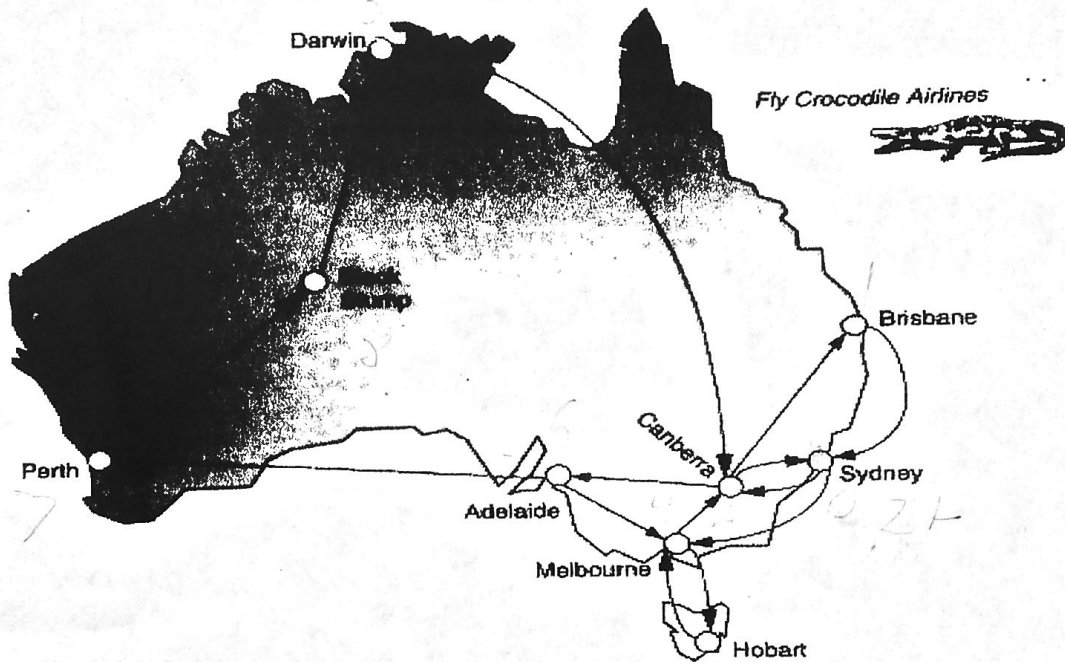1. Perform a depth-first search of the Australia digraph given below, starting at Sydney. List the order in which the cities are processed.
- Do the same for a breadth-first search.

2. Consider the graph below. Write a program that outputs the shortest distance from node 0 to every other node in the graph.