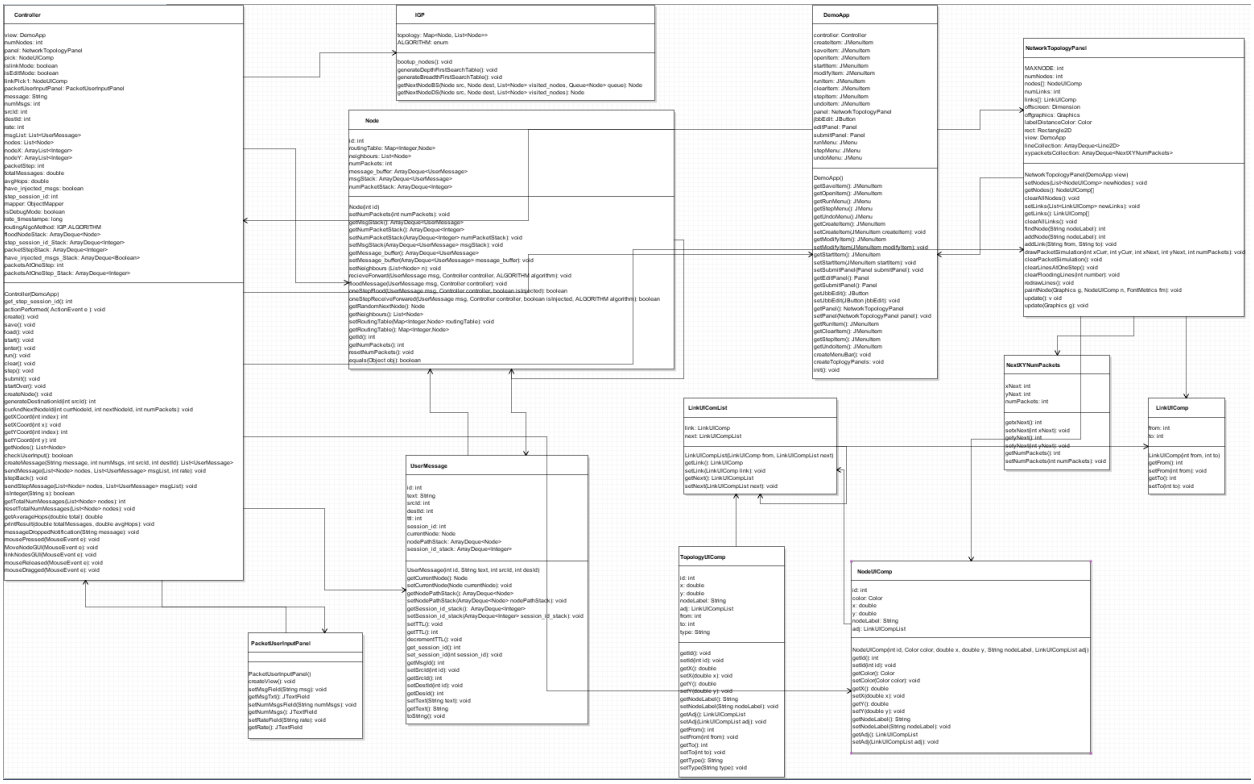
Controller
view: DemoApp
numNodes: int
panel: NetworkTopologyPanel
pick: NodeUiComp
isLinkMode: boolean
isEditMode: boolean
linkPick:1: NodeUiComp
packetUserInputPanel: PacketUserInputPanel
message: String
numMsgs: int
srcId: int
destId: int
rate: int
msgList: List<UserMessage>
nodes: List<Node>
nodeX: ArrayList<Integer>
nodeY: ArrayList<Integer>
packetStep: int
totalMessages: double
avgHops: double
have_injected_msgs: boolean
stop_session_id: int
mapper: ObjectMapper
isDebugMode: boolean
rate_timestamp: long
routingAlgoMethod: IGP, ALGORITHM
floodNodeStack: ArrayDeque<Node>
stop_session_id_Stack: ArrayDeque<Integer>
packetStepStack: ArrayDeque<Integer>
have_injected_msgs_Stack: ArrayDeque<Boolean>
packetsAtOneStep: int
packetsAtOneStep_Stack: ArrayDeque<Integer>
Controller(DemoApp)
get_stop_session_id() int
actionPerformed(ActionEvent e) : void
create() void
save() void
load() void
start() void
enter() void
run() void
clear() void
stop() void
submit() void
startOver() void
createNode() void
generateDestnationId(int srcId) int
curNodeNextNodeId(int curNodeId, int nextNodeId, int numPackets) void
getXCoord(int index) int
setXCoord(int x) void
getYCoord(int index) int
setYCoord(int y) int
getNodes() List<Node>
checkUserInput() boolean
createMessage(String message, int numMsgs, int srcId, int destId) List<UserMessage>
sendMessage(List<Node> nodes, List<UserMessage> msgList, int rate) void
stepBack() void
sendStepMessageList(List<Node> nodes, List<UserMessage> msgList) void
isInteger(String s) boolean
getTotalNumMessages(List<Node> nodes) int
resetTotalNumMessages(List<Node> nodes) void
getAverageHops(double total) double
printResult(double totalMessages, double avgHops) void
messageDroppedNotification(String message) void
mousePressed(MouseEvent e) void
MoveNodeGUI(MouseEvent e) void
linkNodesGUI(MouseEvent e) void
mouseReleased(MouseEvent e) void
mouseDragged(MouseEvent e) void
IGP
topology: Map<Node, List<Node>>
ALGORITHM: enum
bootup_nodes() void
generateDepthFirstSearchTable() void
generateBreadthFirstSearchTable() void
getNextNodeBS(Node src, Node dest, List<Node> visited_nodes, Queue<Node> queue) Node
getNextNodeDS(Node src, Node dest, List<Node> visited_nodes) Node
Node
id: int
routingTable: Map<Integer,Node>
neighbours: List<Node>
numPackets: int
message_buffer: ArrayDeque<UserMessage>
msgStack: ArrayDeque<UserMessage>
numPacketStack: ArrayDeque<Integer>
Node(int id)
setNumPackets(int numPackets) void
getMsgStack() ArrayDeque<UserMessage>
