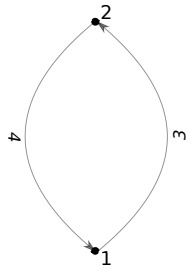
MATH.APP.270 Algorithms for graphs

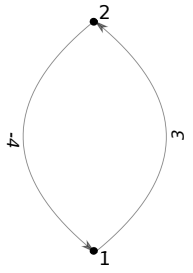
Programming assignment 2: graphs for testing 2022

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

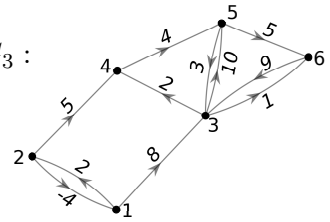
G_1 :



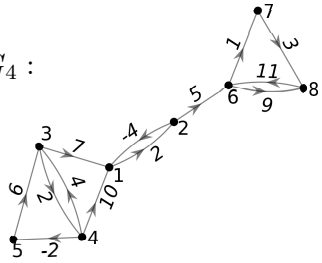
G_2 :



G_3 :



G_4 :



The following table contains the input files for these graphs:

graph	Python input file	Matlab input file
G_1	`G01PythonFW.txt`	`G01MatlabFW.m`
G_2	`G02PythonFW.txt`	`G02MatlabFW.m`
G_3	`G03PythonFW.txt`	`G03MatlabFW.m`
G_4	`G04PythonFW.txt`	`G04MatlabFW.m`

The *Path* matrix for each of these graphs is given as follows:

$$G_1: \begin{bmatrix} \langle 1\rangle & \langle 1,2\rangle \\ \langle 2,1\rangle & \langle 2\rangle \end{bmatrix} \qquad G_2: \begin{bmatrix} \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle \end{bmatrix}$$

$$G_3: \begin{bmatrix} \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle 3\rangle & \langle 3,4\rangle & \langle 3,4,5\rangle & \langle 3,6\rangle \\ \langle\rangle & \langle\rangle & \langle 4,5,3\rangle & \langle 4\rangle & \langle 4,5\rangle & \langle 4,5,3,6\rangle \\ \langle\rangle & \langle\rangle & \langle 5,3\rangle & \langle 5,3,4\rangle & \langle 5\rangle & \langle 5,3,6\rangle \\ \langle\rangle & \langle\rangle & \langle 6,3\rangle & \langle 6,3,4\rangle & \langle 6,3,4,5\rangle & \langle 6\rangle \end{bmatrix}$$

$$G_4 : \begin{bmatrix} \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle 3\rangle & \langle 3,4\rangle & \langle 3,4,5\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle 4,3\rangle & \langle 4\rangle & \langle 4,5\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle 5,3\rangle & \langle 5,3,4\rangle & \langle 5\rangle & \langle\rangle & \langle\rangle & \langle\rangle \\ \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle 6\rangle & \langle 6,7\rangle & \langle 6,7,8\rangle \\ \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle 7,8,6\rangle & \langle 7\rangle & \langle 7,8\rangle \\ \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle\rangle & \langle 8,6\rangle & \langle 8,6,7\rangle & \langle 8\rangle \end{bmatrix}$$