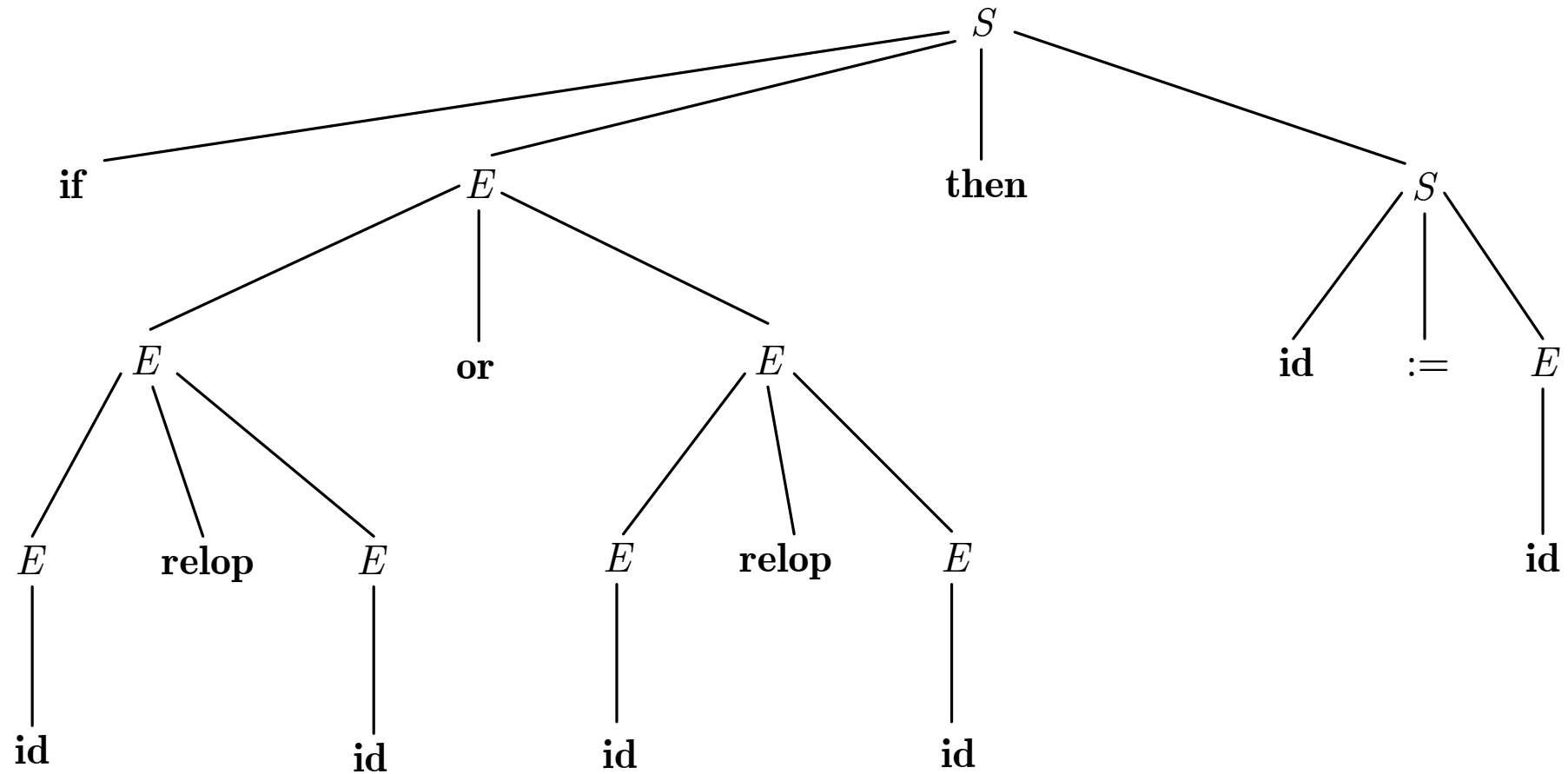
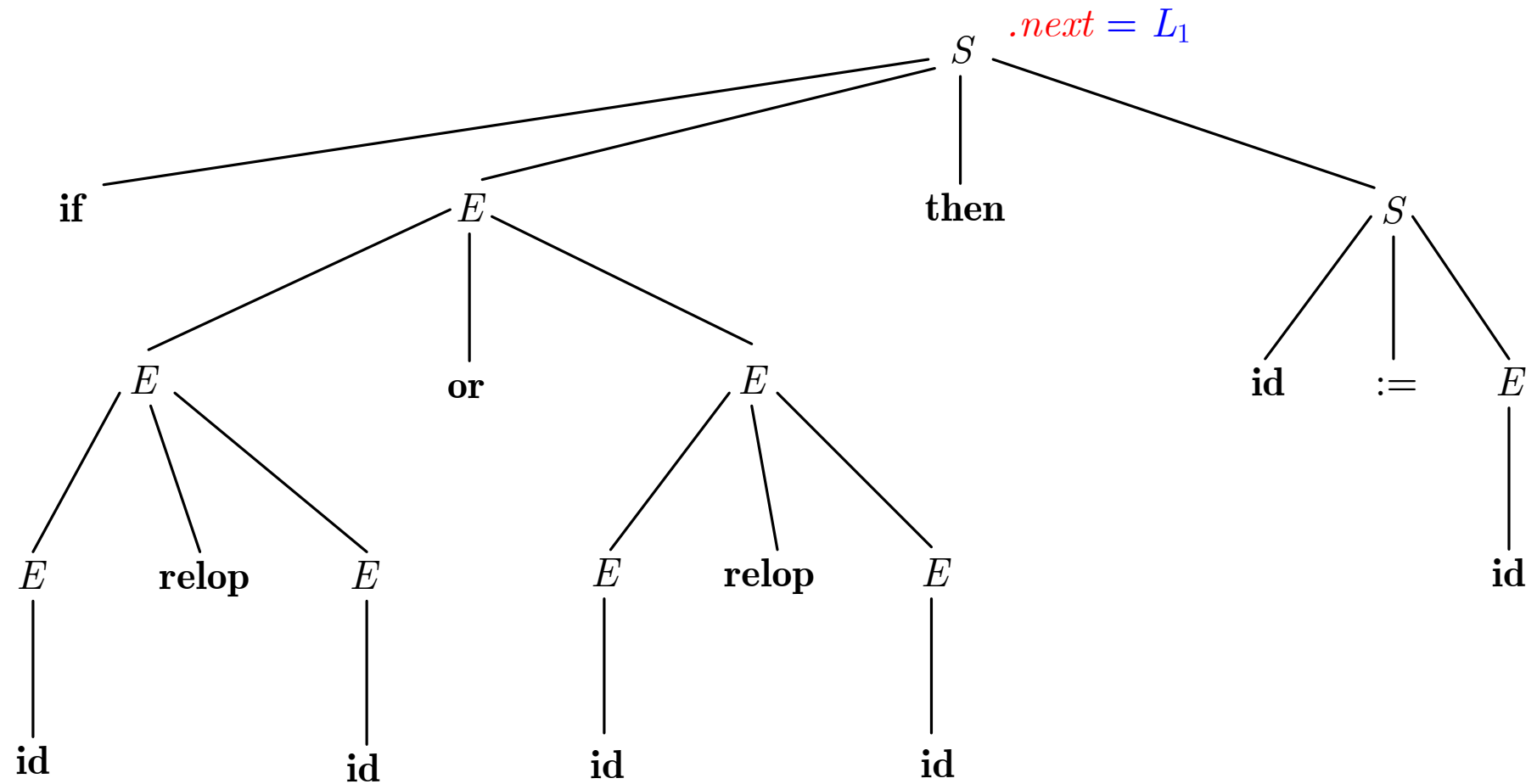


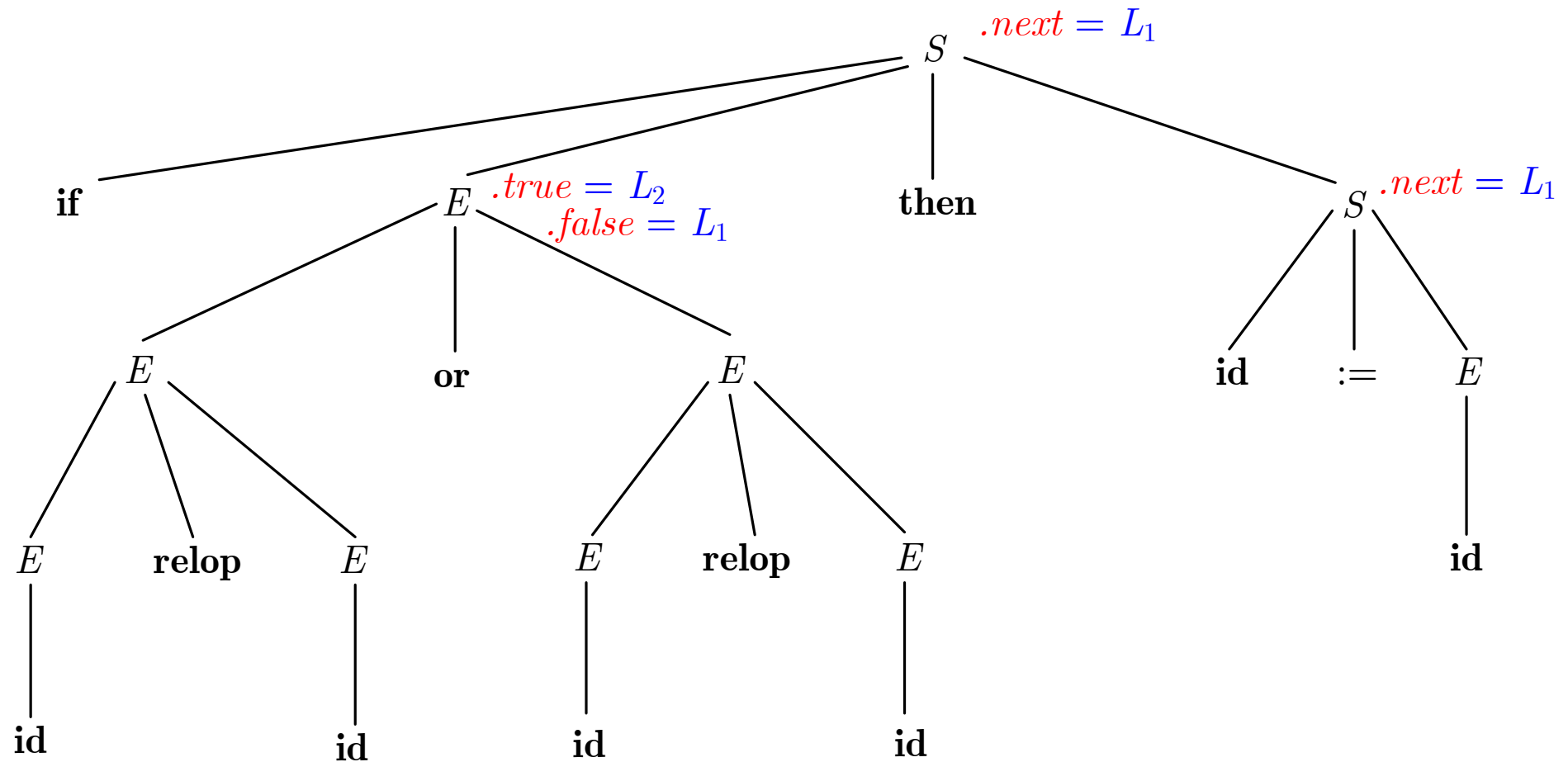
if $x < z$ **or** $x > w$ **then** $x := y$



