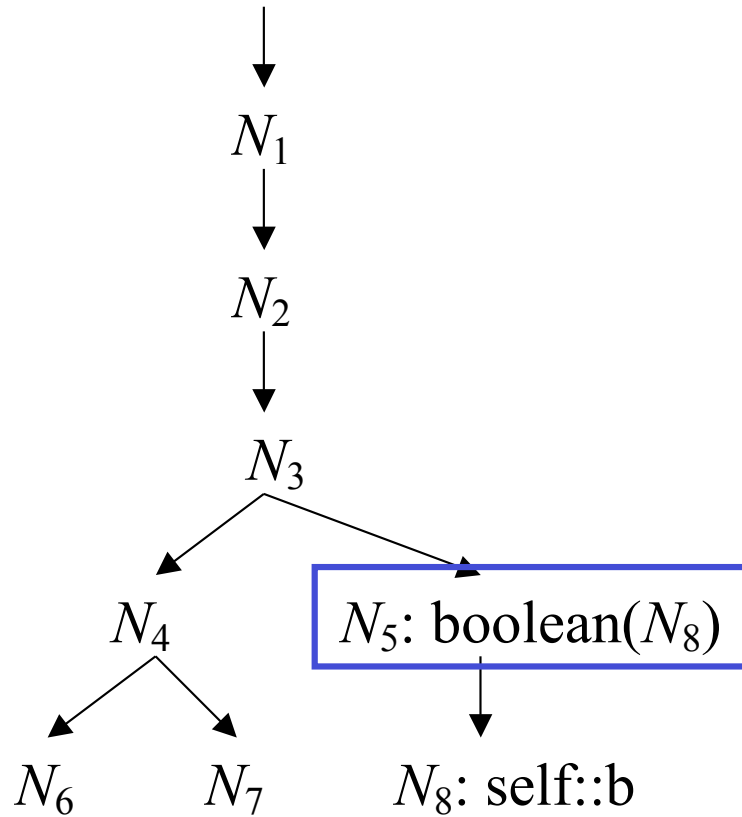
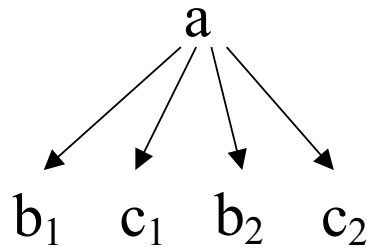


$N_8: \text{self}::b$

$N_5: \text{boolean}(N_8)$			
cn	cp	cs	res
$c_1$	1	3	false
$b_2$	2	3	true
$c_2$	3	3	false
$b_2$	1	2	true
$c_2$	2	2	false

$N_8: \text{self}::b$			
cn	cp	cs	res
$c_1$	1	3	{ }
$b_2$	2	3	{ $b_2$ }
$c_2$	3	3	{ }
$b_2$	1	2	{ $b_2$ }
$c_2$	2	2	{ }
$c_2$	1	1	{ }

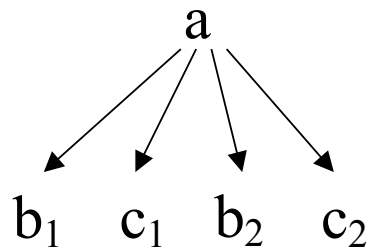
<a> <b/> <c/> <b/> <c/></a>



N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>8</sub> : self::b			
cn	cp	cs	res
c <sub>1</sub>	1	3	{ }
b <sub>2</sub>	2	3	{ b <sub>2</sub> }
c <sub>2</sub>	3	3	{ }
b <sub>2</sub>	1	2	{ b <sub>2</sub> }
c <sub>2</sub>	2	2	{ }
c <sub>2</sub>	1	1	{ }

<a> <b/> <c/> <b/> <c/></a>



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

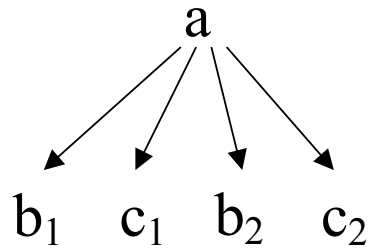
$N_8$

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res

$N_4: N_6 \neq N_7$			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$N_5: \text{boolean}(N_8)$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

