

## Classes-Responsibilities-Collaborators (CRC) Design Model for Android Maze Application

Class AMazeActivity	
<b>Responsibilities</b> <ul style="list-style-type: none"> <li>• Serve as the main menu screen for users when they open the app</li> <li>• Allow users to pick a skill level, maze builder, and robot driver</li> <li>• Pass information about users' maze to the GeneratingActivity</li> </ul>	<b>Collaborators</b> <ul style="list-style-type: none"> <li>• GeneratingActivity</li> </ul>

Class GeneratingActivity	
<b>Responsibilities</b> <ul style="list-style-type: none"> <li>• Receive information about the user's desired maze from MazeActivity</li> <li>• Use that information to prepare a maze</li> <li>• Show the progress of the maze generation to the user</li> <li>• Switch to a new activity, depending on user's selection, and pass on information to that activity</li> </ul>	<b>Collaborators</b> <ul style="list-style-type: none"> <li>• AMazeActivity</li> <li>• PlayManuallyActivity</li> <li>• PlayAnimationActivity</li> </ul>

Class PlayManuallyActivity	
<b>Responsibilities</b> <ul style="list-style-type: none"> <li>• Allow the user to manually explore the maze using buttons for movement</li> <li>• Allow the user to toggle walls, the map, and the solution, if they want</li> <li>• Allow the user to return to the menu with the back button</li> <li>• Have a shortcut button which takes us directly to the finishing screen (temporary)</li> </ul>	<b>Collaborators</b> <ul style="list-style-type: none"> <li>• GeneratingActivity</li> <li>• FinishActivity</li> </ul>

Class	
PlayAnimationActivity	
<b>Responsibilities</b> <ul style="list-style-type: none"> <li>• Allow the user to watch a robot automatically solve the maze (can start and pause the robot)</li> <li>• Allow the user to toggle walls, the map, and the solution, if they want</li> <li>• Allow the user to return to the menu with the back button</li> <li>• Have a shortcut button which takes us directly to the finishing screen (temporary)</li> </ul>	<b>Collaborators</b> <ul style="list-style-type: none"> <li>• GeneratingActivity</li> <li>• FinishActivity</li> </ul>

Class	
FinishActivity	
<b>Responsibilities</b> <ul style="list-style-type: none"> <li>• Display messages for success or failure (i.e. did the user complete the maze or not?)</li> <li>• Display path length and energy consumption</li> <li>• Allow the user to go back to the menu</li> </ul>	<b>Collaborators</b> <ul style="list-style-type: none"> <li>• PlayManuallyActivity</li> <li>• PlayAnimationActivity</li> <li>• AMazeActivity</li> </ul>