V :a set of verticles
E :a set of edges
$G \Leftarrow (V, E)$
H :a max heap of $\triangle Q_{c_x,c_y}$
while H is not empty **do**
    extract $max \triangle Q_{c_x,c_y}$ from H, where any $c_x, c_y \in C$
    if $max \triangle Q_{c_x,c_y} < 0$ **then**
        break
    end if
    $c_z \Leftarrow c_x \cup c_y$
    $C \Leftarrow C - c_x - c_y + c_z$
    $N_{c_z} \Leftarrow \{c_k | u_m \in c_z, v_n \in c_k, e_{mn} \in G(E)\}$
    for $c_k \in N_{c_z}$ **do**
        $\triangle Q_{c_k,c_z} \Leftarrow Q(G, C - c_k - c_z + (c_k \cup c_z) - Q(G, C)$
    end for
end while