Name: BHUKYA VASANTH KUMAR
Roll: B180741CS
S-7: CSE

Activity

TERMS

$t ::=$

true	constant true
false	constant false
and t t	logical and
or t t	logical or
not t	logical negation

and t t

1) short - circuit evaluation semantics

and t_1 t_2

and false $t_2 \longrightarrow$ false

and t_1 false $\longrightarrow$ false

and true $t_2 \longrightarrow$ t_2

and t_1 true $\longrightarrow$ t_1

$$\frac{t_1 \longrightarrow t_1'}{\text{and } t_1 t_2 \longrightarrow \text{and } t_1' t_2}$$

2) complete evaluation semantics

and false $t_2 \longrightarrow t_2$

and t_1 false $\longrightarrow t_1$

and true $t_2 \longrightarrow t_2$

and t_1 true $\longrightarrow t_1$

$$\frac{t_1 \longrightarrow t_1'}{\text{and } t_1 t_2 \longrightarrow \text{and } t_1' t_2}$$

$$\frac{t_2 \longrightarrow t_2'}{\text{and } t_1 t_2 \longrightarrow \text{and } t_1 t_2'}$$

or t t

1. complete evaluation semantics

or v_1 v_2

or   true   true   → true
or   true   false   → true
or false   true   → true
or false   false →false

2. short circuit evaluation semantics

or t_1 t_2

or   true   true   → true
or   true   false →true
or   false   true   → true
or   false false →false

not t

1. complete evaluation semantics

not v

not true → false
not false → true

2. short circuit evaluation semantics

not t

not true →false
not false →true