```
Shared Memory Jacobi pseudocode:
const TOLERANCE = ...
main() {
  double A[n,n], B[n,n]
  double maxdiff = 0.0
  bool done := false
  initialize A, B
  co id := 0 to P-1 {
   double diff
    int startrow := id * n / P
    int endrow := (id+1) * n / P - 1
    while not done {
      for i := startrow to endrow {
        for j := 1 to n-2 {
          A[i][j] := (B[i][j-1] + B[i][j+1] + B[i-1][j] + B[i+1][j]) / 4
          diff := abs(A[i][j] - B[i][j])
          <
            if (maxdiff < diff) // how should we implement <...>?
             maxdiff = diff
          >
       }
      }
      barrier // is this needed?
      if (id == 0) {
       if maxdiff < TOLERANCE
         done := true
        else {
         swap(A,B)
         maxdiff := 0
        }
      }
     barrier // needed?
   }
  print out answer
}
```