getNumPacketStack() ArrayDeque<Integer>
setNumPacketStack(ArrayDeque<Integer> numPacketStack) void
setMsgStack(ArrayDeque<UserMessage> msgStack) void
getMessage_buffer() ArrayDeque<UserMessage>
setMessage_buffer(ArrayDeque<UserMessage> message_buffer) void
setNeighbours (List<Node> n) void
receiveForward(UserMessage msg, Controller controller, ALGORITHM algorithm) void
floodMessage(UserMessage msg, Controller controller) void
oneStepFlood(UserMessage msg, Controller controller, boolean isInjected) boolean
oneStepRecieveForward(UserMessage msg, Controller controller, boolean isInjected, ALGORITHM algorithm) boolean
getRandomNextNode() Node
getNeighbours() List<Node>
setRoutingTable(Map<Integer,Node> routingTable) void
getRoutingTable() Map<Integer,Node>
getId() int
getNumPackets() int
readNumPackets() void
equals(Object obj) boolean
DemoApp
controller: Controller
createItem: JMenuItem
saveItem: JMenuItem
openItem: JMenuItem
startItem: JMenuItem
modifyItem: JMenuItem
runItem: JMenuItem
clearItem: JMenuItem
stopItem: JMenuItem
undoItem: JMenuItem
panel: NetworkTopologyPanel
bbEdit: JButton
editPanel: Panel
submitPanel: Panel
runMenu: JMenu
stopMenu: JMenu
undoMenu: JMenu
DemoApp()
getSaveItem() JMenuItem
getOpenItem() JMenuItem
getRunMenu() JMenu
getStopMenu() JMenu
getUndoMenu() JMenu
getCreateItem() JMenuItem
setCreateItem(JMenuItem createItem) void
getModifyItem() JMenuItem
setModifyItem(JMenuItem modifyItem) void
getStartItem() JMenuItem
setStartItem(JMenuItem startItem) void
setSubmitPanel(Panel submitPanel) void
getEditPanel() Panel
getSubmitPanel() Panel
getUbbEdit() JButton
setUbbEdit(JButton bbEdit) void
getPanel() NetworkTopologyPanel
setPanel(NetworkTopologyPanel panel) void
getRunItem() JMenuItem
getClearItem() JMenuItem
getStopItem() JMenuItem
getUndoItem() JMenuItem
createMenuBar() void
createTopologyPanels() void
init() void
NetworkTopologyPanel
MAXNODE: int
numNodes: int
nodes[]: NodeUiComp
numLinks: int
links[]: LinkUiComp
offscreen: Dimension
offgraphics: Graphics
labelDistanceColor: Color
rect: Rectangle2D
view: DemoApp
lineCollection: ArrayDeque<Line2D>
xypacketsCollection: ArrayDeque<NextXYNumPackets>
NetworkTopologyPanel(DemoApp view)
setNodes(List<NodeUiComp> newNodes) void
getNodes() NodeUiComp[]
clearAllNodes() void
setLinks(List<LinkUiComp> newLinks) void
getLinks() LinkUiComp[]
clearAllLinks() void
findNode(String nodeLabel) int
addNode(String nodeLabel) int
addLink(String from, String to) void
drawPacketSimulation(int xCur, int yCur, int xNext, int yNext, int numPackets) void
clearPacketSimulation() void
