# Rough Testing Plan

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| **Test** | **Expected Result** | **Actual Result** | **Pass/Fail** | **Remarks** |
| AntAttack initialisation | Program initialises and awaits user input to choose next course of action |  |  |  |
| AntAttack GUI | GUI is created on AntAttack initialisation |  |  |  |
| Tournament Setup | Tournament is initialised with provided AntBrains as competitors |  |  |  |
| Tournament Run | Tournament generates 2n2 matches between each competing AntBrain |  |  |  |
| Tournament Results | After games in the tournament are played, the winner is returned |  |  |  |
| Game Setup | Game is passed two AntBrain instances and begins initialisation |  |  |  |
| Game Generate World | World is generated for game to play on |  |  |  |
| Game Played | Game is played for 30000 turns |  |  |  |
| Game Result | Result of the game is returned |  |  |  |
| World Syntax Checked | Provided a World object the World is checked for correct syntax |  |  |  |
| World Generated | A random, well-formed world is generated |  |  |  |
| Cell Function : Rock | If a rock is present it correctly returns rock presence as true |  |  |  |
| Cell Function : Food | If food is present, correct number of food is returned |  |  |  |
| Cell Function : Marker | If a marker is present, the type and colour of marker is returned |  |  |  |
| Cell Function : Ant | If an ant is present on the cell, the ant ID is returned |  |  |  |
| Cell Function : Remove Ant | Ant on the cell is removed |  |  |  |
| Cell Function : Ant Dies | If death condition is true, the Ant at cell is removed and dies |  |  |  |
| Ant Function : Move | Ant moves in the correct direction to a new cell and the new cell is updated as such |  |  |  |
| Ant Function : Turn | And turns towards the correct direction |  |  |  |
| Ant Function : Get State | Provided the current state, the correct next state is returned |  |  |  |
| Ant Function : Rest | Ant correctly enters a rest state after any action |  |  |  |
| Ant Function : Pick up food | And picks up food and changes state |  |  |  |
| Ant Function : Sense | Ant senses the condition of the cell in direction d and changes state accordingly |  |  |  |
| Ant Function : Drop Food | Ant drops food on its current cell |  |  |  |
| Ant Function : Mark Cell | Ant marks cell with a marker |  |  |  |
| AntBrain Function : Check Syntax | AntBrain is checked, returns if syntax is valid |  |  |  |
| AntBrain Function : Get State | Given a passed state, the AntBrain returns a new state |  |  |  |
| GUI Function : Buttons | Buttons for application features work correctly |  |  |  |
| GUI Function : Exit | Exit option terminates the application |  |  |  |
| GUI Displayed Correctly | Layout is correct |  |  |  |
| GUI Displays Message | Message output displayed correctly |  |  |  |
| GUI Simulation Visualisation | Visualisation of Current Game state is displayed and updated on each update interval |  |  |  |