1. Make an efficient implementation of Graph and demonstrate all possible operations, such as search, traverse etc.

2. Take a sample text file like this which resembles an electrical network. Your program and data structure should efficiently build Circuit using this information even for a large size electrical circuits. The electrical circuit may be of size millions of nodes and edges. A Random Electrical Circuit Generator will be shared with you today itself. In the sample below, ".end" signals end of the circuit netlist.

   R1 1 2 10
   R2 2 3 20
   V3 1 0 10
   I4 3 1 20
   R5 3 0 40
   .end

3. For the circuit mentioned above, find a TREE of resistances and voltage sources using BFS and DFS and compare the performances.

4. Send your codes to gtiitgcourses@gmail.com after finishing the assignment by 23.59 Hrs tomorrow i.e. 02 April 2021.