<a> <b/> <c/> <b/> <c/></a>



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

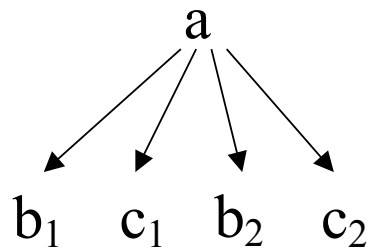
$N_8$

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

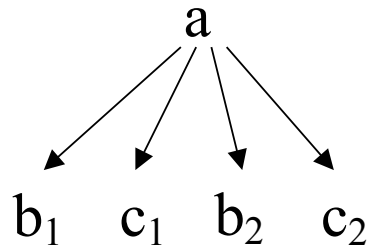
$N_8$

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

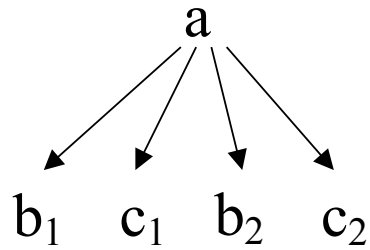
$N_8$

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

$N_8$

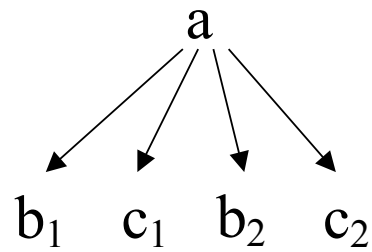
N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false



$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

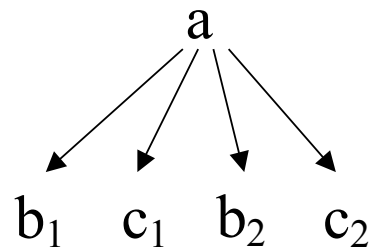
$N_8$

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

$\langle a \rangle \langle b \rangle \langle c \rangle \langle b \rangle \langle c \rangle \langle /a \rangle$



$N_1$

$N_2$

$N_3: N_4 \text{ and } N_5$

$N_4: N_6 \neq N_7$

$N_5: \text{boolean}(N_8)$

$N_6$

$N_7$

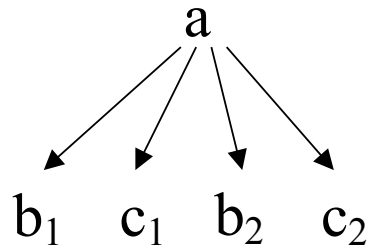
$N_8$

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>4</sub> : N <sub>6</sub> != N <sub>7</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	true
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

N <sub>5</sub> : boolean(N <sub>8</sub> )			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

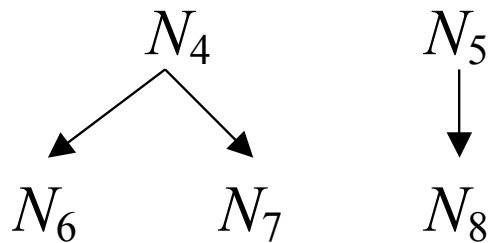
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

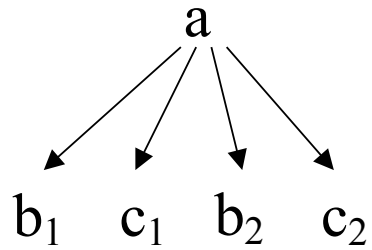
$N_3: N_4 \text{ and } N_5$



$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

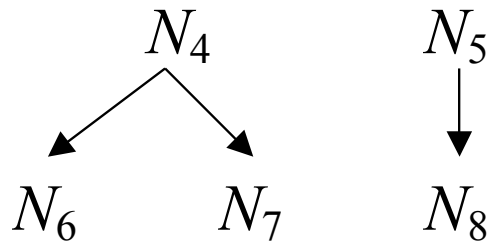
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

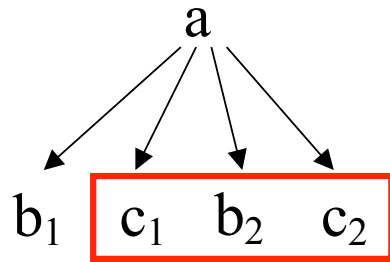
$N_3: N_4 \text{ and } N_5$



$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res
a	.	.	{ }

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

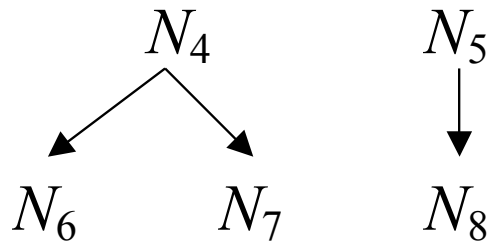
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