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if $x < z$ **or** $x > w$ **then** $x := y$



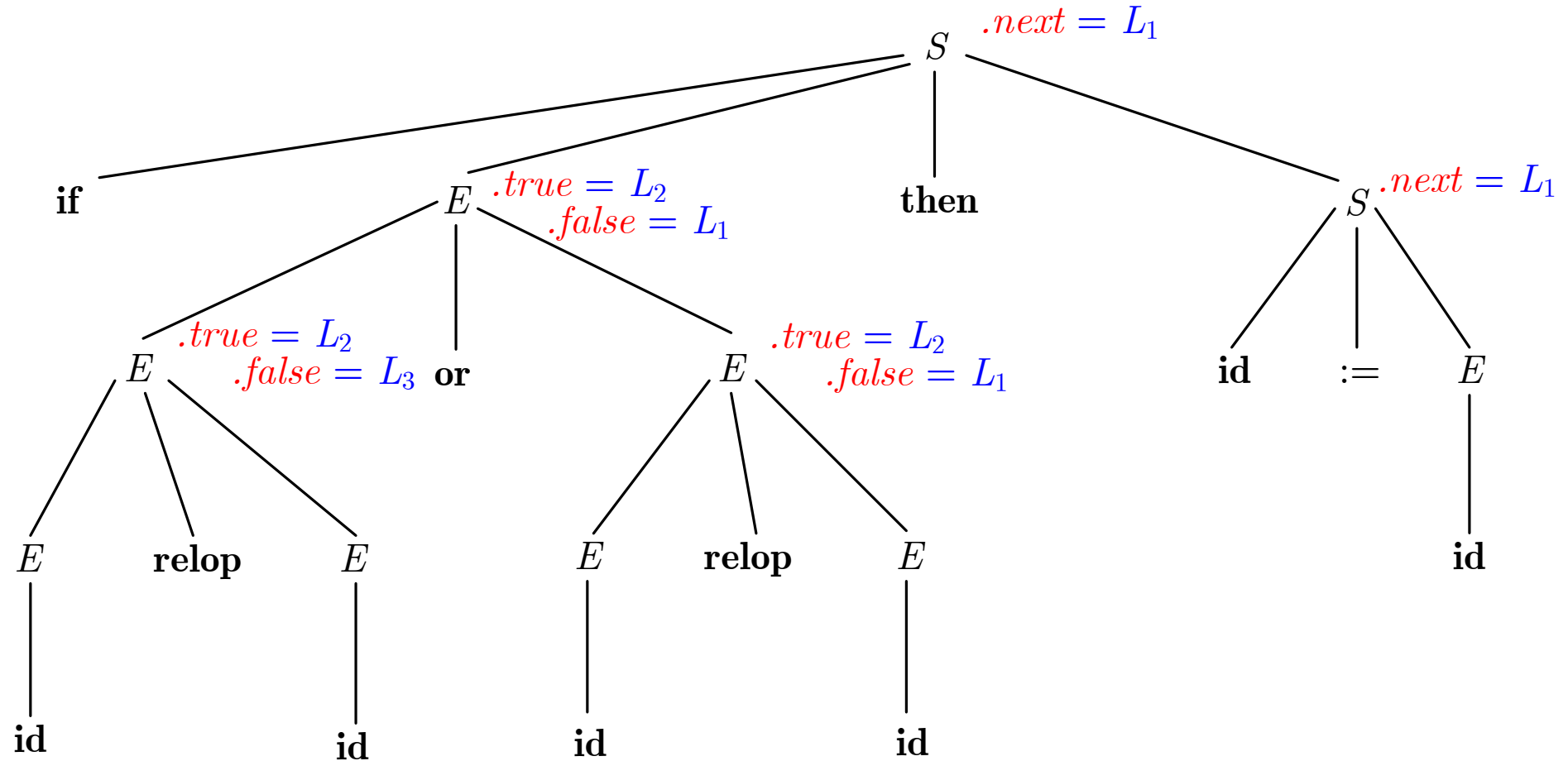
$S \rightarrow \text{if } E \text{ then } S_1$

$E.true := \text{newlabel}; \quad E.false := S.next;$

$S_1.next := S.next;$

$S.code := E.code \parallel \text{gen}(E.true \text{ ' :! ' }) \parallel S_1.code$

