Shortest Path with BFS

1. Modify the BFS graph algorithm so that it computes the shortest path from the start vertex to all other vertices.

   ```python
   FUNCTION BFS(G, start_vertex)
   found = {v: FALSE FOR v in G.vertices}
   found[start_vertex] = TRUE
   visit_queue = [start_vertex]
   WHILE visit_queue.length != 0
       vFound = visit_queue.pop()
       FOR vOther IN G.edges[vFound]
           IF found[vOther] == FALSE
               found[vOther] = TRUE
               visit_queue.add(vOther)
   RETURN found
   ```

2. How would you use our BFS procedure (not the shortest path procedure) to find groups of connected components?