
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:        $node \leftarrow Q.dequeue()$        $G(u) \leftarrow name$ 
5:        $G(v) \leftarrow score$ 
6:   while  $G$  is not empty do
7:      $u = G.removeMin()$ 
8:     for each vertex  $z$  adjacent to  $u$  and in  $G$  do
9:       if  $D(u) + w((u, z)) < D(z)$  then
10:         $D(z) \leftarrow D(u) + w((u, z))$ 
11:        update  $z$  in  $G$ 
12:
13:   return  $G$ 
14:
```
