**FUNCTIONAL TEST SUITE FOR MANUAL SCRIPTED TESTING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Story / Scenario** | **Function Being Tested** | **Initial System State** | **Input (Action)** | **Expected Output** |
| 1 | **S1.1: Start** | Start the Game (UI) | - JPacman GUI is launched  - The game is not yet started | User clicks **"Start"** button | - The game starts  - Pacman and ghosts appear on the board  - Game status changes to “Playing” |
| 2 | **S2.1: The Player Consumes** | Move Pacman & Consume Pellet | - Game has started  - Pacman is adjacent to a pellet square | Player presses the arrow key toward the pellet square | - Pacman moves into the pellet square  - Pellet disappears  - Score increases by 10 |
| 3 | **S2.2: Move on Empty Square** | Move Pacman on Empty Square | - Game has started  - Pacman is adjacent to an empty square | Player presses the arrow key toward the empty square | - Pacman moves to the empty square  - Score remains unchanged |
| 4 | **S2.3: The Move Fails** | Attempt Move into Wall | - Game has started  - Pacman is adjacent to a wall | Player presses the arrow key toward the wall | - Pacman remains in the same position  - No score change |
| 5 | **S2.4: The Player Dies** | Move Pacman into Ghost | - Game has started  - Pacman is adjacent to a ghost | Player presses the arrow key toward the ghost’s square | - Pacman dies  - The game is over (game status changes to “Game Over”) |
| 6 | **S2.5: Player Wins** | Consume Last Pellet | - Game has started  - All pellets except one have been eaten | Pacman moves onto the last remaining pellet | - Pacman’s score increases  - Player wins (game status changes to “You Win!”) |
| 7 | **S3.1: A Ghost Moves** | Automatic Ghost Movement | - Game has started  - A ghost is adjacent to an empty cell | A tick event occurs (internal game clock) | - The ghost moves to the empty cell  - Ghost’s new position is confirmed |
| 8 | **S3.2: Ghost Moves Over Pellet** | Automatic Ghost Movement with Pellet | - Game has started  - A ghost is adjacent to a cell containing a pellet | A tick event occurs | - The ghost moves onto the pellet cell  - The pellet is not visible (consumed or hidden) |
| 9 | **S3.3: Ghost Leaves Pellet** | Automatic Ghost Movement Off Pellet | - A ghost is currently on a cell containing a pellet (from S3.2) | A tick event occurs | - The ghost moves away from the cell  - The pellet reappears on that cell |
| 10 | **S3.4: The Player Dies** | Ghost Moves into Pacman | - Game has started  - A ghost is adjacent to the cell containing Pacman | A tick event occurs | - The ghost moves into Pacman’s cell  - The game is over (Pacman dies) |
| 11 | **S4.1: Suspend the Game** | Suspend/Stop Function | - Game has started  - Pacman and ghosts are moving | User clicks **"Stop"** button | - All movement is suspended (Pacman & ghosts stop)  - Game status changes to “Stopped” |
| 12 | **S4.2: Restart the Game** | Resume/Start Function | - Game is suspended (from S4.1) | User clicks **"Start"** button | - Game resumes from the suspended state  - Pacman and ghosts continue moving  - Score and positions remain intact |

**Exploratory testing report:**

**Bug number: 1**

**Initial state of the system:** When the game ends (either by the player dying or winning), the game remains on the end screen.

**Steps to reproduce:** End the game by allowing Pacman to die or by consuming the final pellet to win. Then, press the "Start" button.

**Expected outcome:** The game should restart in the same window.

**Actual outcome:** The game remains stuck on the end screen, requiring a complete relaunch to start a new game.

**Bug number: 2**

**Initial state of the system:** During regular gameplay, with AI ghosts actively moving on the board.

**Steps to reproduce:** Observe the blue ghost’s movement across various locations on the board.

**Expected outcome:** The blue ghost should continuously move until the game ends.

**Actual outcome:** At certain locations, the blue ghost becomes stuck and ceases to move.