

Towards the Bakery Algorithm – 1

```

process (  $p \in Procs$  )
  variables  $unchecked, max = 0$ ;
  {  $ncs$ : while ( TRUE )
    {  $e1$ :  $unchecked := Procs \setminus \{self\}$ ;
       $e2$ :  $max := 0$ ;
       $e3$ : while (  $unchecked \neq \{\}$  )
        { with (  $i \in unchecked$  )
          {  $e4$ :  $unchecked := unchecked \setminus \{i\}$ ;
             $e5$ : if (  $num[i] > max$  ) {  $max := num[i]$  }
          }
        } ;
      with (  $i \in \{j \in Nat : j > max\}$  ) {  $num[self] := i$  } ;
       $unchecked := Procs \setminus \{self\}$ ;
      while (  $unchecked \neq \{\}$  )
        { with (  $i \in unchecked$  )
          { await  $\vee num[i] = 0$ 
               $\vee \langle num[self], self \rangle \prec \langle num[i], i \rangle$ ;
             $unchecked := unchecked \setminus \{i\}$ 
          }
        } ;
      skip;    the critical section;
       $num[self] := 0$ ;
    }
  }

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