

Swing Tester

**Dan's batch agent creation**

Welcome, Aliens Are Killing The Monke. Who will win?

How Many Aliens?

How Many Monke?

**Place Agents**

☐ Monke

☒ Alien

☐ Target

ADD

DELETE (placeholder)

print alien/Monke lists (placeholder)

**Edit Agent Ranges**

The Monke Talk Range (m)

0 25 50 75 100

El Monke Shoot Range (m)

0 25 50 75 100

**Select Le Distributed Algorithm**

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Generate config file!

Panel 0

Panel 1

Panel 2

Panel 3

generateButton

Function name	Function calls	Description
void main()	<ul style="list-style-type: none"> <li>createWindow()</li> </ul>	Main function. Creates the JavaSwing Window JFrame object.
void createWindow()	<ul style="list-style-type: none"> <li>createUI(frame)</li> </ul>	Contains code relating to the parameters of the JFrame main UI window.
void createUI(frame)	<ul style="list-style-type: none"> <li>createPanel0(mainPanel, gbc)</li> <li>createPanel1(mainPanel, gbc)</li> <li>createPanel2(mainPanel, gbc)</li> <li>createPanel3(mainPanel, gbc)</li> <li>createGenerateButton(mainPanel, gbc)</li> <li>placeAgentButtonFunctions(addButton, deleteButton, printButton, alienButton, MonkeButton, talkSlider, shootSlider)</li> </ul>	<p>Contains code that controls all the components inside the UI window.</p> <p>createPanelx() functions are used to create each subpanel, which are then assigned to a location inside the overall mainPanel object using mainPanel.add(panelx, gbc).</p> <p>createGenerateButton() is used to create the “generate config file” button at the bottom of the screen</p> <p>After all the panels and buttons are added to the UI, the functionality/event listeners used to define the button actions are created. The JButton objects from panel0 and panel1, and the slider values from panel 2, are referenced using the panelx.getComponents() functions, and are then passed to placeAgentButtonFunctions(). Note that all objects that are referenced this way need to have &lt;object&gt;.setName(name) first.</p>
JPanel createPanel0(mainPanel, gbc)	-	<p><b>Panel 0 – Dan’s batch agent creation</b></p> <p>Panel used to integrate Dan’s functionality of creating alien/monke agents by specifying the desired number of each. Returns JPanel panel0.</p> <p>Features JLabels for creating floating text and JTextFields for user input.</p>
JPanel createPanel1(mainPanel, gbc)	-	<p><b>Panel 1 – Place Agents</b></p> <p>Allows user to specify which agent they wish to create and then ADD each to an arrayList of corresponding alien/monke objects. Returns JPanel panel1.</p> <p>Features JRadioButtons for selecting agent type. JButtons have been used as well for ADDing new agents. DELETE currently has no function. “Print lists” is generally used for debugging and prints the current agent arrayList into terminal. Button definitions are given in the function placeAgentButtonFunctions().</p>
JPanel createPanel2(mainPanel, gbc)	-	<p><b>Panel 2 – Edit Agent Ranges</b></p> <p>Allows user to specify the monke talk and shoot ranges. Returns JPanel panel2.</p> <p>JLabels for floating text, and JSliders for the slider objects have been used. Has no function aside from creating these objects. Slider values are read inside placeAgentButtonFunctions().</p>

JPanel createPanel3(mainPanel, gbc)	-	<p><b>Panel 3 – Select Le Distributed Algorithm</b></p> <p>Allows user to make a DDM algorithm selection using a dropdown box. Returns JPanel panel3.</p> <p>JComboBox used to create this dropdown menu. Currently does not affect any parameters of the aliens and monkes.</p>
JButton createGenerateButton(mainPanel, gbc)	-	<p>Creates the button for generating the config file. Returns JButton generateButton.</p> <p>Since it uses the alien and monke arrays which have been defined outside of createUI(), the JSON config file creation functionality can be handled entirely inside this function.</p>
void placeAgentButtonFunctions(JButton addButton, JButton deleteButton, JButton printButton, JRadioButton alienButton, JRadioButton MonkeButton, JSlider talkSlider, JSlider shootSlider)	-	<p>Handles the button press events for creating agents using:</p> <ul style="list-style-type: none"> <li>• JButtons from panel 1</li> <li>• JRadioButtons from panel 1</li> <li>• JSliders from panel 2</li> </ul> <p>addButton action: creates alien/monke objects with increasing ID, randomised XY positions, and talk/shoot ranges from talk/shootSliders.getValue().</p> <p>printButton action: takes monkeList and alienList and prints them to terminal.</p>