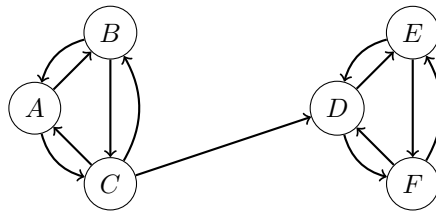

Pre-lecture exercises will not be collected for credit. However, you will get more out of each lecture if you do them, and they will be referenced during lecture. We recommend **writing out** your answers to pre-lecture exercises before class. Pre-lecture exercises usually should not take you more than 30 minutes.

Consider the following graph:



1. What happens if you run DFS to explore the graph, starting from B ?
2. What happens if you run DFS to explore the graph, starting from F ?
3. Suppose you wanted to separate the two clusters $\{A, B, C\}$ and $\{D, E, F\}$ from each other. Based on your answer above, how might you use DFS to do this?