Computer Science Department,
College of Computer and Information Sciences,
King Saud University.

CSC 311
The Second Semester, 2020/2021
Homework #3
Due on April 04, 2021.

Q1:
Give the pseudocode of an algorithm for **The Longest Increasing Subsequence** problem which is defined as follows. Given an array A of distinct integers, find the length of the longest increasing subsequence of elements in A.
Example: The length of the longest increasing subsequence in $[1, 19, 5, 10, 2, 50, 23, 35]$ is 5 which is the length of the subsequence $[1, 5, 10, 23, 35]$.

Q2:
Show all steps of the Breadth First Search Algorithm to find all shortest paths from V_2 to all other vertices in the following graph.