if $x < z$ **or** $x > w$ **then** $x := y$



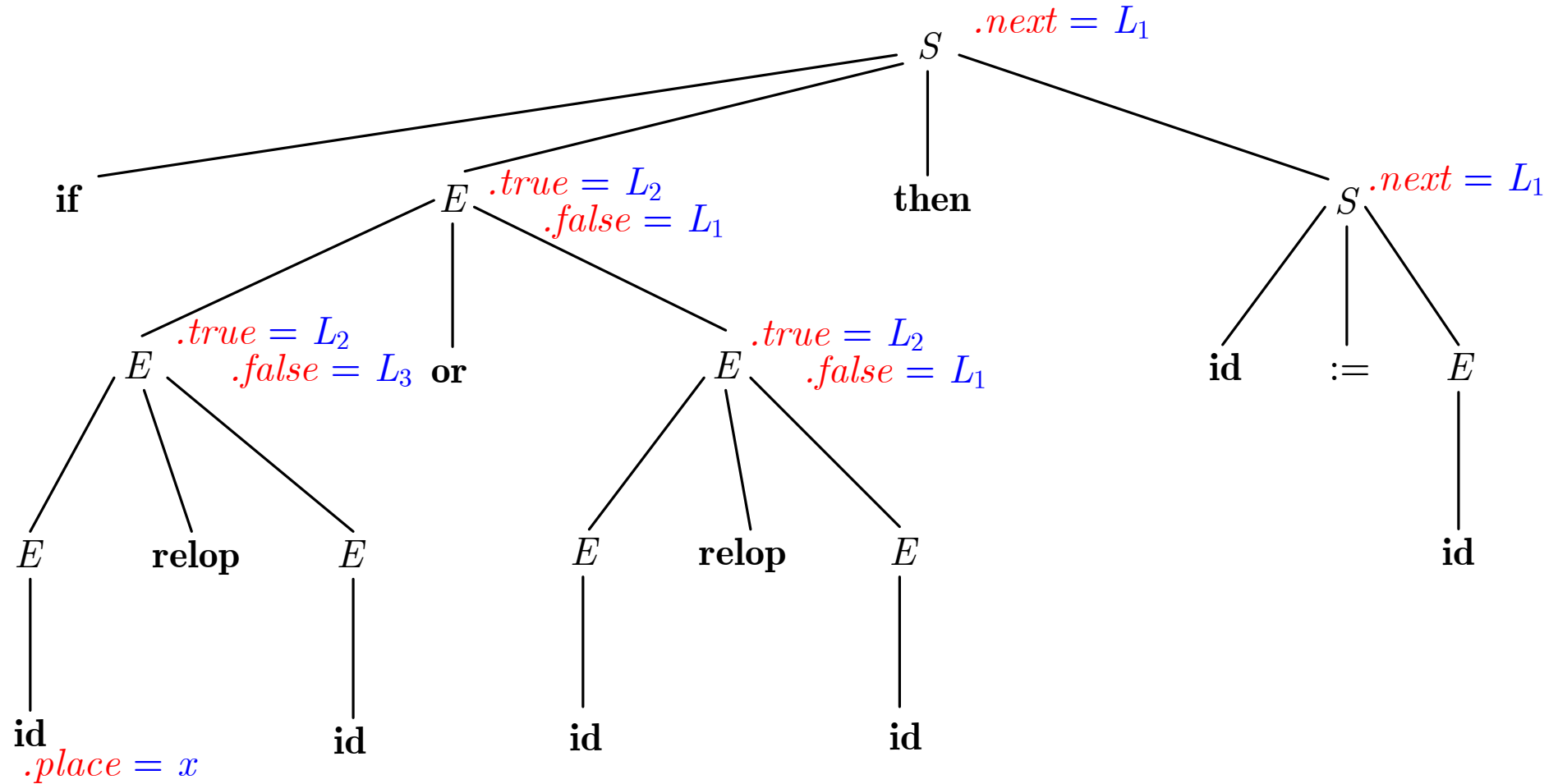
$E \rightarrow E_1 \text{ or } E_2$

$E_1.true := E.true; \quad E_1.false := \text{newlabel};$

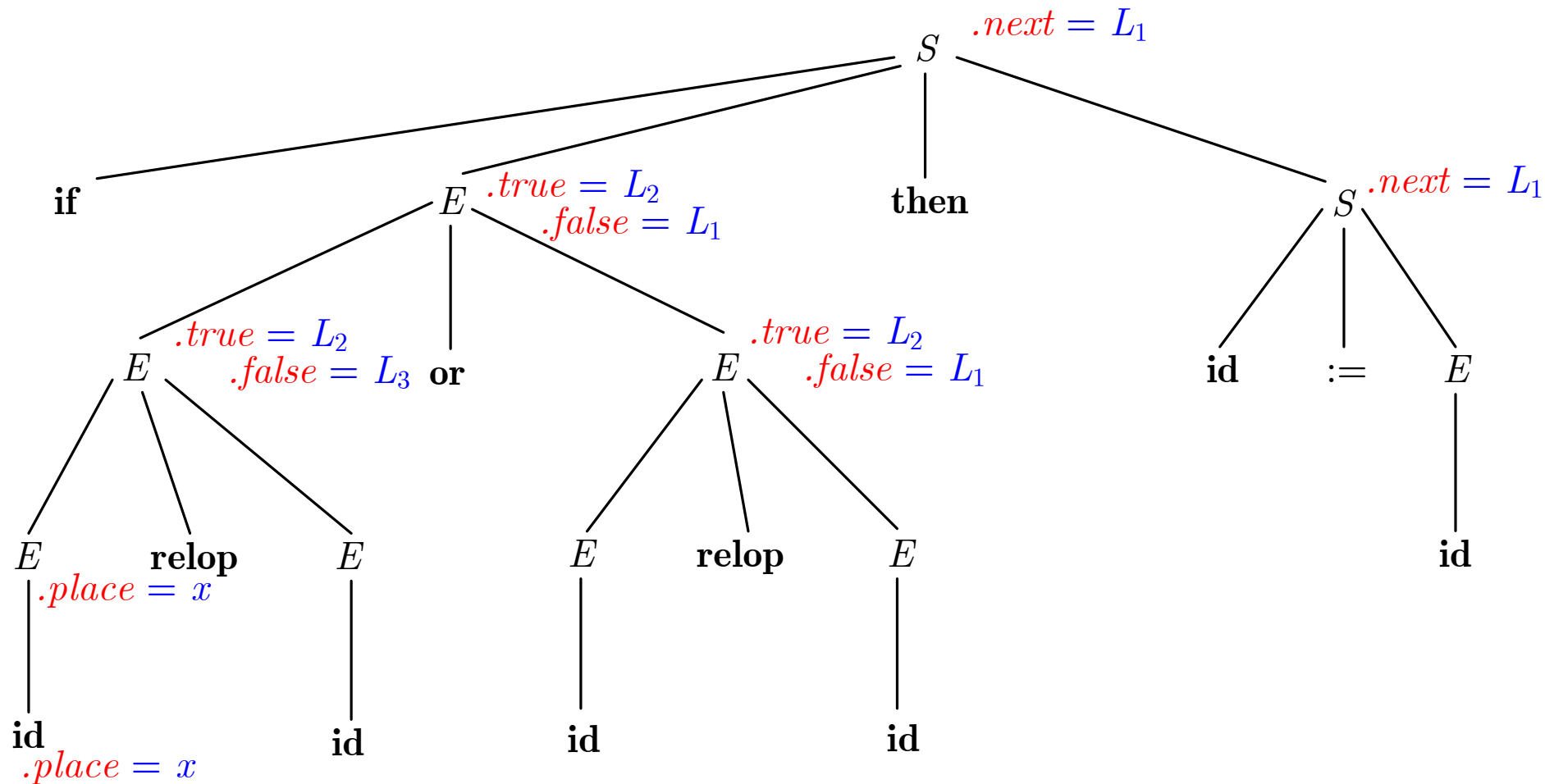
$E_2.true := E.true; \quad E_2.false := E.false;$

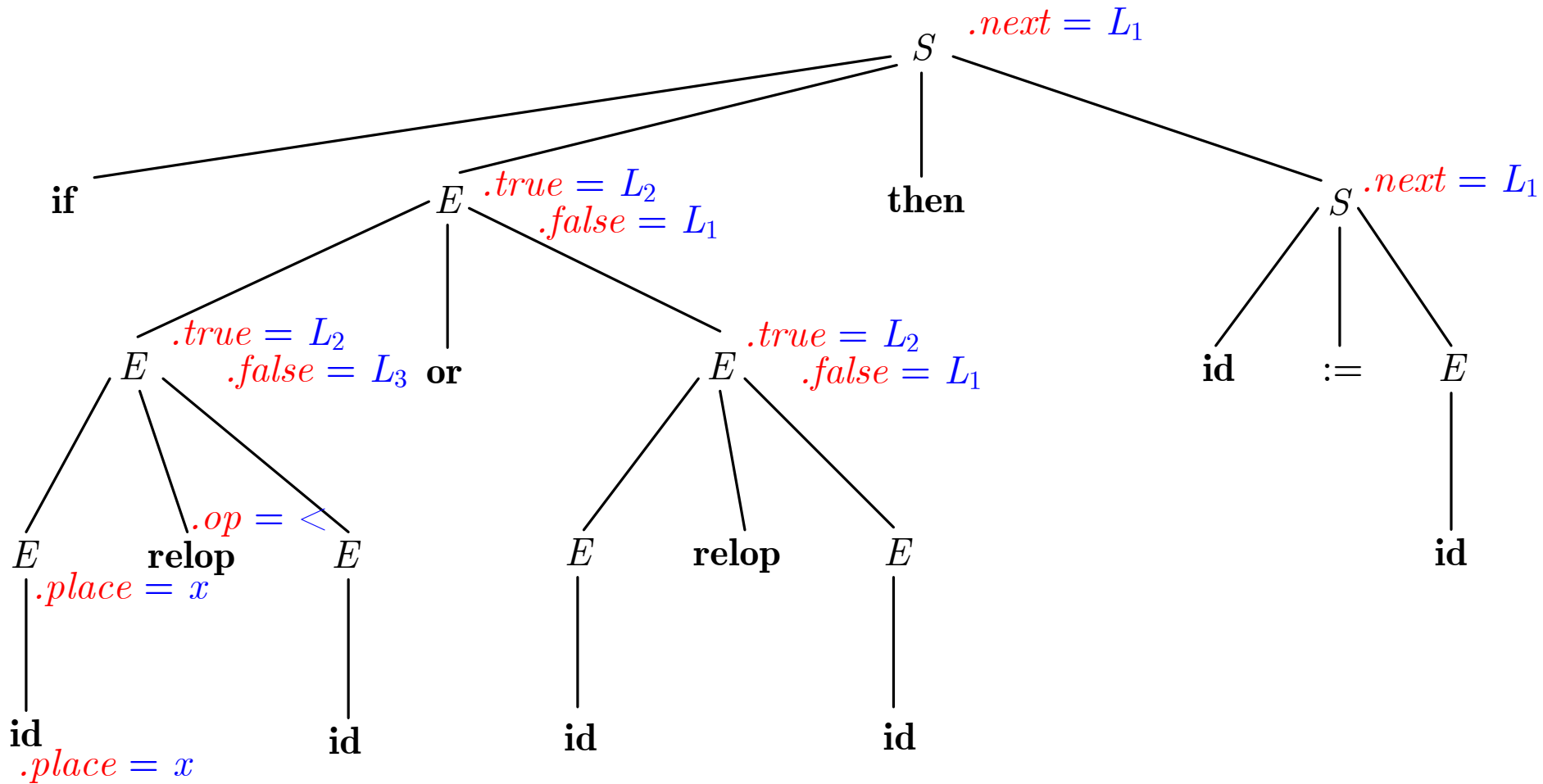
$E.code := E_1.code || \text{gen}(E_1.false' :') || E_2.code;$

