
Algorithm 1 Exploration Model

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1: procedure EXPLORATION( $G, D, Q$ )
2:   while  $Q$  is not empty do
3:     if  $D.label = queue.metadata$  then
4:        $node \leftarrow Q.dequeue()$ 
5:        $G(u) \leftarrow name$ 
6:        $G(v) \leftarrow score$ 
7:   while  $G$  is not empty do
8:      $u = G.removeMin()$ 
9:     for each vertex  $z$  adjacent to  $u$  and in  $G$  do
10:      if  $D(u) + w((u, z)) < D(z)$  then
11:         $D(z) \leftarrow D(u) + w((u, z))$ 
12:        update  $z$  in  $G$ 
    return  $G$ 
```
