

ALGORITHM: CONNECTEDCOMPONENTS

Input: Undirected graph $g = (V, E)$

Output: an array C of arrays that contains all the connected components in graph g .

- (1) Initialize C to an empty array
- (2) $N \leftarrow V$
- (3) While $\|N\| > 0$ do
- (4) $j \leftarrow$ random node from N
- (5) $(d, p, w) \leftarrow \text{BFS}(g, j)$
- (6) $C \leftarrow C \cup w$
- (7) $N \leftarrow N \setminus \{w\}$
- (8) Return C