if $x < z$ **or** $x > w$ **then** $x := y$

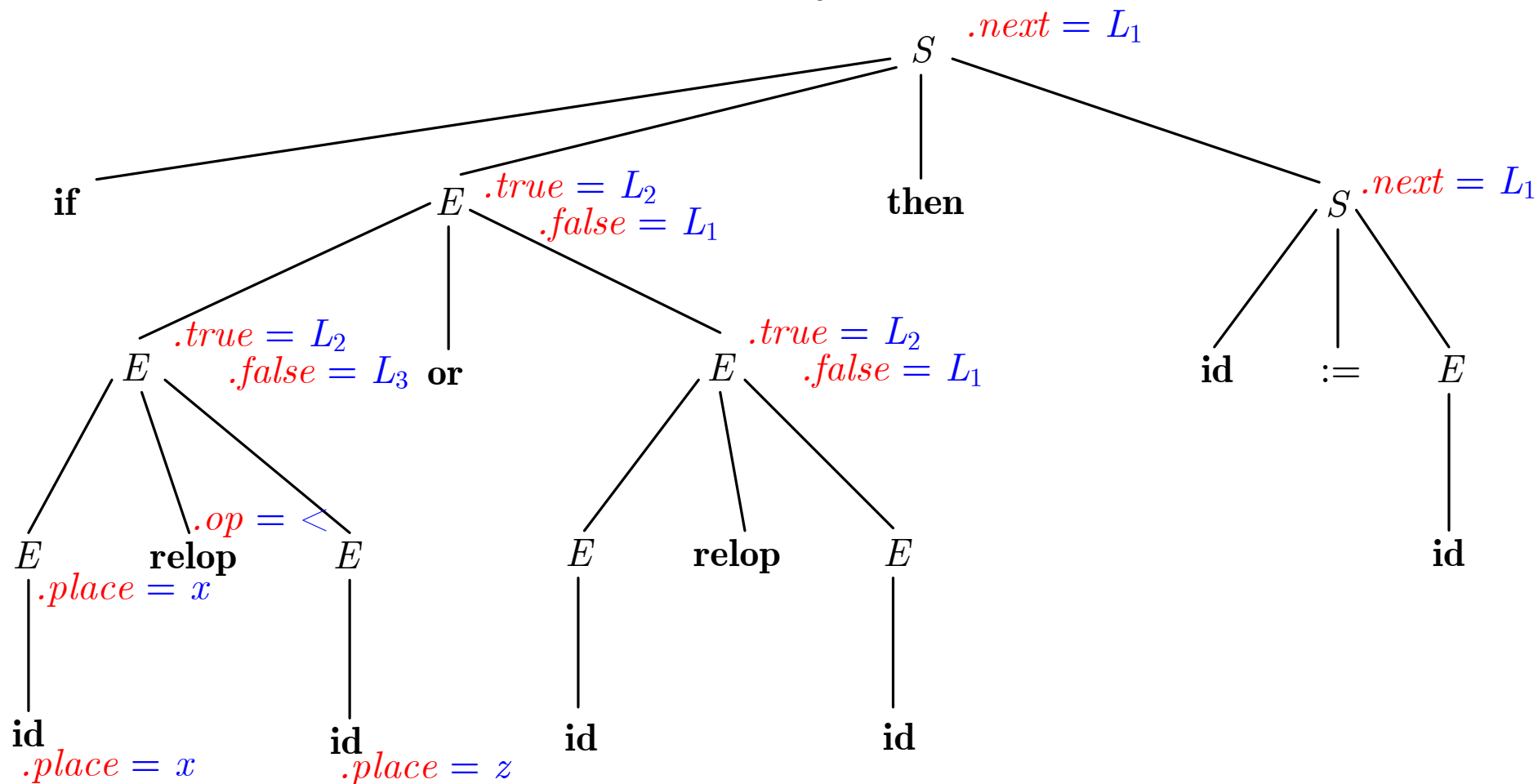


if $x < z$ **or** $x > w$ **then** $x := y$

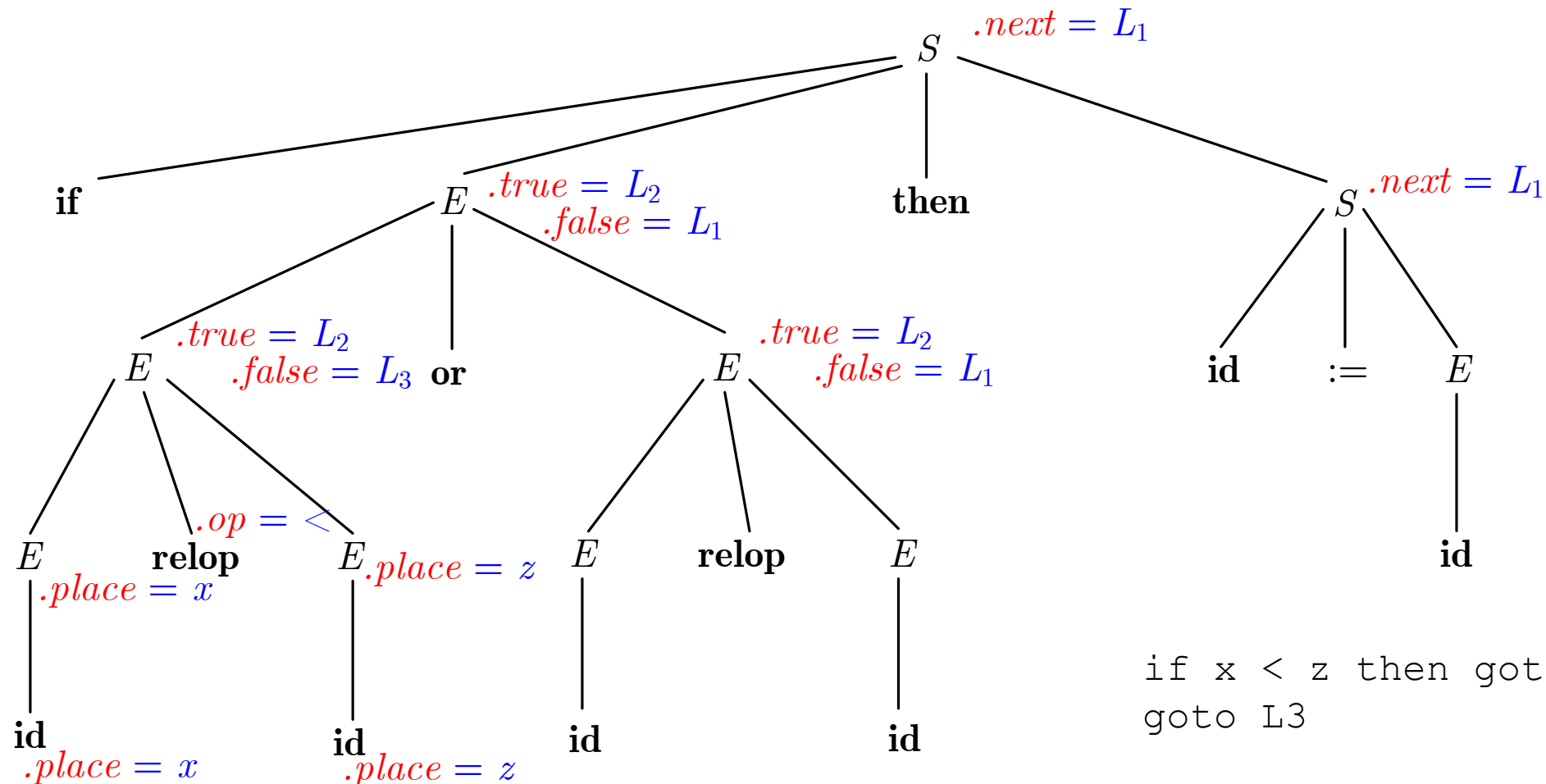


$$\mathbf{if} \ x < z \ \mathbf{or} \ x > w \ \mathbf{then} \ x := y$$


if $x < z$ **or** $x > w$ **then** $x := y$

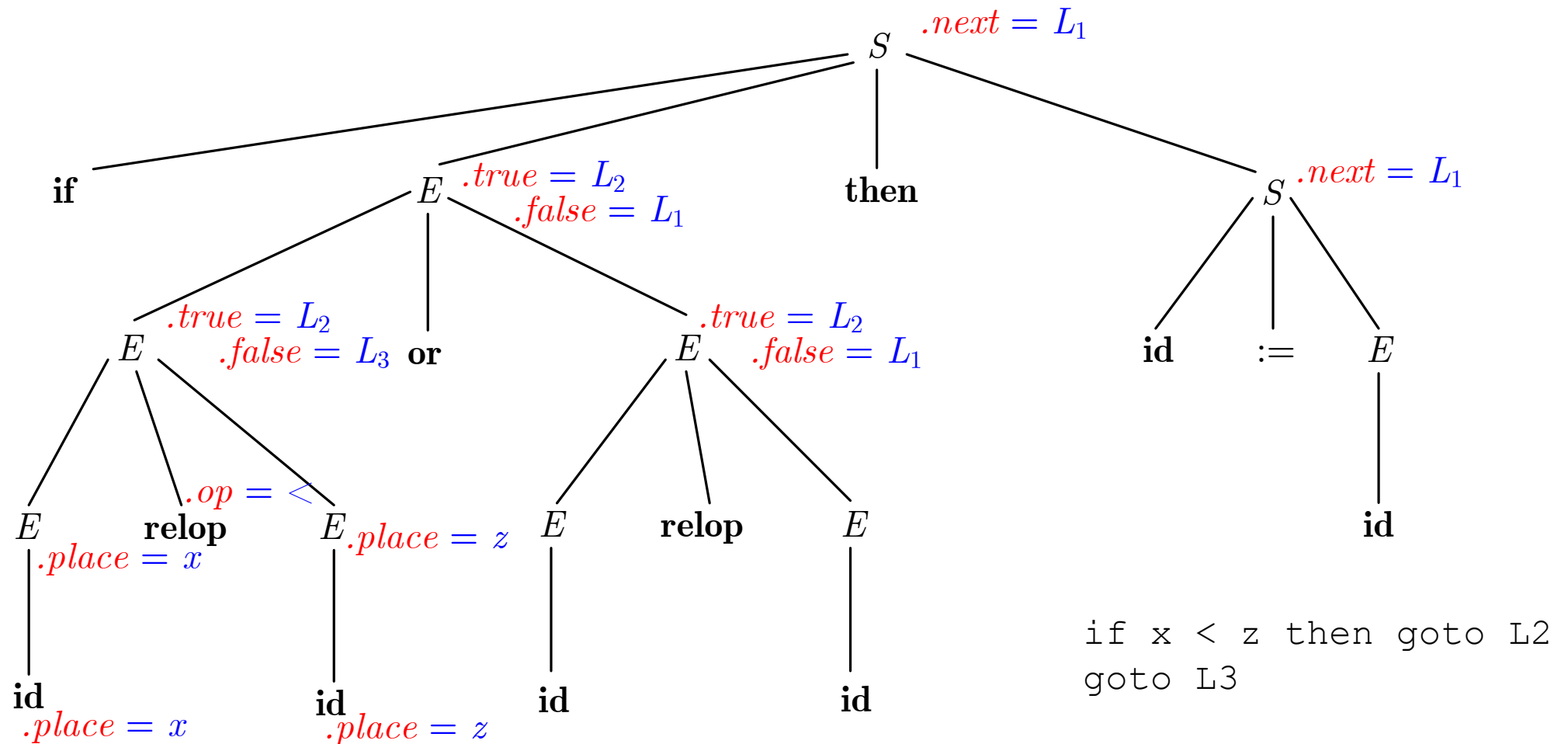


if $x < z$ **or** $x > w$ **then** $x := y$

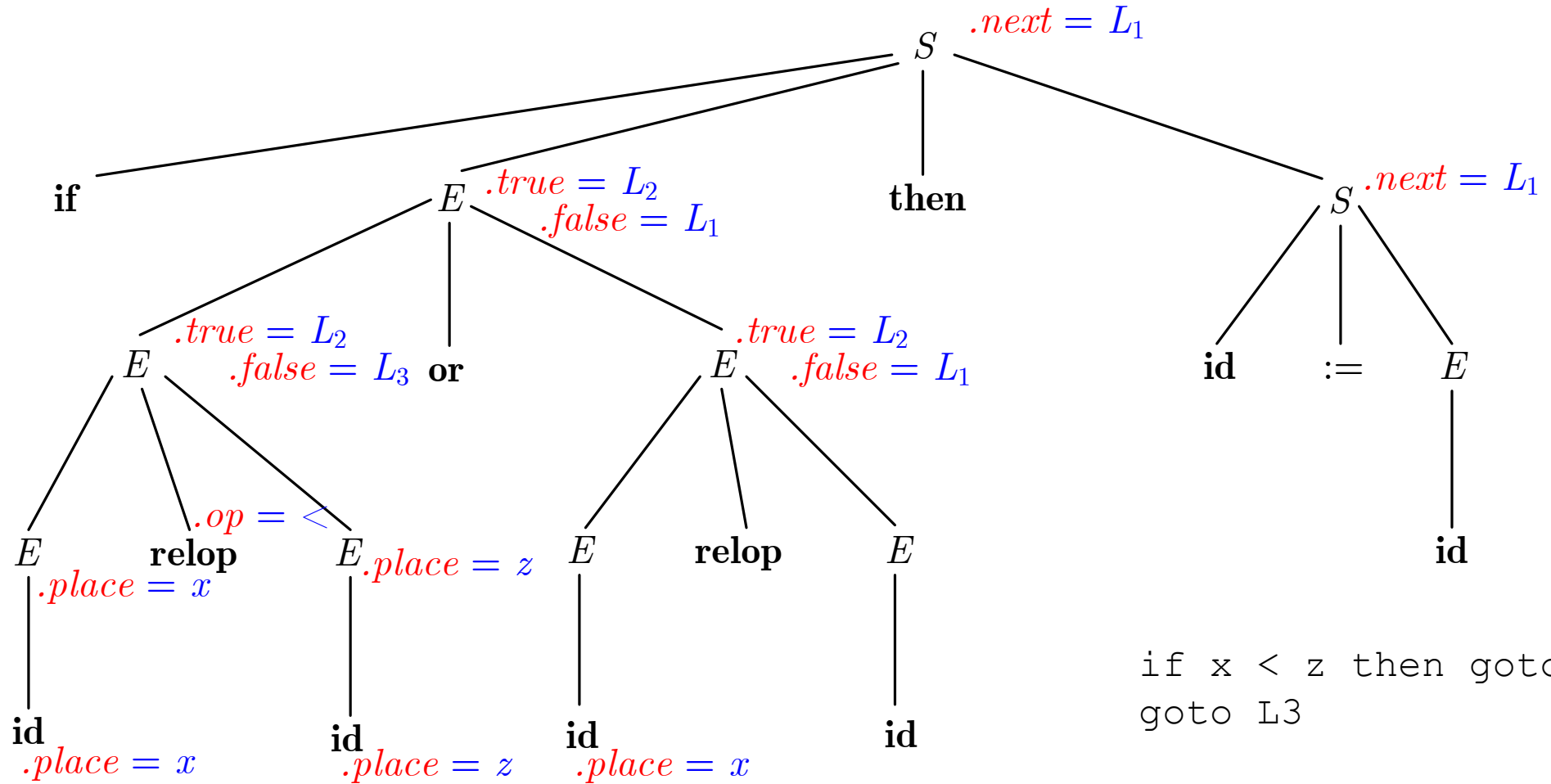


