ALGORITHMS – COURSEWORK

Task 05 – Report Writing

a) For this coursework, I used Depth First Search (DFS) Algorithm. Depth First Search is a recursive algorithm for searching all the vertices of a graph or tree data structure. The purpose of this algorithm is to mark each vertex as visited while avoiding cycles.
A standard Depth First Search implementation puts each vertex of the graph into Visited or Not Visited categories.
Depth First Search can be implemented using stacks, and that is the main reason used the Depth First Search Algorithm.
Depth First Search Algorithm simply works as follows.
   - Pick a starting any one of the graph's vertices on top of the stack.
   - Pop a node from the stack to select the next node to visit.
   - Next, create a list of that vertex's adjacent nodes. Add the ones which aren't in the visited list to the top of the stack.
   - Then need to keep repeating this process until the stack is empty.

   That's how the Depth First Search Algorithm works.