

Corrigé du TD6 de compilation 2015

L'interprétation est définie dans le tableau suivant

Adresse Instruction	Instruction	Règle Appliquée	Etat mémoire obtenu
1	init	init	[]
2	push(0)	push	$m_1 = \langle \omega, 0, \text{cst}, * \rangle. []$
3	new(x, entier, var, 0)	newV	$m_2 = \langle x, 0, \text{var}, \text{entier} \rangle. []$
4	push(4)	push	$m_3 = \langle \omega, 4, \text{cst}, * \rangle. \langle x, 0, \text{var}, \text{entier} \rangle. []$
5	newarray(t, entier)	newarray	$m_4 = \langle t, @tas, \text{tab}, \text{entier} \rangle. \langle x, 0, \text{var}, \text{entier} \rangle. []$
6	push(9)	push	$m_5 = \langle \omega, 9, \text{cst}, * \rangle. m_4$
7	new(fct, entier, meth, 0)	newM	$m_6 = \langle fct, 9, \text{meth}, \text{entier} \rangle. m_4$
8	goto(29)	goto	m_6
29	push(4)	push	$m_7 = \langle \omega, 4, \text{cst}, * \rangle. m_6$
30	load(x)	load	$m_8 = \langle \omega, 0, \text{cst}, * \rangle. m_7$
31	sup	op2	$m_9 = \langle \omega, \text{true}(4 > 0), \text{cst}, * \rangle. m_6$
32	not	op1	$m_{10} = \langle \omega, \text{false}, \text{cst}, * \rangle. m_6$
33	if(43)	iffalse	m_6
34	load(x)	load	$m_{11} = \langle \omega, 0, \text{cst}, * \rangle. m_6$
35	push(1)	push	$m_{12} = \langle \omega, 1, \text{cst}, * \rangle. m_{11}$
36	invoke(fct)	invoke	$m_{13} = \langle \omega, 37, \text{cst}, * \rangle. m_{12}$
9	new(max, entier, var, 1)	newV	$m_{14} = \langle \omega, 37, \text{cst}, * \rangle. \langle \text{max}, 1, \text{var}, \text{entier} \rangle. m_{11}$
10	push(5)	push	$m_{14\text{bis}} = \langle \omega, 5, \text{cst}, * \rangle. m_{14}$
11	new(y, entier, var, 0)	newV	$m_{15} = \langle y, 5, \text{var}, \text{entier} \rangle. m_{14}$
12	load(max)	load	$m_{16} = \langle \omega, 1, \text{cst}, * \rangle. m_{15}$
13	push(0)	push	$m_{17} = \langle \omega, 0, \text{cst}, * \rangle. m_{16}$

14	sup	op2	$m_{18} = \langle \omega, \text{true}(1 > 0), \text{cst}, * \rangle . m_{15}$
15	not	op1	$m_{18\text{bis}} = \langle \omega, \text{false}, \text{cst}, * \rangle . m_{15}$
16	if(24)	if	m_{15}
17	load(max)	load	$m_{19} = \langle \omega, 1, \text{cst}, * \rangle . m_{15}$
18	inc(y)	inc	$m_{20} = \langle y, 6, \text{var}, \text{entier} \rangle . m_{14}$
19	load(max)	load	$m_{21} = \langle \omega, 1, \text{cst}, * \rangle . m_{20}$
20	push(1)	push	$m_{22} = \langle \omega, 1, \text{cst}, * \rangle . m_{21}$
21	sub	op2	$m_{21} = \langle \omega, 0(1-1), \text{cst}, * \rangle . m_{20}$
22	store(max)	store	$m_{22} = \langle y, 6, \text{var}, \text{entier} \rangle . \langle \omega, 37, \text{cst}, * \rangle . \langle \text{max}, 0, \text{var}, \text{entier} \rangle . m_{11}$
23	goto(12)	goto	m_{22}
12	load(max)	load	$m_{23} = \langle \omega, 0, \text{cst}, * \rangle . m_{22}$
13	push(0)	push	$m_{24} = \langle \omega, 0, \text{cst}, * \rangle . m_{23}$
14	sup	op2	$m_{25} = \langle \omega, \text{false}(0 > 0), \text{cst}, * \rangle . m_{22}$
15	not	op1	$m_{26} = \langle \omega, \text{true}, \text{cst}, * \rangle . m_{22}$
16	if(24)	if	m_{22}
24	load(y)	load	$m_{27} = \langle \omega, 6, \text{cst}, * \rangle . m_{22}$
25	swap	swap	$m_{28} = \langle y, 6, \text{var}, \text{entier} \rangle . \langle \omega, 6, \text{cst}, * \rangle . \langle \omega, 37, \text{cst}, * \rangle . \langle \text{max}, 0, \text{var}, \text{entier} \rangle . m_{11}$
26	pop	pop	$m_{29} = \langle \omega, 6, \text{cst}, * \rangle . \langle \omega, 37, \text{cst}, * \rangle . \langle \text{max}, 0, \text{var}, \text{entier} \rangle . m_{11}$
27	swap	swap	$m_{30} = \langle \omega, 37, \text{cst}, * \rangle . \langle \omega, 6, \text{cst}, * \rangle . \langle \text{max}, 0, \text{var}, \text{entier} \rangle . m_{11}$
28	return	return	$m_{30} = \langle \omega, 6, \text{cst}, * \rangle . \langle \text{max}, 0, \text{var}, \text{entier} \rangle . m_{11}$
37	swap	swap	$m_{31} = \langle \text{max}, 0, \text{var}, \text{entier} \rangle . \langle \omega, 6, \text{cst}, * \rangle . m_{11}$
38	pop	pop	$m_{32} = \langle \omega, 6, \text{cst}, * \rangle . m_{11}$
39	astore(t)	astore	m_6 avec modification du tas en $t[0]=6$
40			
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