$E \rightarrow E_1 \text{ relop } E_2$	$E.\text{code} := E_1.\text{code} E_2.\text{code}$ $ \text{gen}(\text{'if' } E_1.\text{place relop.op } E_2.\text{place 'goto' } E.\text{true}) \text{gen}(\text{'goto' } E.\text{false})$
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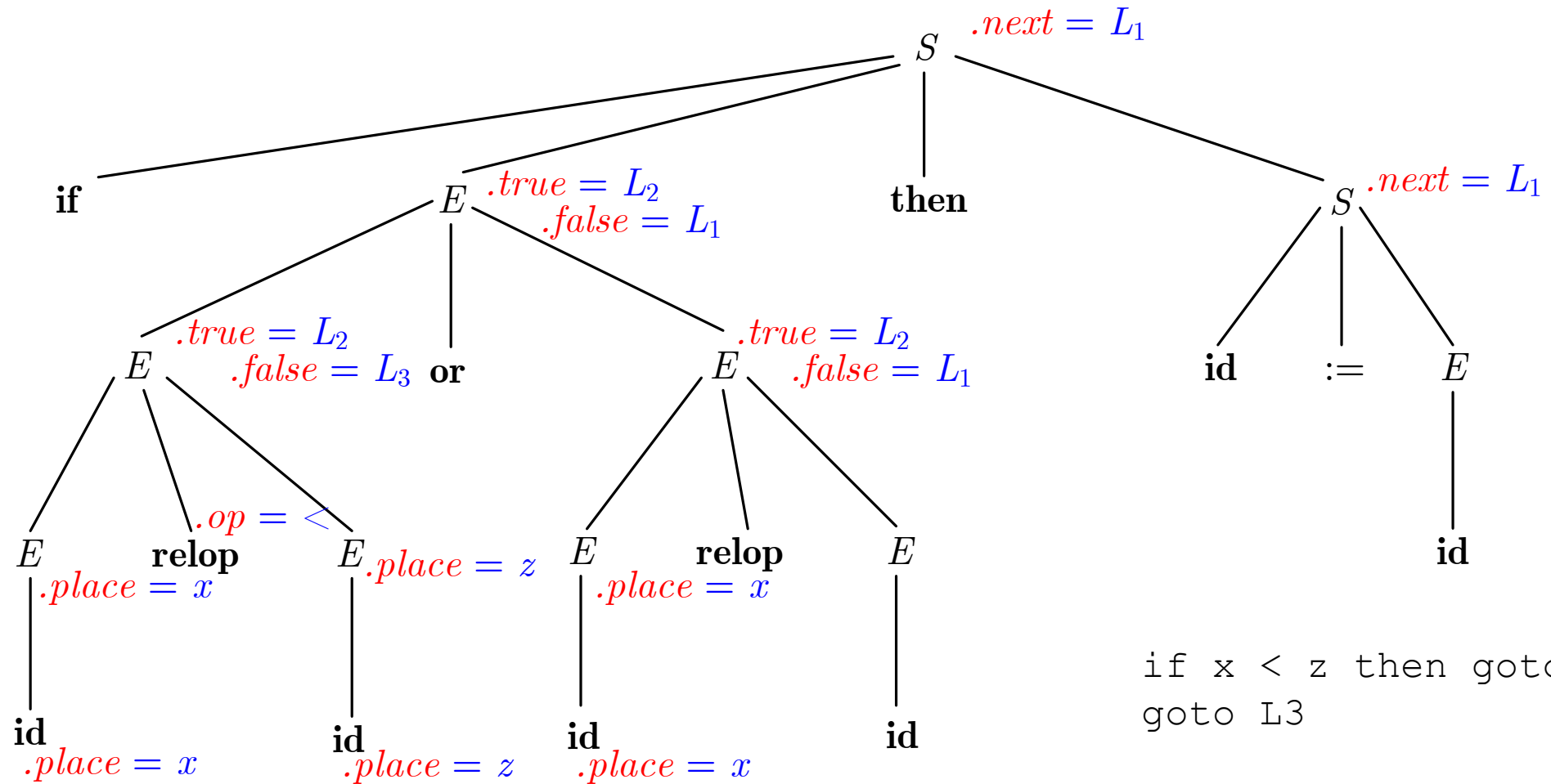
if $x < z$ or $x > w$ then $x := y$



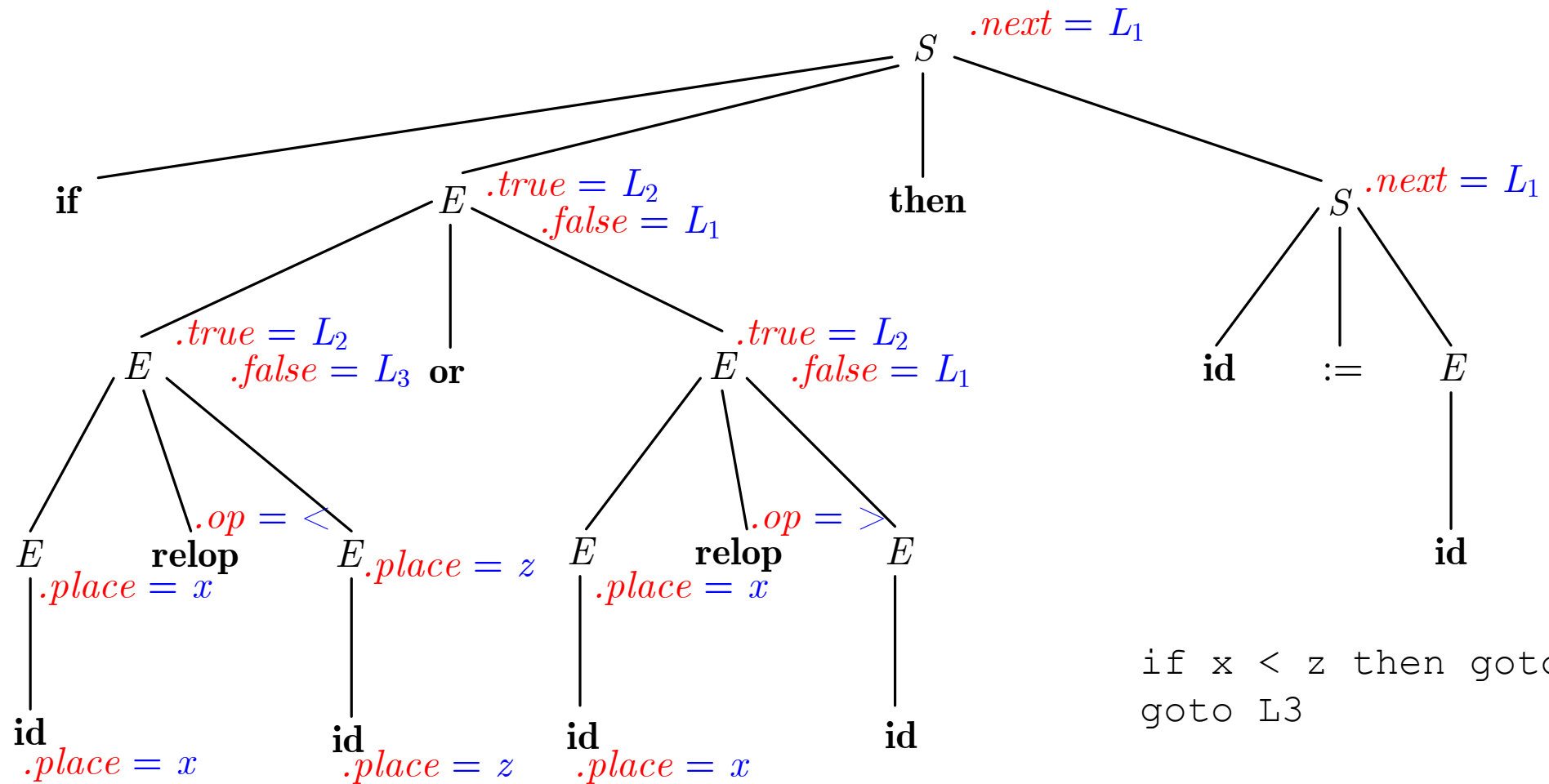
if $x < z$ **or** $x > w$ **then** $x := y$