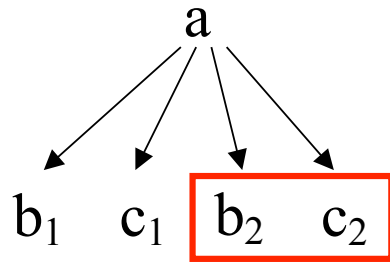
$N_3: N_4 \text{ and } N_5$



$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

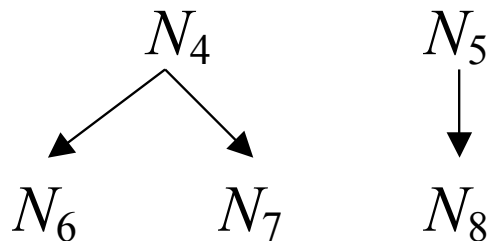
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

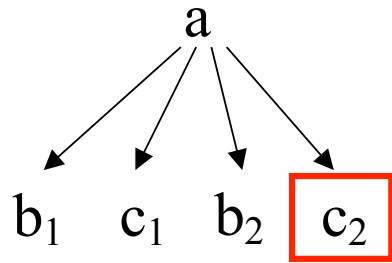
$N_3: N_4 \text{ and } N_5$



$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

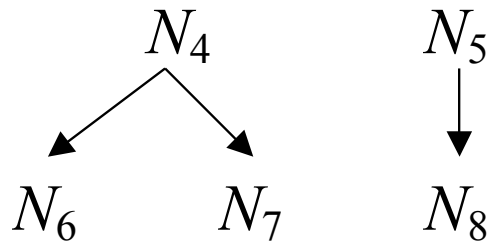
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

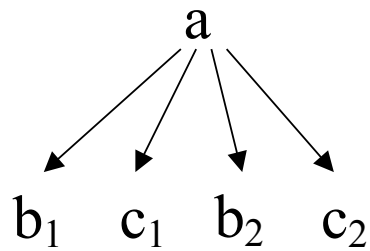
$N_3: N_4 \text{ and } N_5$



$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }
b <sub>2</sub>	.	.	{ }

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

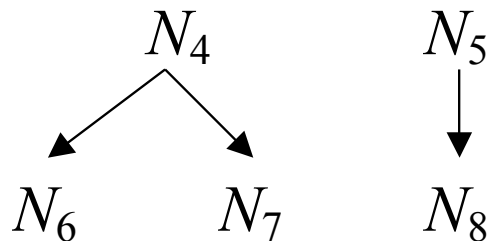
<a> <b/> <c/> <b/> <c/></a>



$N_1: \text{child}::b/N_2$

$N_2: \text{following}::*[N_3]$

$N_3: N_4 \text{ and } N_5$

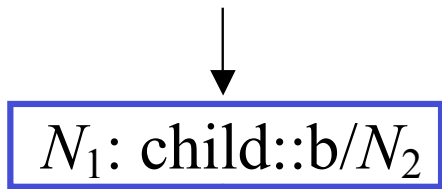
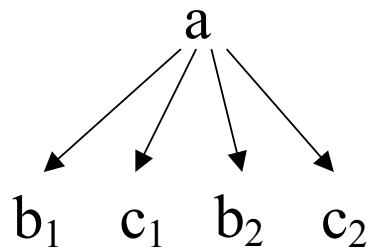


N <sub>2</sub> : following::*[N <sub>3</sub> ]			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }
b <sub>2</sub>	.	.	{ }
c <sub>2</sub>	.	.	{ }

