```
root@dde6d0cf6850:/work# cafeobj lecture8/interpreter.cafe

-- loading standard prelude

            -- CafeOBJ system Version 1.6.2(PigNose0.99) --
                   built: 2024 Dec 26 Thu 0:09:00 GMT
                         prelude file: std.bin
                                ***
                      2025 Jan 11 Sat 8:50:18 GMT
                             Type ? for help
                                ***
                   -- Containing PigNose Extensions --
                                 ---
                             built on SBCL
                              2.0.1.debian
processing input : /work/lecture8/interpreter.cafe

-- defining module* VAR
-- reading in file  : bool

processing input : /usr/local/share/cafeobj-1.6/lib/bool.cafe

processing input : /usr/local/share/cafeobj-1.6/lib/base_bool.cafe

processing input : /usr/local/share/cafeobj-1.6/lib/truth.cafe

-- defining module! TRUTH
-- reading in file  : truth

-- done reading in file: truth

-- defining module* BASE-BOOL
-- reading in file  : eql

processing input : /usr/local/share/cafeobj-1.6/lib/eql.cafe

-- defining module! EQL
-- done reading in file: eql

processing input : /usr/local/share/cafeobj-1.6/lib/sys_bool.cafe

-- defining module! BOOL
-- done reading in file: bool

-- defining module! EXP
-- reading in file  : nat

processing input : /usr/local/share/cafeobj-1.6/lib/nat.cafe

-- defining module! NAT
-- reading in file  : nznat

processing input : /usr/local/share/cafeobj-1.6/lib/nznat.cafe

-- defining module! NZNAT
-- done reading in file: nznat

-- done reading in file: nat

-- opening module EXP
-- reduce in %EXP : ((((x + y) - ((z * n(2)) / x)) === (n(10) + (x * y))) || ((x =!= y) && (((n(1) + x) +
y) > z))):Exp
((((x + y) - ((z * n(2)) / x)) === (n(10) + (x * y))) || ((x =!= y) && (((n(1) + x) + y) > z))):Exp
(0.0000 sec for parse, 0.0000 sec for 0 rewrites + 0 matches)
-- defining module! STM
-- defining module! BOOL-ERR
-- defining module! NAT-ERR
-- defining module! PAIR
-- defining module* TRIV-ERR
-- defining module! LIST
-- defining module! ENTRY
-- defining view
-- defining module! ENV
-- defining module! INTERPRET
-- opening module INTERPRETTRIV-ERR2ENTRY
-- reduce in %INTERPRET : (evalExp(n(0),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 1 rewrites + 2 matches)
-- reduce in %INTERPRET : (evalExp(n(10),empEnv)):Nat&Err
(10):NzNat
(0.0010 sec for parse, 0.0000 sec for 1 rewrites + 2 matches)
-- reduce in %INTERPRET : (evalExp((n(10) - n(2)),empEnv)):Nat&Err
(8):NzNat
(0.0000 sec for parse, 0.0000 sec for 4 rewrites + 12 matches)
-- reduce in %INTERPRET : (evalExp(((n(10) - n(2)) + n(1)),empEnv)):Nat&Err
(9):NzNat
(0.0000 sec for parse, 0.0000 sec for 7 rewrites + 22 matches)
-- reduce in %INTERPRET : (evalExp((n(1) * n(2)),empEnv)):Nat&Err
(2):NzNat
(0.0000 sec for parse, 0.0000 sec for 4 rewrites + 15 matches)
-- reduce in %INTERPRET : (evalExp(((((n(1) * n(2)) + n(10)) - n(2)) + n(1)),empEnv)):Nat&Err
(11):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 45 matches)
-- reduce in %INTERPRET : (evalExp((n(10) / n(2)),empEnv)):Nat&Err
(5):NzNat
(0.0000 sec for parse, 0.0000 sec for 4 rewrites + 15 matches)
-- reduce in %INTERPRET : (evalExp((n(10) % n(2)),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 4 rewrites + 16 matches)
-- reduce in %INTERPRET : (evalExp((n(10) === n(2)),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 11 rewrites + 25 matches)
-- reduce in %INTERPRET : (evalExp((n(10) =!= n(2)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 11 rewrites + 25 matches)
-- reduce in %INTERPRET : (evalExp((n(10) < n(2)),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 11 rewrites + 29 matches)
-- reduce in %INTERPRET : (evalExp((n(10) > n(2)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 11 rewrites + 29 matches)
-- reduce in %INTERPRET : (evalExp((n(10) && n(2)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 31 matches)
-- reduce in %INTERPRET : (evalExp((n(10) || n(2)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- reduce in %INTERPRET : (evalExp((n(10) && n(0)),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- reduce in %INTERPRET : (evalExp((n(10) || n(0)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- reduce in %INTERPRET : (evalExp((n(10) && n(1)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 31 matches)
-- reduce in %INTERPRET : (evalExp((n(10) || n(1)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- reduce in %INTERPRET : (evalExp((n(0) && n(1)),empEnv)):Nat&Err
(0):Zero
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- reduce in %INTERPRET : (evalExp((n(0) || n(1)),empEnv)):Nat&Err
(1):NzNat
(0.0000 sec for parse, 0.0000 sec for 13 rewrites + 32 matches)
-- opening module INTERPRET
-- reduce in %INTERPRET : (interpret(p1)):Env&Err
((x , 3628800) | ((y , 11) | empEnv)):Env
(0.0000 sec for parse, 0.0080 sec for 2909 rewrites + 6668 matches)
-- reduce in %INTERPRET : (interpret(p2)):Env&Err
((x , 3628800) | ((y , 11) | empEnv)):Env
(0.0000 sec for parse, 0.0080 sec for 2910 rewrites + 6675 matches)
-- reduce in %INTERPRET : (interpret(p3)):Env&Err
((x , 6) | ((y , 0) | ((z , 0) | empEnv))):Env
(0.0000 sec for parse, 0.0020 sec for 483 rewrites + 1152 matches)
-- reduce in %INTERPRET : (interpret(p4)):Env&Err
((x , 2000000000000000000) | ((y , 141421356) | ((z , 141421356) | ((tmp , 141421356) | empEnv))))):Env
(0.0000 sec for parse, 0.0810 sec for 21616 rewrites + 49250 matches)

CafeOBJ>
```