Experiment - 6

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Branch: AIML   **Section/Group:** AIML 4 B
Semester: 5th   **Date of Performance:** 11/10/2022
Subject Name: Advanced Programming Lab   **Subject Code:** 20CSP-334

1. AIM:

Obtain the Topological ordering of vertices in a given digraph.

2. Apparatus:

- Tex

3. Algorithm/Theory

We recommend to first see the implementation of DFS. We can modify DFS to find Topological Sorting of a graph. In DFS, we start from a vertex, we first print it and then recursively call DFS for its adjacent vertices. In topological sorting, we use a temporary stack. We don't print the vertex immediately, we first recursively call topological sorting for all its adjacent vertices, then push it to a stack. Finally, print contents of the stack. Note that a vertex is pushed to stack only when all of its adjacent vertices (and their adjacent vertices and so on) are already in the stack. Below image is an illustration of the above approach:

4. Program/Code

6. Output

7. Learning Outcomes:

1. Learned the concepts of Dijkstra's algorithm.

2. Learned the concepts of Graphs.

3. Learned to write a program for the above problem.

4. Learned to use Clion IDE.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			