## نمونه سوال

 Professor Deaver claims that the algorithm for strongly connected components can be simplified by using the original (instead of the transpose) graph in the second depth-first search and scanning the vertices in order of *increasing* finishing times. Is the professor correct? • Give an algorithm that determines whether or not a given undirected graph G = (V, E) contains a cycle. Your algorithm should run in O(V) time, independent of |E|.

• How can the number of strongly connected components of a graph change if a new edge is added?