

MACHINE P1

REFINES P0

SEES Word

VARIABLES

result

l

r

INVARIANTS

inv1: $l \in 0 .. n$

inv2: $r \in l .. n + 1$

inv3: $\forall i. i \in 1 .. l \Rightarrow w(i) = w(n + 1 - i)$

inv5: $r + l = n + 1$

inv4: $l \leq (n + 1)/2$

EVENTS

Initialisation

begin

act2: $result := 0$

act1: $l, r := 0, n + 1$

end

Event pal1 $\hat{=}$

refines pal

when

grd1: $r = l$

then

act1: $result := 1$

end

Event pal2 $\hat{=}$

refines pal

when

grd1: $r = l + 1$

grd2: $w(l) = w(r)$

then

act1: $result := 1$

end

Event nopal $\hat{=}$

refines nopal

when

grd3: $1 \leq l$

grd1: $l < r$

grd2: $w(l) \neq w(r)$

with

i: $i = 1$

j: $j = r$

then

skip

end

Event go-on $\hat{=}$

when

grd1: $l + 1 < r$

grd2: $w(l + 1) = w(r - 1)$

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    then
      act1 :  $l := l + 1$ 
      act2 :  $r := r - 1$ 
    end
  END
```