Algorithm Analysis and Design Lab (CS 312)

Assignment - 09

Due date: Sept 10, 2018

Problem-1 Write a program to show *Depth-First Traversal* in a directed graph $G = (V, E)$. Report **discovery** and **finishing** times of every node in V. Your program will take input from a file having edge list in the form of tuples $e_i = (u_i, v_i, w_i)$ where u_i is the source vertex, v_i is the destination vertex and w_i is the edge weight for the i-th edge e_i.

Problem-2 Use the function written for *Depth-First Traversal* reporting in Problem-1 to report toplogical ordering of vertices in a Directed Acyclic Graph (DAG). See example of DAG below.