```
MACHINE
    S1  ›
REFINES
     S0
SEES
     Array
VARIABLES
    r    private ›
    c    private ›
INVARIANTS
    inv1:   c∈1‥n  not theorem TYPING --undefined-- ›
    inv5:   (∀ i,j· i∈ 1‥c ∧ j∈i‥c ⟹ a(i)≤a(j)) not theorem TYPING --
undefined-- ›
    DLF:    (c=n ) ∨ (c< n ∧ a(c+1) < a(c))
              ∨ (c< n ∧ a(c+1) ≥a(c)) theorem TYPING --undefined-- ›
VARIANT
    n−c ›
EVENTS
    INITIALISATION:    extended ordinary internal --undefined-- ›
        THEN
            act1:   r≔FALSE ›
            act2:   c≔1 ›
        END

    OK:  not extended ordinary internal --undefined-- ›
        REFINES
             OK
        WHERE
            grd1:   c=n not theorem TYPING --undefined-- ›
        THEN
            act1:   r ≔ TRUE ›
        END

    notOK:  not extended ordinary internal --undefined-- ›
        REFINES
             notOK
        WHERE
            grd4:   c< n not theorem TYPING --undefined-- ›
            grd2:   a(c+1) < a(c) not theorem TYPING --undefined-- ›
        END

    step:    not extended convergent internal --undefined-- ›
        WHERE
            grd1:   c<n not theorem TYPING --undefined-- ›
            grd2:   a(c) ≤ a(c+1) not theorem TYPING --undefined-- ›
        THEN
            act1:   c≔c+1 ›
        END

END
```