UML Class Diagram

Main
- + static void main(String[] args)

SimpleNode
- - T data
- - SimpleNode pNext
- + SimpleNode(T data)
- + SimpleNode(T data, SimpleNode<T> pNe
- + T getData()
- + void setData(T data)
- + SimpleNode getpNext()
- + void setpNext(SimpleNode<T> pNext)

TypeStack
- - SimpleNode<T> pTop
- - int size
- + TypeStack()
- + boolean isEmpty()
- + void push(T data)
- + SimpleNode<T> pop()
- + void print()
- + SimpleNode<T> getpTop()
- + void setpTop(SimpleNode<T> pTo
- + int getSize()
- + void setSize(int size)

SimpleList
- - SimpleNode<T> pFirst
- - SimpleNode<T> pLast
- - int size
- + SimpleList()
- + boolean isEmpty()
- + void addStart(T data)
- + void addAtTheEnd(T data)
- + void printList()
- + void printVertexList()
- + String printToString()
- + T getValueByIndex(int index)
- + boolean contains(String value)
- + boolean contains(int value)
- + SimpleNode<T> searchByValue(T value)
- + int indexOf(T valorBuscado)
- + int getIndexOfVertexByName(String name)
- + void deleteFirst()
- + void deleteLast()
- + boolean isValidIndex(int index)
- + void insertAtIndex(int index, T data)
- + void deleteAtIndex(int index)
- + void deleteByIndex(int index)
- + void deleteVertexAtIndex(int index)
- + void sort()
- + void swapIntegers(SimpleNode<Integer> current, SimpleNode<Integer> r
- + SimpleNode<T> getpFirst()
- + void setpFirst(SimpleNode<T> pFirst)
- + SimpleNode<T> getpLast()
- + void setpLast(SimpleNode<T> pLast)
- + int getSize()
- + void setSize(int size)

OurGraph
- - SimpleList<Vertex> vertexsList
- - int[][] matrix
- - int numVertex
- + OurGraph(int size)
- + OurGraph(String userName)
- + OurGraph(SimpleList<String> usersList, SimpleList<String> relationsList)
- + boolean isGraphEmpty()
- + int[][] getMatrix()
- + boolean userExists(String userName)
- + String getVertexName(int index)
- + Vertex getVertex(int vertexIndex)
- + void addVertex(Vertex vertex)
- + boolean vertexExists(int vertexIndex)
- + void addEdge(int srcVertex, int dstVertex)
- + void deleteEdge(int srcVertex, int dstVertex)
- + boolean checkEdge(int srcVertex, int dstVertex)
- - void verifyVertex(int srcVertex, int dstVertex)
- - void differentVertex(int srcVertex, int dstVertex)
- + void print()
- + String printGraphString()
- + void generateRelationsFromList(SimpleList<String> relationships, SimpleList<String> userNam
- + void transpose()
- + void addUser(String userName, int relation)
- + void deleteVertex(int vertexIndex)
- - void updateVertexIndices()
- + void modifyVertexName(int vertexIndex, String newName)
- + String getVertexRelations(int vertexIndex)
- - boolean isValidVertexIndex(int vertexIndex)
- - Vertex getVertexByIndex(int vertexIndex)
- + int getNumVertexs()
- + int getVertexsListSize()
- + SimpleList getVertexsList()

Vertex
- - String name
- - int vertexNum
- + Vertex(String name)
- + Vertex(String name, int vertexNum
- + boolean isEqualTo(Vertex vertice)
- + void assignVertexNum(int num)
- + String vertexToString()
- + void printVertex()
- + String getName()
- + void setName(String name)
- + int getNumVertex()
- + void setNumVertex(int numVertex)

Kosaraju
- - static boolean[] visited
- - OurGraph graph
- - SimpleList<SimpleList> components
- + Kosaraju(OurGraph graph)
- - void findStronglyConnectedComponents(OurGraph grap
- - void findOrder(int vertexNum, TypeStack<Integer> stack)
- - void dfs(int vertex, SimpleList component)
- + SimpleList<SimpleList> getComponents()

GraphVisualizer
- - Graph graph
- - Viewer viewer
- + GraphVisualizer()
- + Viewer getViewer()
- + void eraseVisualizer()
- + void resetView()
- + void visualizeGraph(OurGraph grafo, JPanel graphPanel)
- + void zoomIn(Viewer viewer)
- + void zoomOut(Viewer viewer)
- - boolean isNodeStronglyConnected(int nodeIndex, OurGraph gr

FileManager
- - String SAVED_DIRECTORY
- + FileManager()
- + boolean savedPathExists()
- + int fileCounter()
- + void saveFileToTxt(File inFile)
- + void saveStringToTxt(String string)
- + File selectFile()
- + SimpleList parseUsersFromFile(File fileSelected)
- + SimpleList parseUsersFromTextArea(String textAreaContent)
- + SimpleList parseRelationshipsFromFile(File inFile)
- + SimpleList parseRelationshipsFromTextArea(String textAreaConte
- + void saveGraphToFile(OurGraph graph)

