
ALGORITHM 3: *RegionAssignment*($G, PASS, code_mem$)

- 1: Initialize actor to region assignments $\langle V, R \rangle$, as each actor occupies a separate region
 - 2: Construct IF table entry for each region pair $\langle (r_i, r_j), Integer \rangle$, where $r_i, r_j \in R, i < j$
 - 3: $region_mem \leftarrow \sum_{r \in R} C_r$
 - 4: **while** $region_mem > code_mem$ and $|R| > 1$ **do**
 - 5: Collapse a region pair with minimum IF
 - 6: Update $\langle V, R \rangle$ and IF table
 - 7: $region_mem \leftarrow \sum_{r \in R} C_r$
 - 8: **end while**
 - 9: **return** $\langle V, R \rangle$
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