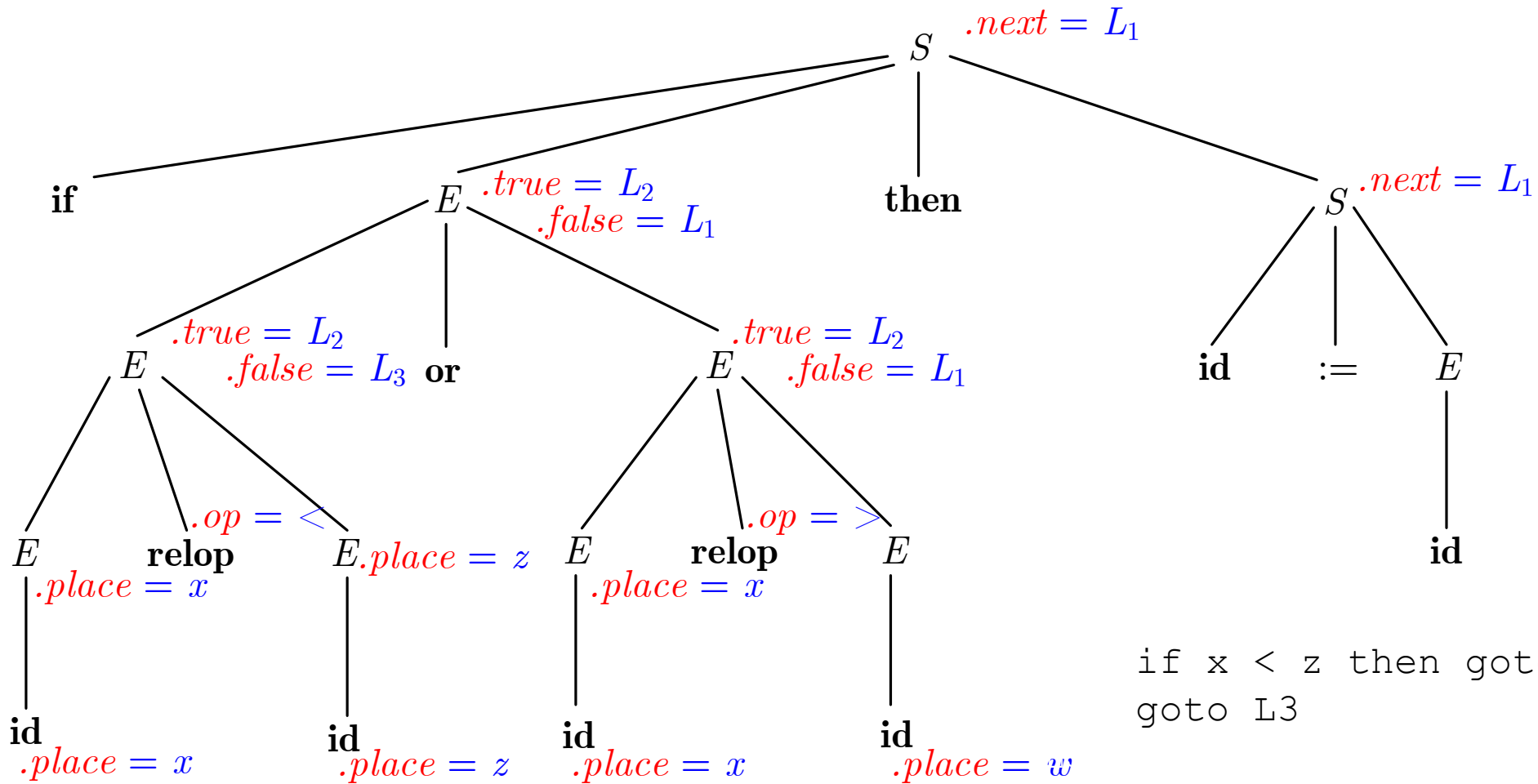
if $x < z$ **or** $x > w$ **then** $x := y$

