

Towards the Bakery Algorithm – 1

```
process (  $p \in Procs$  )  
  variables  $unchecked, max$  ;  
  {  
    while ( TRUE )  
      {  
         $unchecked := Procs \setminus \{self\}$  ;  
         $max := 0$  ;  
        while (  $unchecked \neq \{\}$  )  
          { with (  $i \in unchecked$  )  
            {  $unchecked := unchecked \setminus \{i\}$  ;  
              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;  
         $num[self] := 0$  ;  
      }  
  }
```