###################################################################

(load "LispToLi.lisp")

(load "EvalLi.lisp")

(trace evalLi map-evalLi make-env-evalLi map-mcall-evalLi displace map-progn-evalLi)

(trace lisp2li map-lisp2li get-defun set-defun let-lisp2li addtoenv setf-lisp2li cond-lisp2li case-lisp2li)

###################################################################

(load "makeVM.lisp")

(load "vm-functions.lisp")

(trace make-vm get-register get-memory set-memory set-register vm-pop vm-push)

(trace vm-load vm-run vm-run-instr is-register increase-register decrease-register premier deuxieme get-halt set-halt asm-move asm-push asm-pop asm-store asm-load asm-add asm-sub asm-div asm-mult asm-incr asm-decr asm-jmp asm-jsr asm-rtn asm-cmp asm-jgt asm-jge asm-jlt asm-jle asm-jeq asm-jne get-val calcule-liste)

###################################################################

## test pour STORE

(set-memory 'vm (get-register 'vm 'SP) "Hello world")

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 0

1. Trace: (SET-MEMORY 'VM '0 '"Hello world")

1. Trace: SET-MEMORY ==> "Hello world"

"Hello world"

## test pour LOAD

(set-register 'vm 'R1 (get-memory 'vm (get-register 'vm 'SP)))

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 0

1. Trace: (GET-MEMORY 'VM '0)

1. Trace: GET-MEMORY ==> "Hello world"

1. Trace: (SET-REGISTER 'VM 'R1 '"Hello world")

1. Trace: SET-REGISTER ==> "Hello world"

"Hello world"

(get-register 'vm 'R1)

1. Trace: (GET-REGISTER 'VM 'R1)

1. Trace: GET-REGISTER ==> "Hello world"

"Hello world"

## test pour ADD R0 = 3 et R1 = 1

(vm-run-instr 'vm '(ADD R1 R0))

1. Trace: (VM-RUN-INSTR 'VM '(ADD R1 R0))

"Rentre dans ADD -->"

2. Trace: (PREMIER '(ADD R1 R0))

2. Trace: PREMIER ==> R1

2. Trace: (IS-REGISTER 'VM 'R1)

3. Trace: (GET-REGISTER 'VM 'R1)

3. Trace: GET-REGISTER ==> 1

2. Trace: IS-REGISTER ==> 1

2. Trace: (DEUXIEME '(ADD R1 R0))

2. Trace: DEUXIEME ==> R0

2. Trace: (PREMIER '(ADD R1 R0))

2. Trace: PREMIER ==> R1

2. Trace: (GET-REGISTER 'VM 'R1)

2. Trace: GET-REGISTER ==> 1

2. Trace: (DEUXIEME '(ADD R1 R0))

2. Trace: DEUXIEME ==> R0

2. Trace: (GET-REGISTER 'VM 'R0)

2. Trace: GET-REGISTER ==> 3

2. Trace: (SET-REGISTER 'VM 'R0 '4)

2. Trace: SET-REGISTER ==> 4

1. Trace: VM-RUN-INSTR ==> 4

4

##test pour STORE R0 = 4

(vm-run-instr 'vm '(STORE R0))

1. Trace: (VM-RUN-INSTR 'VM '(STORE R0))

2. Trace: (GET-REGISTER 'VM 'SP)

2. Trace: GET-REGISTER ==> 0

2. Trace: (PREMIER '(STORE R0))

2. Trace: PREMIER ==> R0

2. Trace: (IS-REGISTER 'VM 'R0)

3. Trace: (GET-REGISTER 'VM 'R0)

3. Trace: GET-REGISTER ==> 4

2. Trace: IS-REGISTER ==> 1

2. Trace: (PREMIER '(STORE R0))

2. Trace: PREMIER ==> R0

2. Trace: (GET-REGISTER 'VM 'R0)

2. Trace: GET-REGISTER ==> 4

2. Trace: (SET-MEMORY 'VM '0 '4)

2. Trace: SET-MEMORY ==> 4

1. Trace: VM-RUN-INSTR ==> 4

4

##test pour LOAD R1 = 1

(vm-run-instr 'vm '(LOAD R1))

1. Trace: (VM-RUN-INSTR 'VM '(LOAD R1))

2. Trace: (PREMIER '(LOAD R1))

2. Trace: PREMIER ==> R1

2. Trace: (GET-REGISTER 'VM 'SP)

2. Trace: GET-REGISTER ==> 0

2. Trace: (GET-MEMORY 'VM '0)

2. Trace: GET-MEMORY ==> 4

2. Trace: (SET-REGISTER 'VM 'R1 '4)

2. Trace: SET-REGISTER ==> 4

1. Trace: VM-RUN-INSTR ==> 4

4

##test pour POP avec 4 en memoire

(vm-run-instr 'vm '(POP R2))

2. Trace: (GET-REGISTER 'VM 'SP)

2. Trace: GET-REGISTER ==> 0

2. Trace: (GET-MEMORY 'VM '0)

2. Trace: GET-MEMORY ==> 4

2. Trace: (SET-REGISTER 'VM 'R2 '4)

2. Trace: SET-REGISTER ==> 4

2. Trace: (GET-REGISTER 'VM 'SP)

2. Trace: GET-REGISTER ==> 0

2. Trace: (SET-REGISTER 'VM 'SP '-1)

2. Trace: SET-REGISTER ==> -1

(4 . -1)

(get-register 'vm 'R2)

2. Trace: (GET-REGISTER 'VM 'R2)

2. Trace: GET-REGISTER ==> 4

4

##test pour PUSH avec R0 = 6 et SP = 0

(vm-run-instr 'vm '(PUSH R0))