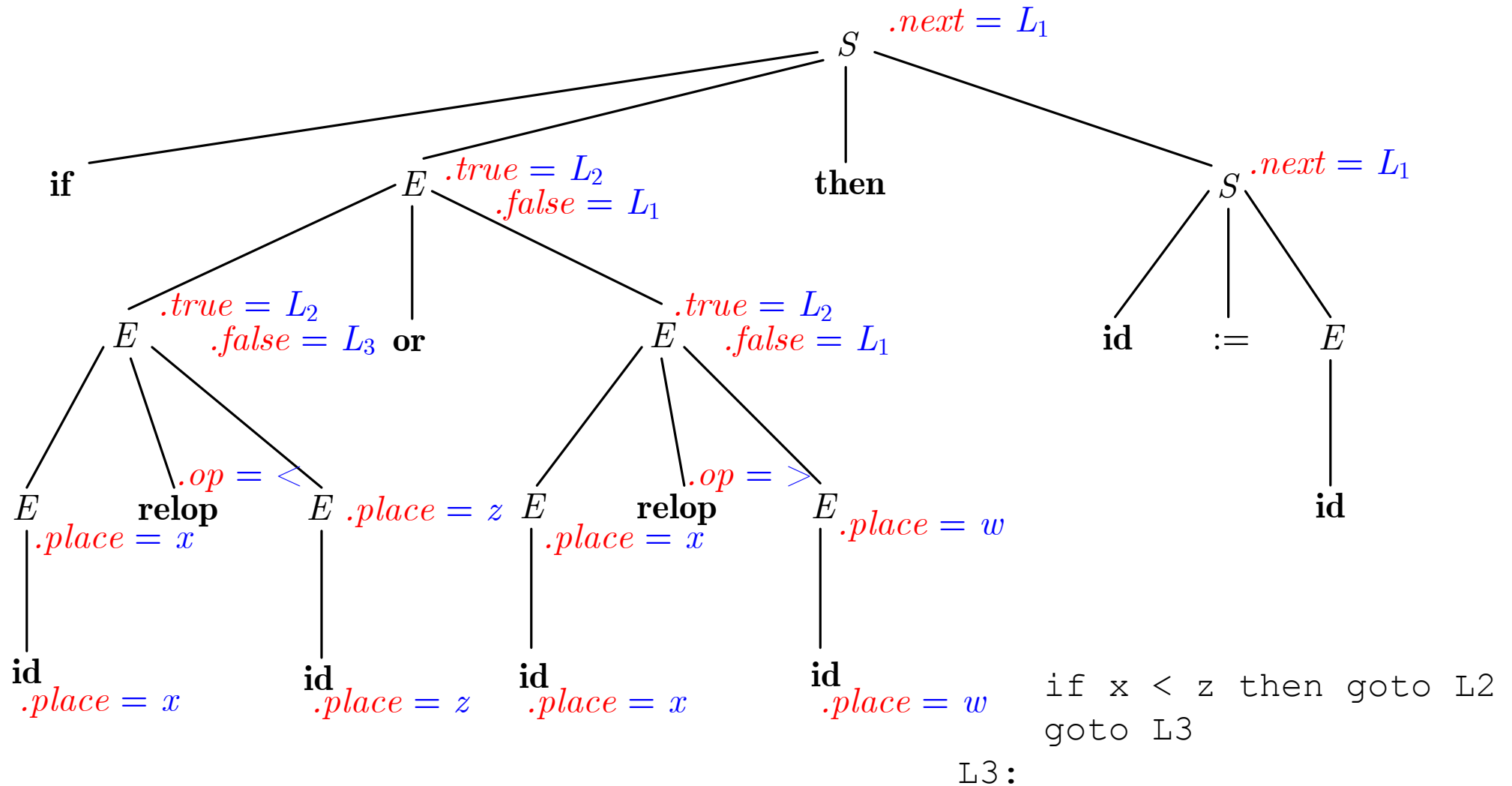


if $x < z$ **or** $x > w$ **then** $x := y$



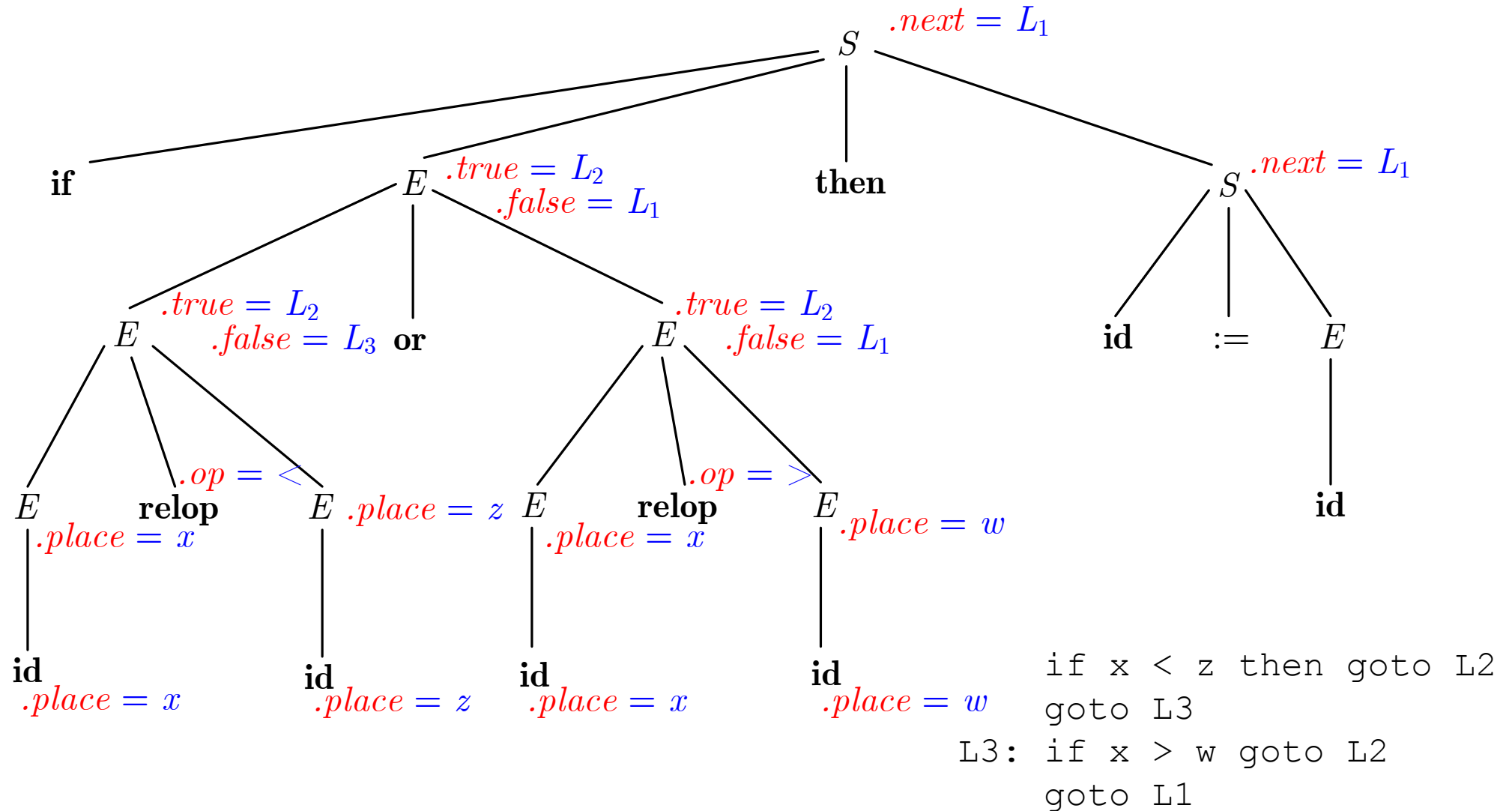
if $x < z$ **or** $x > w$ **then** $x := y$



$$\mathbf{if} \ x < z \ \mathbf{or} \ x > w \ \mathbf{then} \ x := y$$


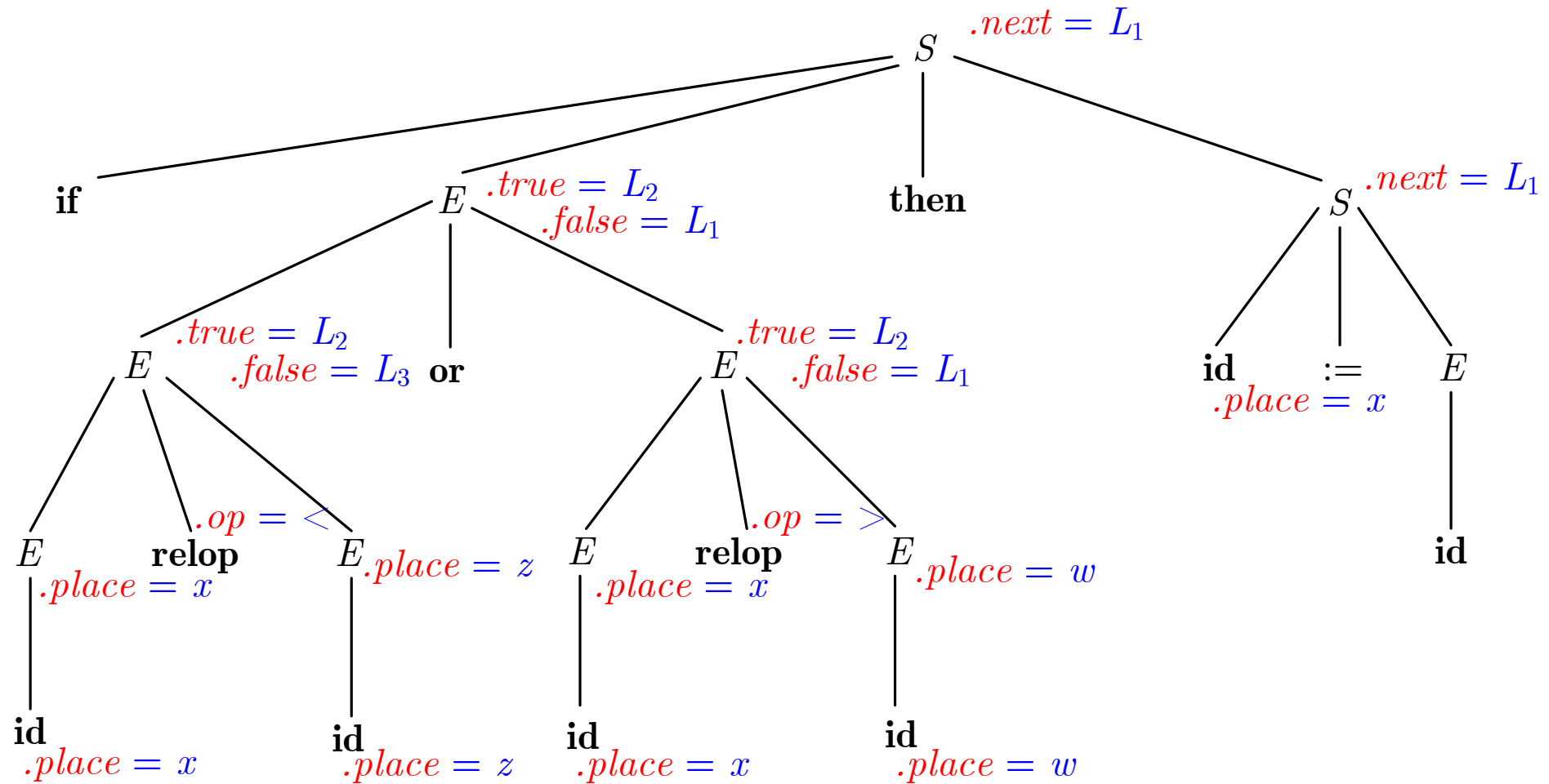
$E \rightarrow E_1 \text{ or } E_2$	$E_1.true := E.true; \quad E_1.false := newlabel;$ $E_2.true := E.true; \quad E_2.false := E.false;$ $E.code := E_1.code gen(E_1.false' :') E_2.code;$
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if $x < z$ **or** $x > w$ **then** $x := y$



$E \rightarrow E_1 \text{ relop } E_2$	$E.\text{code} := E_1.\text{code} E_2.\text{code}$ $ \text{gen}(\text{'if' } E_1.\text{place relop.op } E_2.\text{place 'goto' } E.\text{true}) \text{gen}(\text{'goto' } E.\text{false})$
--	---

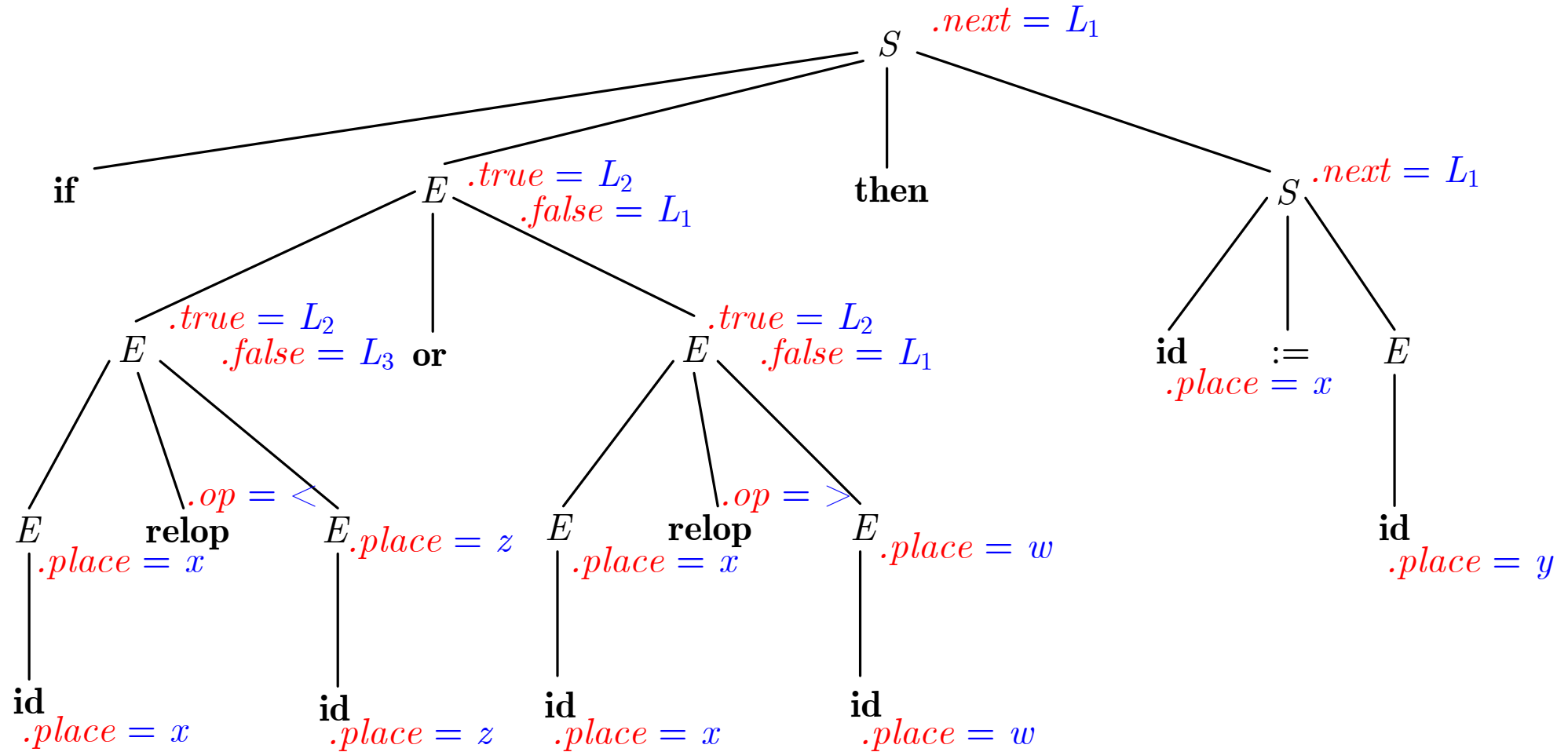
if $x < z$ or $x > w$ then $x := y$



```

if x < z then goto L2
goto L3
L3: if x > w goto L2
goto L1
  