clearLinesAtOneStep() void
clearFloodingLines(int number) void
redrawLines() void
paintNode(Graphics g, NodeUiComp n, FontMetrics fm) void
update() v oid
updateGraphics g) void
NextXYNumPackets
xNext: int
yNext: int
numPackets: int
getxNext() int
setxNext(int xNext) void
getyNext() int
setyNext(int yNext) void
getNumPackets() int
setNumPackets(int numPackets) void
LinkUiComList
link: LinkUiComp
next: LinkUiComList
LinkUiComList(LinkUiComp from, LinkUiComList next)
getLink() LinkUiComp
setLink(LinkUiComp link) void
getNext() LinkUiComList
setNext(LinkUiComList next) void
LinkUiComp
from: int
to: int
LinkUiComp(int from, int to)
getFrom() int
setFrom(int from) void
getTo() int
setTo(int to) void
UserMessage
id: int
text: String
srcId: int
destId: int
ttl: int
session_id: int
currentNode: Node
nodePathStack: ArrayDeque<Node>
session_id_stack: ArrayDeque<Integer>
UserMessage(int id, String text, int srcId, int destId)
getCurrentNode() Node
setCurrentNode(Node currentNode) void
getNodePathStack() ArrayDeque<Node>
setNodePathStack(ArrayDeque<Node> nodePathStack) void
getSession_id_stack() ArrayDeque<Integer>
setSession_id_stack(ArrayDeque<Integer> session_id_stack) void
setTTL() void
getTTL() int
decrementTTL() void
get_session_id() int
set_session_id(int session_id) void
getMsg() int
setSrcId(int id) void
getSrcId() int
setDestId(int id) void
getDestId() int
setText(String text) void
getText() String
toString() void
PacketUserInputPanel
PacketUserInputPanel()
createView() void
setMsgField(String msg) void
getMsgTxt() JTextField
setNumMsgsField(String numMsgs) void
getNumMsgs() JTextField
setRateField(String rate) void
getRate() JTextField
TopologyUiComp
id: int
x: double
y: double
nodeLabel: String
adj: LinkUiCompList
from: int
to: int
type: String
getId() void
setId(int id) void
getX() double
setX(double x) void
getY() double
setY(double y) void
getNodeLabel() String
setNodeLabel(String nodeLabel) void
getAdj() LinkUiCompList
setAdj(LinkUiCompList adj) void
getFrom() int
setFrom(int from) void
getTo() int
setTo(int to) void
getType() String
setType(String type) void
NodeUiComp
id: int
color: Color
x: double
y: double
nodeLabel: String
adj: LinkUiCompList
NodeUiComp(int id, Color color, double x, double y, String nodeLabel, LinkUiCompList adj)
getId() int
setId(int id) void
getColor() Color
setColor(Color color) void
getX() double
setX(double x) void
getY() double
setY(double y) void
getNodeLabel() String
setNodeLabel(String nodeLabel) void
getAdj() LinkUiCompList
setAdj(LinkUiCompList adj) void