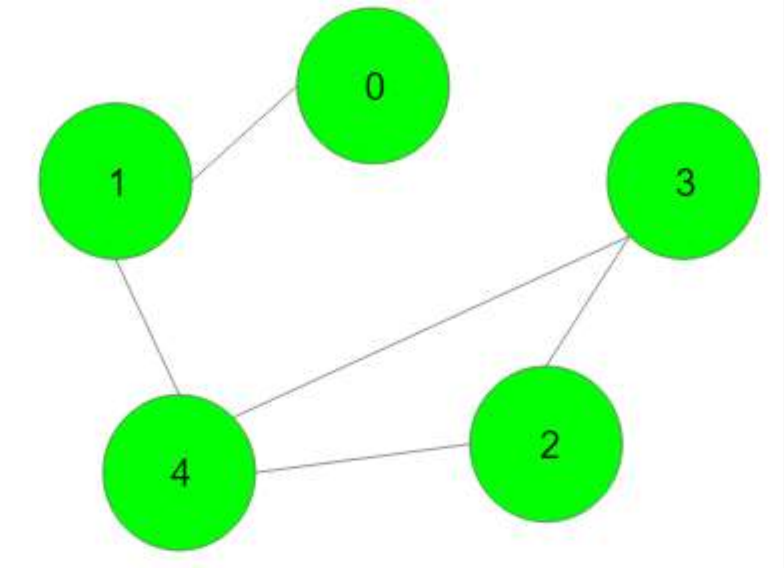
Articulation Point

Given an undirected connected graph with **V** vertices and adjacency list **adj**. You are required to find all the vertices removing which (and edges through it) disconnects the graph into 2 or more components.

Note: Indexing is zero-based i.e nodes numbering from (0 to V-1). There might be loops present in the graph.

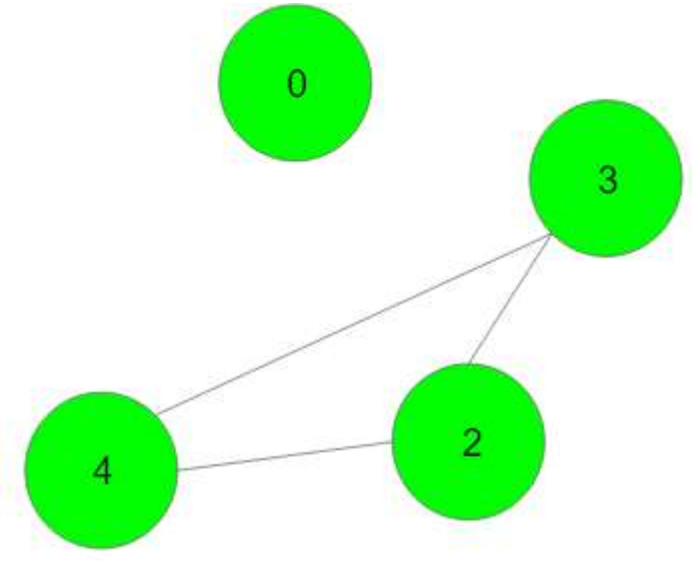
Example 1:

Input:



Output: {1,4}

Explanation: Removing the vertex 1 will discconect the graph as-



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Removing the vertex 4 will disconnect the
graph as-
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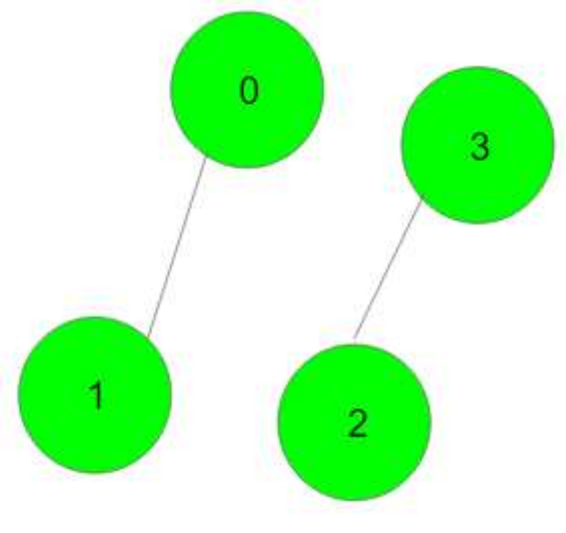

Your Task:

You don't need to read or print anything. Your task is to complete the function **articulationPoints()** which takes V and adj as input parameters and returns a list containing all the vertices removing which turn the graph into two or more disconnected components in sorted order. If there are no such vertices then returns a list containing -1.

Expected Time Complexity: $O(V + E)$
Expected Auxiliary Space: $O(V)$

Constraints:
$1 \leq V \leq 10^5$