

FILE: POOLTEST.F90

```
1 program pooltest
2
3     use pool
4
5     implicit none
6
7     character(len = *) , parameter :: fmt1 = "(A15,10(I3))"
8     character(len = 6) :: option
9     integer :: id
10    n_walkers = 5
11    max_walkers = 10
12
13    call walker_id_pool_init()
14    write(*,*) "walker_id_root:", walker_id_root
15    write(*,*) "n_walkers:", n_walkers
16    write(*,fmt1) "walker_id_pool:", walker_id_pool
17
18    ! Get desired
19 10 write(*,*) "Would you like to add or remove a particle?
    Please &
20           specify either 'add' or 'remove'."
21    read(*,*) option
22
23    select case (option)
24
25        case('add')
26            ! The assigned id should be 6
27
28            ! Pull the next available id
29            call walker_id_pool_pull(id)
```

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30
31     if (n_walkers .gt. max_walkers) then
32         write(*,*) "Error: There is no more space for
33             any more&
34                 walkers."
35         stop
36     end if
37
38     write(*,*) "Assigned ID:", id
39     write(*,*) "walker_id_root:", walker_id_root
40     write(*,*) "n_walkers:", n_walkers
41     write(*,fmt1) "walker_id_pool:", walker_id_pool
42
43     ! Check to see if the use wants to keep going
20 write(*,*) "Would you like to keep going? Please &
44         state 'yes' or 'no'."
45     read(*,*) option
46
47     select case (option)
48         case('yes')
49             go to 10
50         case('no')
51             stop
52         case default
53             write(*,*) "Please choose either 'yes' &
54                 or 'no'."
55             go to 20
56     end select
57
58     case('remove')
59

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60         if (n_walkers .le. 0) then
61             write(*,*) "Error: There are no more particles &
62                 in they system."
63             stop
64         end if
65
66 30         write(*,*) "Which particle would you like to remove
        ?"
67         read(*,*) id
68
69         if (id .le. 0 .or. id .gt. max_walkers) then
70             write(*,*) "Please select an appropriate ID."
71             go to 30
72         end if
73
74         if (walker_id_pool(id) .gt. 0) then
75             write(*,*) "That ID is unoccupied, so there is &
76                 nothing to do."
77             go to 40
78         end if
79
80         call walker_id_pool_push(id)
81         write(*,*) "walker_id_root:", walker_id_root
82         write(*,*) "n_walkers:", n_walkers
83         write(*,fmt1) "walker_id_pool:", walker_id_pool
84
85         ! Check to see if the use wants to keep going
86 40         write(*,*) "Would you like to keep going? Please &
87             state 'yes' or 'no'."
88         read(*,*) option
89

```

```

90         select case (option)
91             case('yes')
92                 go to 10
93             case('no')
94                 stop
95             case default
96                 write(*,*) "Please choose either 'yes' &
97                             or 'no' ."
98                 go to 40
99         end select
100
101     case default
102         write(*,*) "Please specify either 'add' or 'remove'
103                     ."
104         go to 10
105     end select
106 end program pooltest

```