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

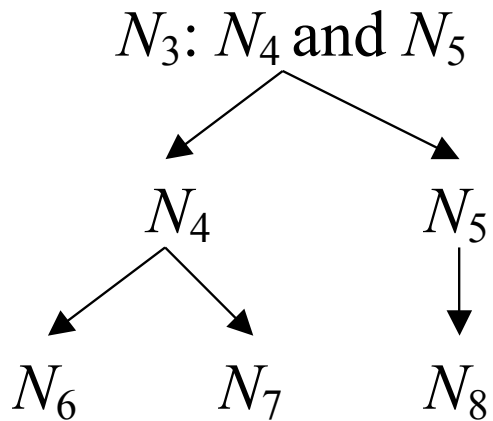


<a> <b/> <c/> <b/> <c/></a>



↓

$N_2: \text{following}::*[N_3]$

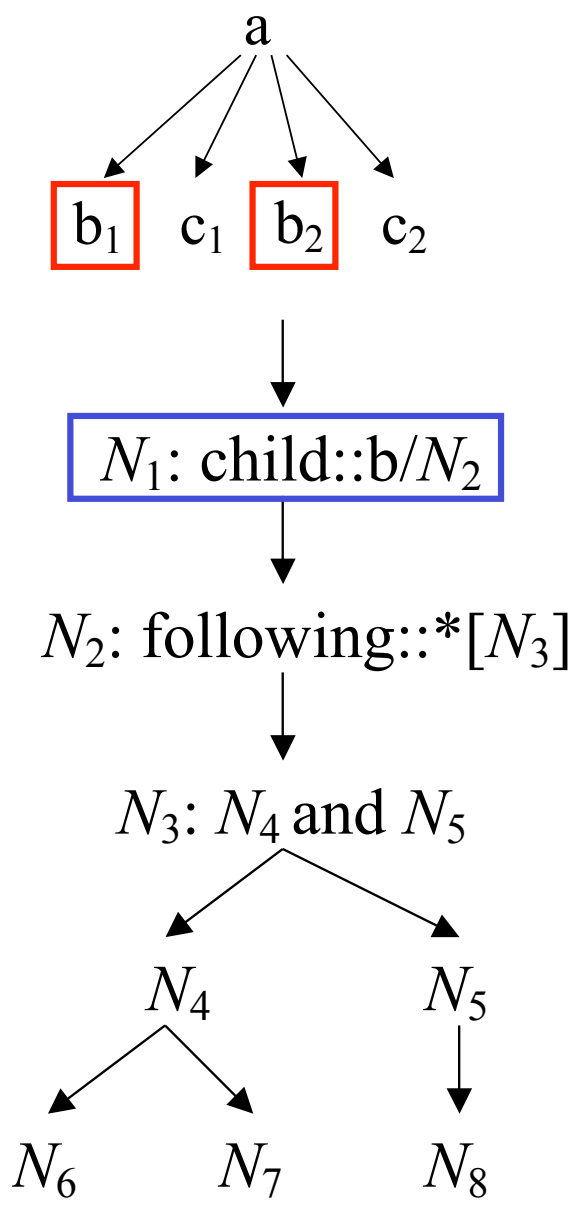


$N_1: \text{child}::b/N_2$			
cn	cp	cs	res

$N_2: \text{following}::*[N_3]$			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }
b <sub>2</sub>	.	.	{ }
c <sub>2</sub>	.	.	{ }

$N_3: N_4 \text{ and } N_5$			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

<a> <b/> <c/> <b/> <c/></a>

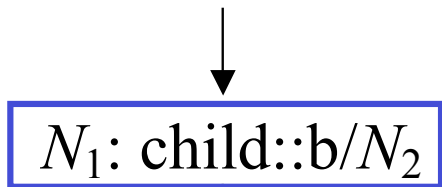
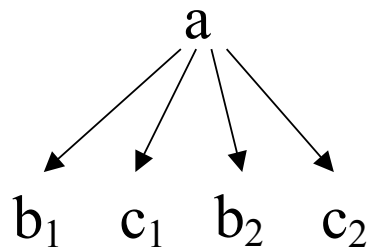


N <sub>1</sub> : child::b/N <sub>2</sub>			
cn	cp	cs	res
a	.	.	{ b <sub>2</sub> }

N <sub>2</sub> : following::*[N <sub>3</sub> ]			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }
b <sub>2</sub>	.	.	{ }
c <sub>2</sub>	.	.	{ }

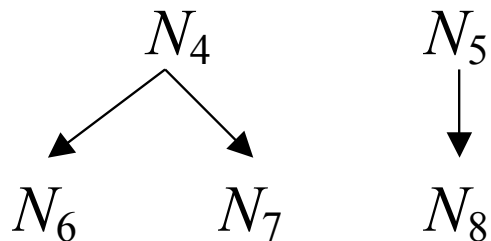
N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false

<a> <b/> <c/> <b/> <c/></a>



N<sub>2</sub>: following::\*[N<sub>3</sub>]

N<sub>3</sub>: N<sub>4</sub> and N<sub>5</sub>



N <sub>1</sub> : child::b/N <sub>2</sub>			
cn	cp	cs	res
a	.	.	{ b <sub>2</sub> }
b <sub>1</sub>	.	.	{ }
c <sub>1</sub>	.	.	{ }
b <sub>2</sub>	.	.	{ }
c <sub>2</sub>	.	.	{ }

N <sub>2</sub> : following::*[N <sub>3</sub> ]			
cn	cp	cs	res
a	.	.	{ }
b <sub>1</sub>	.	.	{ b <sub>2</sub> }
c <sub>1</sub>	.	.	{ b <sub>2</sub> }
b <sub>2</sub>	.	.	{ }
c <sub>2</sub>	.	.	{ }

N <sub>3</sub> : N <sub>4</sub> and N <sub>5</sub>			
cn	cp	cs	res
c <sub>1</sub>	1	3	false
b <sub>2</sub>	2	3	true
c <sub>2</sub>	3	3	false
b <sub>2</sub>	1	2	true
c <sub>2</sub>	2	2	false
c <sub>2</sub>	1	1	false