```
with Ada.Text_IO; use Ada.Text_IO;
procedure Dining_Philosophers is
  subtype ID is Integer range 1..5;

  task Waiter is            -- Waiter spec
    entry Pickup(I : in ID);
    entry Putdown(I : in ID);
  end
  task body Waiter is separate;

  task type Philosopher is   -- Philosopher spec
    entry init(who : ID);
  end;

  DP : array(ID) of Philosopher;  -- the philosophers
  rounds : Integer;               -- number of rounds

  task body Philosopher is   -- Philosopher body
    myid : ID;
  begin
    accept init(who); myid := who; end;
    for j in 1..rounds loop
      -- "think"
      Waiter.Pickup(myid);  -- pick forks up
      -- "eat"
      Waiter.Putdown(myid); -- put forks down
    end loop;
  end Philosopher;

begin  -- read in rounds, then start the philosophers
  Get(rounds);
  for j in ID loop
    DP(j).init(j);
  end loop;
end Dining_Philosophers;
```

Figure 8.18 Dining philosophers in Ada: Main program.