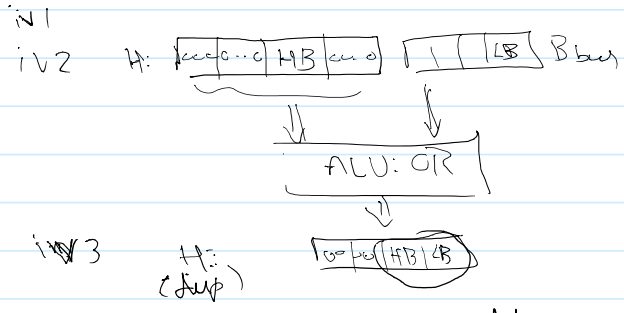
Mic-1 Method (invocation & return)

Interpretation of IJUM

method invocation: INVOKEVIRTUAL

returning from a method: IRETURN

Stack contents during INVOKEVIRTUAL interpretation.



Param Count in Method Header = no. of parameters + 1

iv4, iv5, iv6 — OPC — return adds. PC ← method start adds.

iv6 — fetch ParamCount.HB

iv7, iv8, iv9 — fetch ParamCount.LB

iv9 — H: ParamCount (2 byte value)

iv10 — fetch LocalVarSize.HB

iv11

iv12

iv13, iv14, iv15 — fetch LocalVarSize.LB

iv15 — H: LocalVarSize (2 byte value)

iv16 — write the locn of retn PC value in OBJREF

iv17, iv18 — write return PC value on the stack

MAR, MDR (OPC)

iv19, iv20 — Push parent.LV on stack

iv21 — fetch the first opcode of the method.

iv22 — set child.LV value (Locn of OBJREF)

Interpretation of IRETURN

ir1, ir2 — get the location of old PC

ir3, ir4 — get old PC value (get the location of old LV in MAR)

ir3 } get oldPC value (get the location of old LV in MAR)
ir4 }

ir5 restore oldPC value to PC
fetch parent.next opcode
read for old LV value

ir6 } Write return int value in (TOS) parent.OBJREF location / child.LV
ir8 }
ir7: restore old LV value