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| Class: AMazeActivity (State Title) | |
| Display welcome page & take parameter settings to start with maze generation | |
| The user can select skill-level (#1-14) – consider seek bar | |
| User can select generating random maze or loading maze from file | |
| For random generation user can select algorithm to generate maze: Prim, Eller, Backtracking. | |
| Loading maze- only one maze choice/skill level | |
| Because the final maze allows a user to store a maze to a file, if the file does not exist yet, generate a maze and store it so the maze that the user plays matches maze on file | |
| Start maze generating process | GeneratingActivity |
| Class: FinishActivity (State Finish) | |
| Displays: Display the finish page/tell user outcome (win/lose) and how to restart the game | |
| Displays: overall energy consumption and path length | |
| Use vibration or audio to enhance user experience if robot has stopped because of lack of energy | |
| Input: provide the user with the option to save the maze to file for later reuse. User can store only one maze/skill level. Skill | |

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| level is known, internal filename is known. –Storing another maze of same skill level will overwrite/delete any previous maze at same skill level. | |
| Navigation: Press back button to return to State Title | AMazeActivity |
| Class: GeneratingActivity (State Generating) | |
| Show progress of maze generation algorithm, once finished, user presses play, display switches to state play. | |
| Navigation: press the back button will stop the maze generation and return to State Title | AMazeActivity |
| Navigation: Pressing the play button moves to the PlayActivity once the maze generation is finished. | PlayActivity |
| Input: provide options for user to select way to operate robot: a) Manual, b) CuriousMouse, c) Wall Follower, d) Wizard. Default: Manual | |
| Let user choose to show: 1) the maze from top 2) current visible walls 3) path to exit | |
| Play Button to move on to PlayActivity | PlayActivity |
| PlayActivity State Play | |
| Displays: The maze and let user either: a) watch a robot exploring the maze b) manually navigate through the maze | |
| Input: Provide a feature to toggle visibility of map + solution on map. Support the | |

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| <p>following choices:</p> <p>1) show the maze from top or not -</p> <p>2) show the solution in the maze or not -</p> <p>3) show the currently visible walls or not</p> | |
| <p>If in manual exploration mode: screen provides navigation buttons: up/down/left/right</p> | |
| <p>If in manual exploration mode: provide a start-exploration/pause-animation button</p> | |
| <p>Navigation: If the robot stops (no energy or at exit) screen switches to the finish screen</p> | FinishActivity |
| <p>Press the back button returns to State Title to allow user to choose new parameters/restart</p> | AMazeActivity |
| <p>(only for this project) introduce a button: "shortcut" to directly move the UI to state finish.</p> | FinishActivity |