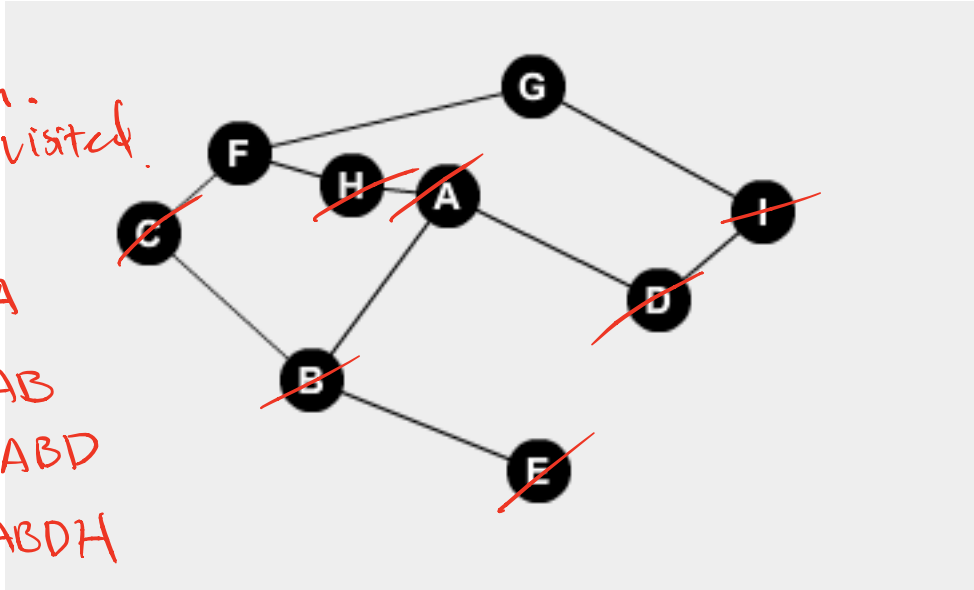


1 Graphs

1.1 Undirected Graph



BFS
 top Queue
~~A~~
 ←
~~BDH~~
~~DHCE~~
~~KCEI~~
~~CEIF~~

bottom.
 visited.
 A
 AB
 ABD
 ABDH

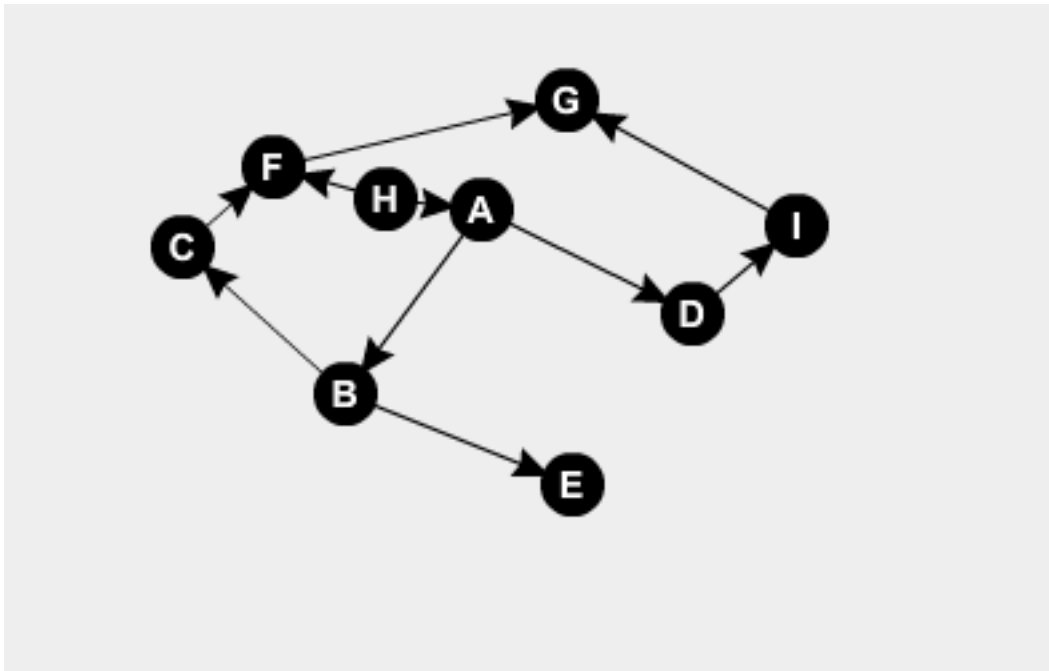
ABDHC

Perform Breadth First Search and Depth First Search on the graph above starting from A. Break ties by visiting in **alphabetical order**. There should be only one correct answer because of the ordering. Make sure to show your Stack or Queue status for each step.

~~IF~~ ABDHCE
~~IFG~~ ABDHCEI
~~IFG~~ ABDHCEIF
 ABDHCEIFG
 ↑
 empty. (F visited so skip)

DFS
 stack bottom visited
~~A~~ ← ✓
~~BDH~~ A
~~CEDH~~ AB
~~EDH~~ ABC
~~GHEDH~~ ABCF
~~IHEDH~~ ABCFG
~~DHEDH~~ ABCFGI
~~AHEDH~~ ABCFGIP (A visited)
~~EDH~~ ABCFGIDH
~~DH~~ ABCFGIDHE (DH visited)

1.2 Directed Graph



Perform Breadth First Search and Depth First Search on the graph above starting from A. Break ties by visiting in **alphabetical order**. There should be only one correct answer because of the ordering. Make sure to show your Stack or Queue status for each step. Some vertices may not be visited.

SAME IDEA ABOVE, BUT DIRECTED SO CERTAIN VERTICES YOU CAN'T REACH.

BFS

ABDC EIFG

Follow the arrows.

DFS

ABC F G E D I