

C-12.8

For each vertex v , perform a modified BFS traversal starting at v that stops as soon as level 4 is computed.

Alternatively, for each vertex v , call method $\text{DFS}(v, 4)$ given below, which is a modified DFS traversal starting at v :

Algorithm $\text{DFS}(v, i)$:

```
if  $i > 0$  and  $v$  is not marked then
    Mark  $v$ .
    Print  $v$ .
    for all vertices  $w$  adjacent to  $v$  do
         $\text{DFS}(w, i - 1)$ .
```