**Notes:**

* Problems 1 and 2 are due by 9:50 AM, November 14, 2018.
* You are required to turn in a written report (Word or PDF file) for the homework part (problem 3) of the lab and upload implementations to canvas. These are due by 8:00 AM, November 28, 2018).

**Objectives:**

* Implement weighted graph and Prim’s Algorithm for minimum spanning trees.

**Problems:**

1. Implement a weighted graph class. Write a driver program, which reads input file mediumGraph.txt (downloadable from Canvas) and display the weighted graphs by printing adjacency list.
2. Implement Prim’s algorithm (provided below). Use your pre-lab assignment to check whether the output of your code is correct or not.
3. Write a driver program, which reads input files mediumGraph.txt, LargeGraph.txt and XtraLargeGraph.txt (downloadable from Canvas) and run Prim’s algorithm on each of them to find the minimum spanning tree within these graphs. Record the times required for each of these graphs and include this in your report.

NB: For the following pseudo code, you need to use a priority queue. You can use your own code from the heap sort assignment or use the appropriate Java or Python packages for the priority queue.

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