```
1:  HoughLines(I)
2:      Set up a two-dimensional array Acc[θ, r] of counters, initialize to 0
3:      Let (u_c, v_c) be the center coordinates of the image I
4:      for all image coordinates (u, v) do
5:          if I(u, v) is an edge point then
6:              (x, y) ← (u − u_c, v − v_c)          ▷ relative coordinate to center
7:              for θ_i = 0 ... π do
8:                  r_i = x cos(θ_i) + y sin(θ_i)
9:                  Increment Acc[θ_i, r_i]
10:     MaxLines ← FindMaxLines(Acc, K)
11:         ▷ return the list of parameter pairs (θ_j, r_j) for K strongest lines
12:     return MaxLines.
```