CS 315 Homework Exercise 5

Due Tuesday, December 4, 2018 by class time

First, study the notes in the file named **graphTraversals11-30-2018.pdf** that accompanies this handout.

Then do the following **NEATLY IN PENCIL** on paper and submit them to me at the start of class.

Remember to put your name on the sheets of paper.

1. Using the graph from the notes do a **depth-first** traversal starting at vertex **F**. List the sequence of vertices that are visited in the order that they are visited. Draw the resulting spanning tree.

2. Using the graph from the notes do a **breadth-first** traversal starting at vertex **B**. List the sequence of vertices that are visited in the order that they are visited. Draw the resulting spanning tree.

3. Given the set of vertices, $\{v_1, v_2, v_3, v_4, v_5\}$, and the following adjacency matrix
   a. Draw the graph,
   b. Do a **breadth-first** traversal starting at vertex v_5 and draw the resulting spanning tree,
   c. Do a **depth-first** traversal starting at v_5 and draw the resulting spanning tree.

	v_1	v_2	v_3	v_4	v_5
v_1	0	1	0	1	0
v_2	1	0	0	1	1
v_3	0	0	0	1	1
v_4	1	1	1	0	1
v_5	0	1	1	1	0

Vertices are to be selected in numerical order.