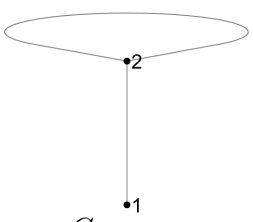
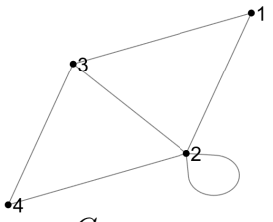
MATH.APP.270 Algorithms for graphs

Programming assignment 1: graphs for testing 2022

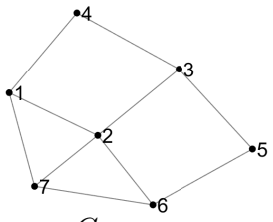
The graphs that you should use for testing your code are presented here:



G_1



G_2



G_3

The following table contains the input files for these graphs:

graph	Python input file	Matlab input file
G_1	`G01Python.txt`	`G01Matlab.m`
G_2	`G02Python.txt`	`G02Matlab.m`
G_3	`G03Python.txt`	`G03Matlab.m`

For each of these graphs, all minimal spanning trees have been generated for one or more starting vertices. For each starting vertex, a summary of all minimal spanning trees have been compiled in a single file. These files are given in the following table:

graph	starting vertex s	Python file containing all minimal spanning trees	Matlab file containing all minimal spanning trees
G_1	1	`G01Start1Trees.txt`	`G01Start1Trees.m`
G_1	2	`G01Start2Trees.txt`	`G01Start2Trees.m`
G_2	3	`G02Start3Trees.txt`	`G02Start3Trees.m`
G_2	4	`G02Start4Trees.txt`	`G02Start4Trees.m`
G_3	2	`G03Start2Trees.txt`	`G03Start2Trees.m`
G_3	4	`G03Start4Trees.txt`	`G03Start4Trees.m`
G_3	6	`G03Start6Trees.txt`	`G03Start6Trees.m`
G_3	7	`G03Start7Trees.txt`	`G03Start7Trees.m`

Note that the trees are interpreted as being directed; all edges point away from the starting vertex s.