```

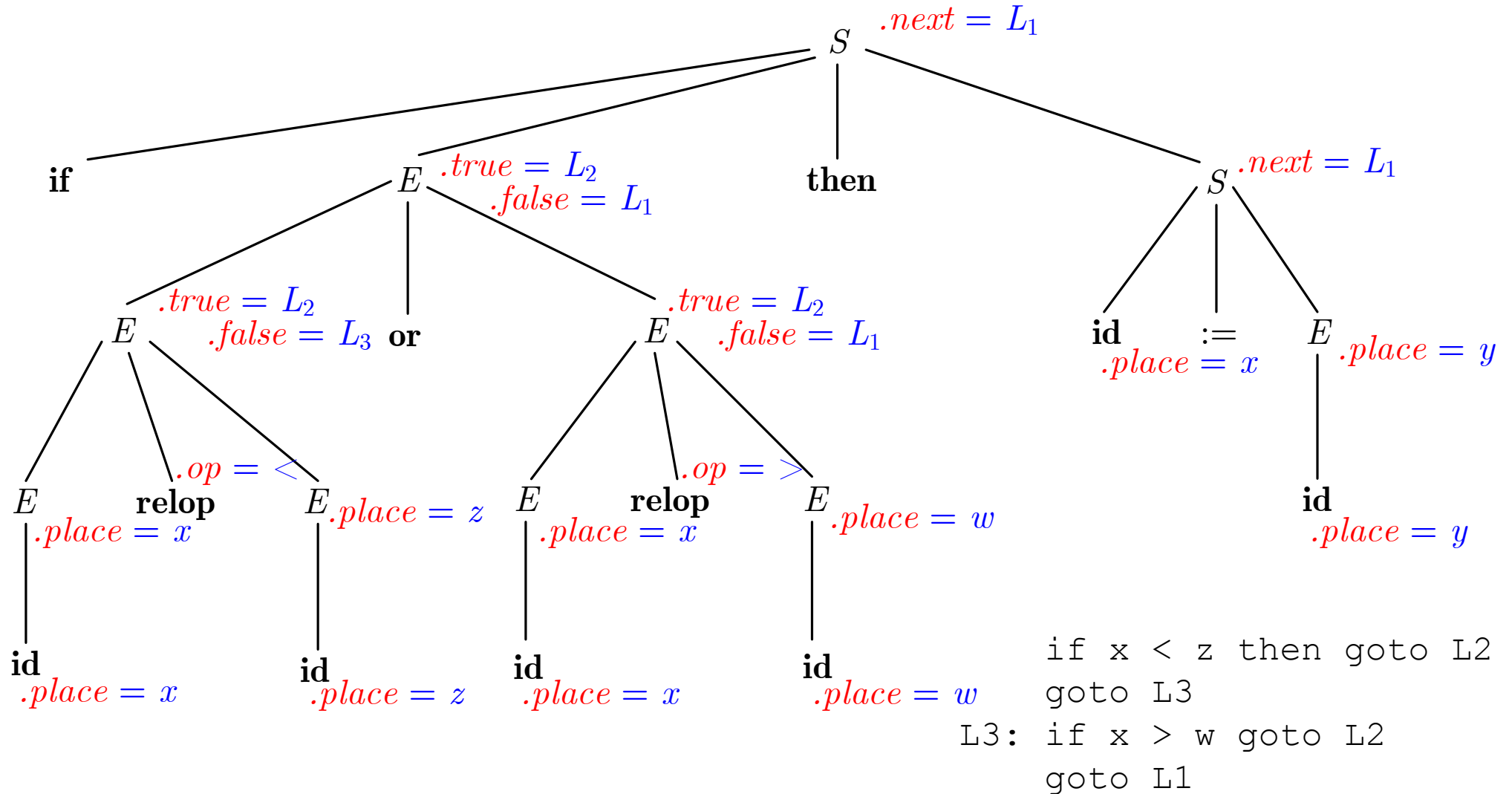
if $x < z$ **or** $x > w$ **then** $x := y$



```

if x < z then goto L2
goto L3
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goto L1
  
```

if $x < z$ **or** $x > w$ **then** $x := y$



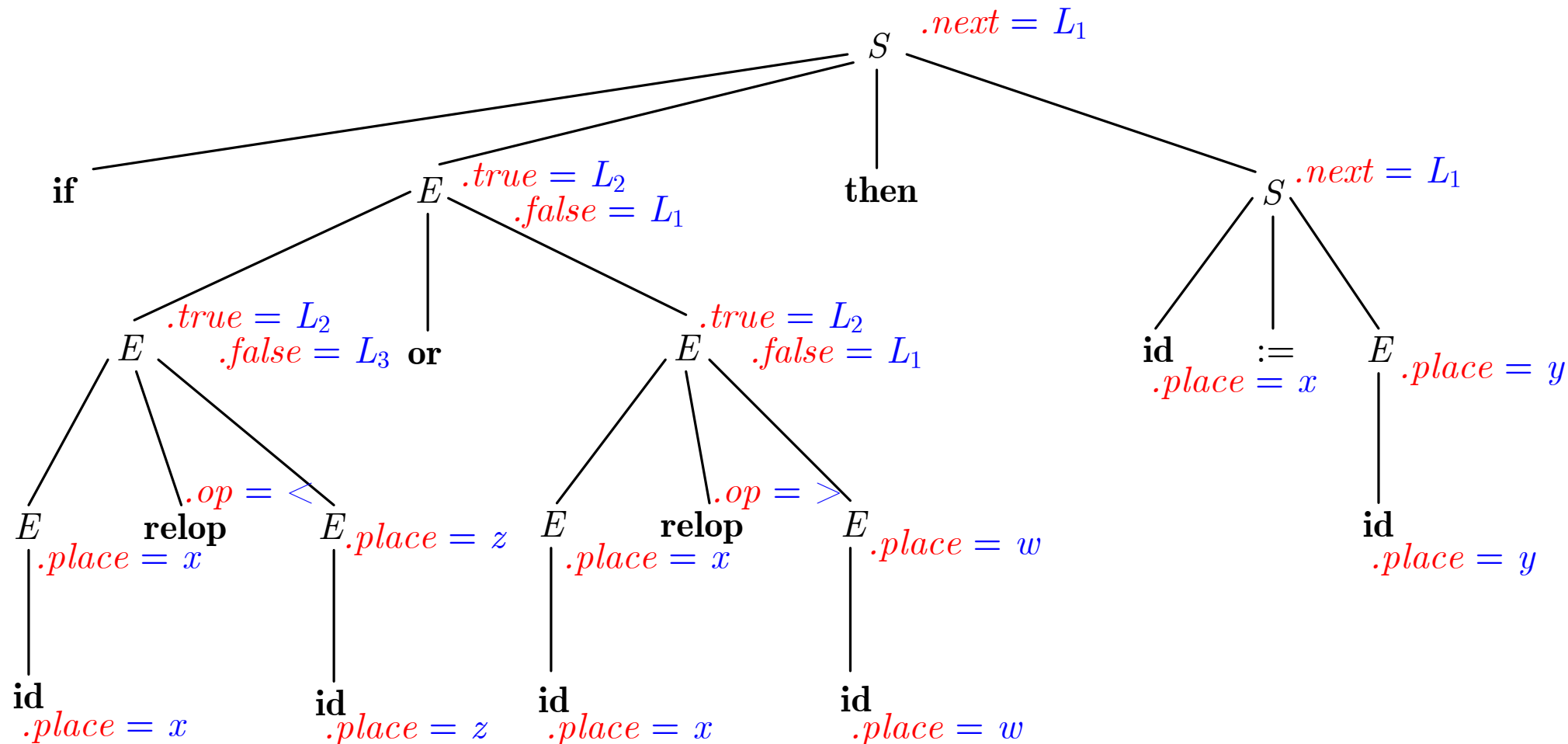
$S \rightarrow \text{if } E \text{ then } S_1$

$E.true := \text{newlabel}; E.false := S.next;$

$S_1.next := S.next;$

$S.code := E.code \parallel \text{gen}(E.true \text{ ' : ' }) \parallel S_1.code$

if $x < z$ **or** $x > w$ **then** $x := y$



$S \rightarrow \text{id} := E$

$p := \text{lookup}(\text{id.name});$

if $p \neq \text{nil}$ then $\text{emit}(p' := E.\text{place})$

else *error*

if $x < z$ then goto L2

goto L3

L3: if $x > w$ goto L2

goto L1

L2: $x := y$

L1: