

```

--algorithm AtomicBakery
{
  variable num = [i \in Procs] -> 0, flag = [i \in Procs] -> FALSE;
  process (p \in Procs)
  {
    variables unchecked = {}, max = 0, nxt = 1;
    {
      uncs: while (TRUE)
      {
        e1: flag[self] = TRUE;
        unchecked = Procs \ {self};
        max = 0;
        e2: while (unchecked # {})
        {
          with (i \in unchecked)
          {
            unchecked = unchecked \ {i};
            if (num[i] > max) { max = num[i] }
          }
        };
        e3: with (i \in {j \in Nat : j > max}) { num[self] = i };
        e4: flag[self] = FALSE;
        unchecked = Procs \ {self};
        w1: while (unchecked # {})
        {
          with (i \in unchecked) { nxt = i };
          await ~ flag[nxt];
          w2: await \ / num[nxt] = 0
          {
            << num[self], self >>
            << num[nxt], prec << num[nxt], nxt >> ;
            unchecked = unchecked \ {nxt};
          };
        };
        cs: skip; \ * the critical section;
        exit: num[self] = 0;
      }
    }
  }
}

```