```
agregar_i_1_1
                                              [\operatorname{stock}[1] >= 1]
                                                 {carrito[i][1] += 1}
                                                                                                                                                                             Máquina = depósito || cliente_1 || ... || cliente_l
                                                                                                                                                                             Variables globales:
                                              agregar_i_1_MAXU
                                                                                                                                                                             I = #clientes
                                              [stock[1] >= MAXU]
                                              {carrito[i][1] += MAXU}
                                                                                                                                                                             J = #productos
                                                                                                                                                                             stock = [0, ..., 0]
                                              agregar_i_J_1
                                                                                       cliente_i
                                                                                                                                                                             carrito = [[0, ..., 0], ..., [0, ..., 0]]
                                              [stock[J] >= 1]
                                                 \{carrito[i][J] += 1\}
                                                                                                                                                                             MAXU = cant. max. de unidades
                                                                                                                                                                             timer_i = timer en min. for i in 1..I
                                              agregar_i_J_MAXU
                                                                                reservar_i
                                              [stock[J] >= MAXU]
                                                                                stock[1] >= carrito[i][1]
                                              {carrito[i][J] += MAXU}
                                                                                stock[J] >= carrito[i][J]
quitar_i_1_1
[carrito[i][1] >= 1]
   {carrito[i][1] -= 1}
                                                                                stock[1] -= carrito[i][1]
quitar_i_1_MAXU
                                                                                stock[J] -= carrito[i][J]
[carrito[i][1] >= MAXU]
                                                                                timer_i = 0
{carrito[i][1] -= MAXU}
                                                                                                                  carrito reservado
                                                     armando carrito
                                                                                                                                                                   carrito confirmado
                                                                                                                    timer_i < 10
quitar_i_J_1
[carrito[i][J] >= 1]
                                                                                                                                             confirmar_i
   {carrito[i][J] -= 1}
                                                                                                                                           [timer_i < 10]
quitar_i_J_MAXU
                                                                                timeout i
[carrito[i][J] >= MAXU]
                                                                                [timer_i >= 10]
{carrito[i][J] -= MAXU}
                                                                                stock[1] += carrito[i][1]
                                                                                stock[2] += carrito[i][2]
                                                                                stock[J] += carrito[i][J]
                                                                                                                                                                   depósito
                                                                              cancelar_i
                                                                              [timer_i < 10]
                                                                                                                                                                                                 ingresar_1_1
                                                                              stock[1] += carrito[i][1]
                                                                                                                                                                                                 \{ stock[1] += 1 \}
                                                                              stock[J] += carrito[i][J]
                                                                                                                                                                                                 ingresar_1_MAXU
                                                                              carrito[i][1] = 0
                                                                                                                                             ingresando unidades
                                                                                                                                                                                                 {stock[1] += MAXU}
                                                                              carrito[i][J] = 0
                                                                                                                                                                                                  ingresar_J_1
                                                                                                                                                                                                 {\operatorname{stock}[J] += 1}
                                                                                                                                                                                                  ingresar_J_MAXU
                                                                                                                                                                                                 {stock[J] += MAXU}
```