

# Fundamentals of Computer Algorithms

## Homework 4 Additional Problems

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Due: 2018-09-18

1. Implement the function `findCycle` in the attached python source file. In your homework submission, only submit your function, not the whole source file. Your function should find *one* cycle, if it exists. It does not need to find the shortest cycle.
2. Let us suppose that  $\mathbb{G}$  is a directed graph and the vertex  $s \in G$  has  $\text{in-deg}(s) \neq 0$  and  $\text{out-deg}(s) \neq 0$ . Is it possible for the DFS tree for  $s$  to contain *only*  $s$ ?