1. Trace: (GET-REGISTER 'VM 'R0)

1. Trace: GET-REGISTER ==> 6

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 0

1. Trace: (SET-REGISTER 'VM 'SP '1)

1. Trace: SET-REGISTER ==> 1

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 1

1. Trace: (GET-REGISTER 'VM 'R0)

1. Trace: GET-REGISTER ==> 6

1. Trace: (GET-REGISTER 'VM 'R0)

1. Trace: GET-REGISTER ==> 6

1. Trace: (SET-MEMORY 'VM '1 '6)

1. Trace: SET-MEMORY ==> 6

(1 . 6)

## avec PUSH 9 puis POP R2

(vm-run-instr 'vm '(PUSH 9))

1. Trace: (GET-REGISTER 'VM '9)

1. Trace: GET-REGISTER ==> NIL

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 1

1. Trace: (SET-REGISTER 'VM 'SP '2)

1. Trace: SET-REGISTER ==> 2

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 2

1. Trace: (SET-MEMORY 'VM '2 '9)

1. Trace: SET-MEMORY ==> 9

(2 . 9)

(vm-run-instr 'vm '(POP R2))

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 2

1. Trace: (GET-MEMORY 'VM '2)

1. Trace: GET-MEMORY ==> 9

1. Trace: (SET-REGISTER 'VM 'R2 '9)

1. Trace: SET-REGISTER ==> 9

1. Trace: (GET-REGISTER 'VM 'SP)

1. Trace: GET-REGISTER ==> 2

1. Trace: (SET-REGISTER 'VM 'SP '1)

1. Trace: SET-REGISTER ==> 1

(9 . 1)

## test de MOVE avec R2 = 9 et R0 = 6

(vm-run-instr 'vm '(MOVE R2 R0))

1. Trace: (GET-REGISTER 'VM 'R0)

1. Trace: GET-REGISTER ==> R2

1. Trace: (GET-REGISTER 'VM 'R2)

1. Trace: GET-REGISTER ==> 9

1. Trace: (GET-REGISTER 'VM 'R2)

1. Trace: GET-REGISTER ==> 9

1. Trace: (SET-REGISTER 'VM 'R0 '9)

1. Trace: SET-REGISTER ==> 9

9

avec 1 et R0 = 9

(vm-run-instr 'vm '(MOVE 1 R0))

1. Trace: (GET-REGISTER 'VM 'R0)

1. Trace: GET-REGISTER ==> 9

1. Trace: (GET-REGISTER 'VM '1)

1. Trace: GET-REGISTER ==> NIL

1. Trace: (SET-REGISTER 'VM 'R0 '1)

1. Trace: SET-REGISTER ==> 1

1

avec 1 et 2

(vm-run-instr 'vm '(MOVE 1 2))

1. Trace: (GET-REGISTER 'VM '2)

1. Trace: GET-REGISTER ==> NIL

\*\*\* - 2 doit être un registre.

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NOUVELLE VERSION

##

(vm-run-instr 'VM '(MOVE (:CONST 3) R0))

1. Trace: (VM-RUN-INSTR 'VM '(MOVE (:CONST 3) R0))

"Rentre dans MOVE -->"

2. Trace: (DEUXIEME '(MOVE (:CONST 3) R0))

2. Trace: DEUXIEME ==> R0

2. Trace: (IS-REGISTER 'VM 'R0)

3. Trace: (GET-REGISTER 'VM 'R0)

3. Trace: GET-REGISTER ==> 0

2. Trace: IS-REGISTER ==> 1

2. Trace: (PREMIER '(MOVE (:CONST 3) R0))

2. Trace: PREMIER ==> (:CONST 3)

2. Trace: (IS-REGISTER 'VM '(:CONST 3))

3. Trace: (GET-REGISTER 'VM '(:CONST 3))

3. Trace: GET-REGISTER ==> NIL

2. Trace: IS-REGISTER ==> NIL

2. Trace: (PREMIER '(MOVE (:CONST 3) R0))

2. Trace: PREMIER ==> (:CONST 3)

2. Trace: (DEUXIEME '(MOVE (:CONST 3) R0))

2. Trace: DEUXIEME ==> R0

2. Trace: (PREMIER '(MOVE (:CONST 3) R0))

2. Trace: PREMIER ==> (:CONST 3)

2. Trace: (SET-REGISTER 'VM 'R0 '3)

2. Trace: SET-REGISTER ==> 3

2. Trace: (INCREASE-REGISTER 'VM 'CO)

3. Trace: (GET-REGISTER 'VM 'CO)

3. Trace: GET-REGISTER ==> 0

3. Trace: (SET-REGISTER 'VM 'CO '1)

3. Trace: SET-REGISTER ==> 1

2. Trace: INCREASE-REGISTER ==> 1

"----------------------------------------"

1. Trace: VM-RUN-INSTR ==> "----------------------------------------"

"----------------------------------------"

##

(vm-run-instr 'VM '(LOAD (+ FP 5) R0))

"Rentre dans LOAD -->"

6. Trace: (GET-REGISTER 'VM 'FP)

6. Trace: GET-REGISTER ==> 0

6. Trace: (GET-MEMORY 'VM '5)

6. Trace: GET-MEMORY ==> NIL

6. Trace: (SET-REGISTER 'VM 'R0 'NIL)

6. Trace: SET-REGISTER ==> NIL

6. Trace: (GET-REGISTER 'VM 'CO)

6. Trace: GET-REGISTER ==> 6

6. Trace: (SET-REGISTER 'VM 'CO '7)

6. Trace: SET-REGISTER ==> 7

"----------------------------------------"

"----------------------------------------"