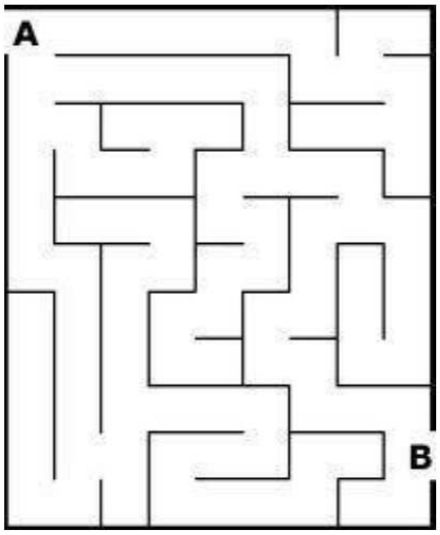
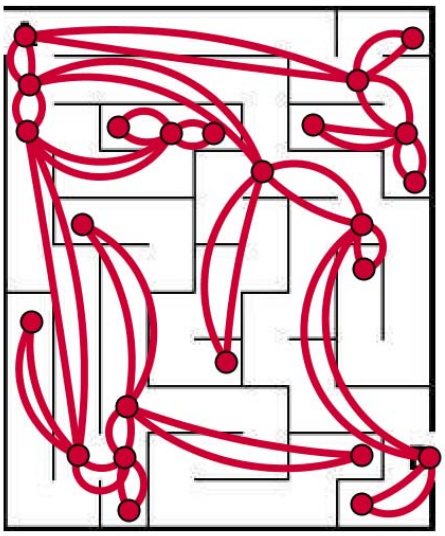
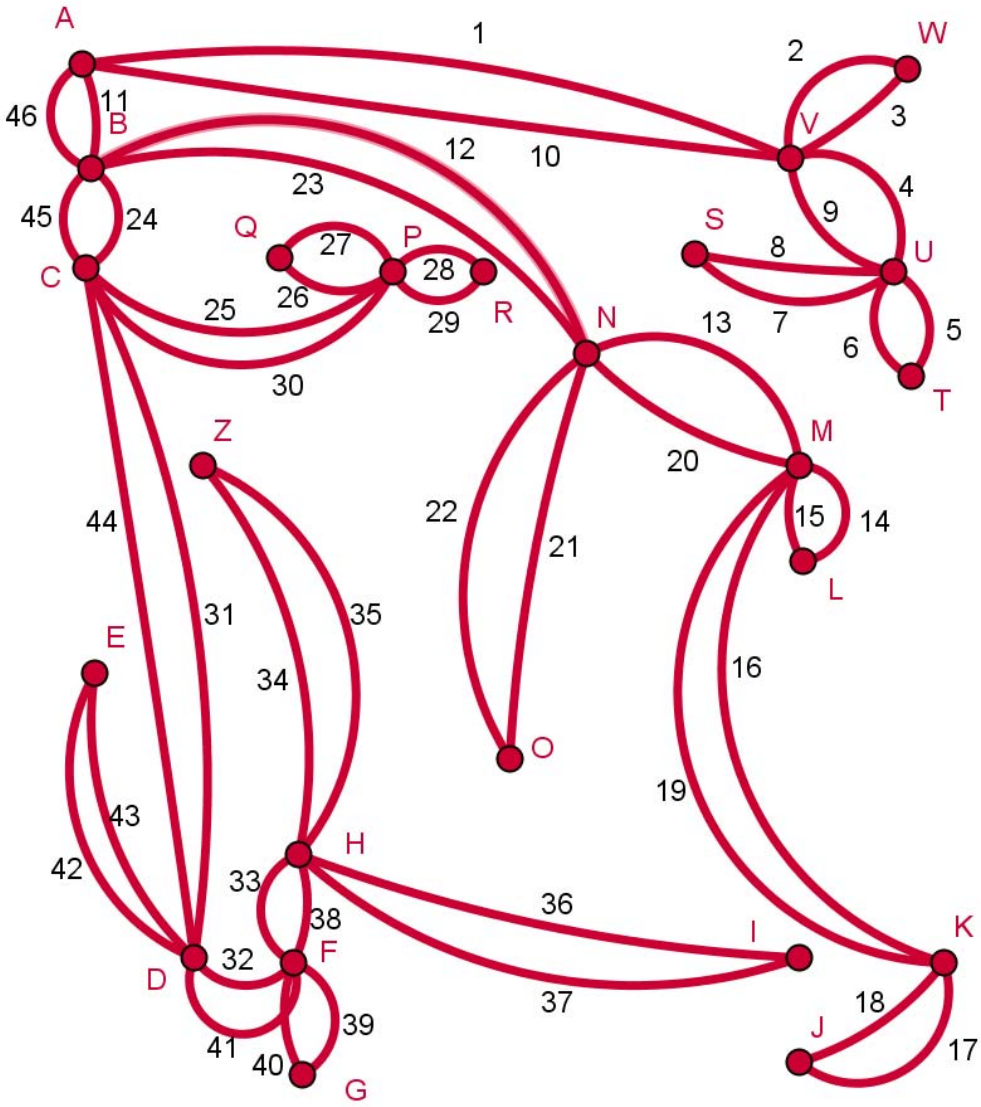
EXAMPLE OF ANALYZING A MAZE

Here is a maze and the Eulerization of the associated graph. Note that there is a vertex at the start, at the end, at every dead end, and at every intersection where a decision must be made on where to go next. I connect two vertices with a pair of edges whenever they are directly connected by a corridor in the maze (i.e., when there are no other vertices in between them on the connecting corridor).





Here is an Euler circuit, starting and ending at the starting location of the maze (A).



Here is the result of pruning away the unnecessary edges to get from the start to the finish – those edges which, while traveling the Euler circuit on the way from the start to the finish, returned you to previously visited vertices, and those edges which are traversed after reaching the end point of the maze. I then “straightened out” the edges to conform to the original maze, to show the solution to the maze.