

Experiment 6-A

Bubble Sort Algorithm

OBJECTIVE

Given below is a working implementation of Bubble Sort algorithm in assembly language for eZ8 CPU using techniques we have covered so far. Inspect the code and fill in the blanks as required.

```
vector reset = startup
org %1000

startup:
srp #00
ld r0, #10h
ld r1, #7h
ld r2, #2dh
ld r3, #13h
ld r4, #47h
ld r5, #9h
ld r6, #16h
ld r7, #4h

ld r10, #0h
ld r11, #1h
jr mainloop

replace:
    ld @r10, r9
    ld @r11, r8
    ?? incr1

mainloop:
    cp r11, ??
    jr eq, incr2
    ld r8, @r10
    ld r9, ??
    cp r8, r9
    ?? gt, ??
    jr incr1

incr1:
    inc r11
    jr mainloop

incr2:
    inc ??
    ?? r10, #8h
    jr ??, ending
    ld r11, r10
    jr incr1

ending:
    clr r8
    clr r9
    clr r10
    clr r11
    end
```