MainInterface
- - OurGraph grafo
- - GraphVisualizer graphVisualizer
- - javax.swing.JTextArea MatrixTextArea
- - javax.swing.JMenu aboutBtn
- - javax.swing.JMenuItem aboutMsgBtn
- - javax.swing.JMenuItem addRelationMenu
- - javax.swing.JPanel bg
- - javax.swing.JPanel bg2
- - javax.swing.JButton cargarButton
- - javax.swing.JMenuItem changeVertexNameBtn
- - javax.swing.JButton checkKosaraju
- - javax.swing.JPanel content
- - javax.swing.JMenuItem exitBtn
- - javax.swing.JLabel jLabel1
- - javax.swing.JLabel jLabel2
- - javax.swing.JLabel jLabel3
- - javax.swing.JLabel jLabel4
- - javax.swing.JLabel jLabel5
- - javax.swing.JLabel jLabel6
- - javax.swing.JLabel jLabel7
- - javax.swing.JLabel jLabel8
- - javax.swing.JLabel jLabel9
- - javax.swing.JMenuItem jMenuItem1
- - javax.swing.JPanel jPanel7
- - javax.swing.JPanel jPanel8
- - javax.swing.JScrollPane jScrollPane1
- - javax.swing.JScrollPane jScrollPane3
- - javax.swing.JScrollPane jScrollPane4
- - javax.swing.JPopupMenu.Separator jSeparator1
- - javax.swing.JPopupMenu.Separator jSeparator2
- - javax.swing.JTextArea manualTextArea
- - javax.swing.JMenu menu1
- - javax.swing.JMenu menu2
- - javax.swing.JMenuBar menubar
- - javax.swing.JMenuItem modifyRelationMenu
- - javax.swing.JMenuItem newProjectBtn
- - javax.swing.JMenuItem openBtn
- - javax.swing.JMenuItem removeRelationMenu
- - javax.swing.JButton resetViewBtn
- - javax.swing.JMenuItem saveBtn
- - javax.swing.JTextArea userListTextArea
- - javax.swing.JButton vertexAddBtn
- - javax.swing.JButton vertexDeleteBtn
- + MainInterface()
- - void showAboutDialog()
- - int showVertexList()
- - boolean isValidVertexIndex(int vertexIndex)
- - int showExitConfirmationDialog()
- + void rebootGraph()
- - void showAddRelationsDialog(int selectedVertexIndex)
- - void showDeleteRelationsDialog(int selectedVertexIndex)
- - void updateJTextArea()
- - boolean isStronglyConnected(int nodeIndex, OurGraph grafo)
- - // <editor-fold defaultstate="collapsed" desc="Generated Code">//GEN-BEGIN:initComponents void initCompon
- - void openBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void exitBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void saveBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void menu1ActionPerformed(java.awt.event.ActionEvent evt)
- - void newProjectBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void vertexDeleteBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void checkKosarajuActionPerformed(java.awt.event.ActionEvent evt)
- - void changeVertexNameBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void vertexAddBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void cargarButtonActionPerformed(java.awt.event.ActionEvent evt)
- - void resetViewBtnActionPerformed(java.awt.event.ActionEvent evt)
- - void addRelationMenuActionPerformed(java.awt.event.ActionEvent evt)
- - void removeRelationMenuActionPerformed(java.awt.event.ActionEvent evt)
- - void modifyRelationMenuActionPerformed(java.awt.event.ActionEvent evt)
- - void aboutMsgBtnActionPerformed(java.awt.event.ActionEvent evt)
- + void runMainGUI()
- + void emptyTextAreas()

NewUserPage
- - String userName
- - int relationIndex
- - javax.swing.JLabel jLabel1
- - javax.swing.JLabel jLabel3
- - javax.swing.JLabel jLabel4
- - javax.swing.JPanel jPanel1
- - javax.swing.JTextField userNameBox1
- - javax.swing.JComboBox<String> usersComboList
- + NewUserPage()
- + NewUserPage(SimpleList<Vertex> comboBoxList)
- - // <editor-fold defaultstate="collapsed" desc="Generated Code">//GEN-BEGIN:initComponents void initCompon
- - void usersComboListActionPerformed(java.awt.event.ActionEvent evt)
- - void userNameBox1ActionPerformed(java.awt.event.ActionEvent evt)
- + ComboBoxAPI parsePage2()

ComboBoxAPI
- - String userName
- - int relationIndex
- + ComboBoxAPI(String userName, int relationInde
- + void printBoxApi()
- + String getUserName()
- + int getRelationIndex()