Algorithm MAKEMONOTONE($\mathcal{P}$)
Input. A simple polygon $\mathcal{P}$ stored in a doubly-connected edge list $\mathcal{D}$.
Output. A partitioning of $\mathcal{P}$ into monotone subpolygons, stored in $\mathcal{D}$.

1. Construct a priority queue $\mathcal{Q}$ on the vertices of $\mathcal{P}$, using their y-coordinates as priority. If two points have the same y-coordinate, the one with smaller x-coordinate has higher priority.
2. Initialize an empty binary search tree $\mathcal{T}$.
3. **while** $\mathcal{Q}$ is not empty
4. **do** Remove the vertex v_i with the highest priority from $\mathcal{Q}$.
5. Call the appropriate procedure to handle the vertex, depending on its type.