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CS 481 HW5

10/06/08

1. c = (5.0/9.0) \* (f - 32.0)

execute [c=(5.0/9.0)\*(f-32.0)] {

execute [5.0/9.0] {

LOAD 5.0

LOAD 9.0

CALL divide

STORE return1

}

execute [f-32.0] {

LOAD f

LOAD 32.0

CALL substract

STORE return2

}

LOAD return1

LOAD return 2

CALL multiply

STORE c

` }

1. If phrases of the special form occur frequently, and if they allow translation into particularly efficient code.
2. Backpatching is the solution to forward jumping. When the code generator has to generate a forward jump, it generated an incomplete jump instruction, whose destination address is temporarily set to zero. Later when the address becomes known the code generator goes back and patches it into the jump instruction.