Pathfinders Test Plan M2

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| **Test Case** | **Steps & Expected Outcomes** |
| 1. Game logic response to user input | 1. Launch game    * **EXPECT**: No visual artifacts observed, no object flickering, assets are rendered onscreen. Player is not rendered overlapping with terrain (i.e. ground, walls). 2. Exit game. 3. Launch game again.    * **EXPECT:** Same outcome as 1.), i.e. no inconsistencies. |
| 2. Sprite sheet animation | 1. Press the D key.    * **EXPECT**: the player stickman character moves to the right with running animations. 2. Repeat 1,2 but with the A key.    * **EXPECT**: Same as 1, but the character faces left while running. |
| 3. New integrated assets | 1. Launch game    * **EXPECT**: A new background with mountains should be visible |
| 4. Mesh-based collision detection | 1. Launch game.    * **EXPECT:** Random boulders are falling with consistent motion.    * **EXPECT:** Player character starts above platform and slowly drops due to gravity 2. Press the SPACE key to jump.    1. **EXPECT**: The player should accelerate upward momentarily, then come back down. 3. Move off platform.    * **EXPECT:** Player begins to fall continuously (see below). |
| 5. Base user tutorial/help | 1. Use the movement keys (WASD) to move off the platform into empty space    * **EXPECT**: Player falls continuously until out of scene, then “dies”, then the game restarts. |
| 6. FPS counter | 1. Launch game.    * **EXPECT:** The player stickman character drops onto the platform, is stopped, and stays grounded 2. Use the movement keys (WASD) to move into a falling boulder.    * **EXPECT:** Collision occurs, the player becomes uncontrollable (dies), and the scene fades. |
| 7. Advanced graph search algorithm | 1. Launch game and reach the second level by moving to the trophy in the first level.    * **EXPECT:** Player should be able to encounter a new level. 2. Use the movement key (WASD and space) to move left or the right of newly spawned boulder.    * **EXPECT:** The boulder should search and chase the player based on player’s position |

Pathfinders Test Plan M1

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| **Test Case** | **Steps & Expected Outcomes** |
| 1. Textured Geometry Rendering | 1. Launch game    * **EXPECT**: No visual artifacts observed, no object flickering, assets are rendered onscreen. Player is not rendered overlapping with terrain (i.e. ground, walls). 2. Exit game. 3. Launch game again.    * **EXPECT:** Same outcome as 1.), i.e. no inconsistencies. |
| 2. Basic 2D Transformations & Keyboard/Mouse control | 1. Press the D key.    * **EXPECT**: the player stickman character moves (translation) right so long as the key is pressed. 2. Let go of the D key.    * **EXPECT**: the player stickman character begins to slow down to a stop due to friction. 3. Repeat 1,2 but with the A key.    * **EXPECT**: Same as 1,2 but moving left. |
| 3. Random/coded Action & Key-frame/State Interpolation | 1. Launch game and wait for ~10 seconds.    * **EXPECT**: A boulder sprite spawns from the top of the screen and begins to fall downward.    * **EXPECT:** The boulder should be moving slightly horizontally towards the player’s position at the time the boulder was spawned      + i.e., horizontal motion is interpolated between spawn position and player position at spawn |
| 4. Gravity | 1. Launch game.    * **EXPECT:** Random boulders are falling with consistent motion.    * **EXPECT:** Player character starts above platform and slowly drops due to gravity 2. Press the SPACE key to jump.    1. **EXPECT**: The player should accelerate upward momentarily, then come back down. 3. Move off platform.    * **EXPECT:** Player begins to fall continuously (see below). |
| 5. Game-space boundaries | 1. Use the movement keys (WASD) to move off the platform into empty space    * **EXPECT**: Player falls continuously until out of scene, then “dies”, then the game restarts. |
| 6. Collision | 1. Launch game.    * **EXPECT:** The player stickman character drops onto the platform, is stopped, and stays grounded 2. Use the movement keys (WASD) to move into a falling boulder.    * **EXPECT:** Collision occurs, the player becomes uncontrollable (dies), and the scene fades. |
| 7. Save/Load | 1. Press ‘L’ on the keyboard, making sure $PROJ\_DIR/save.json does not exist    * **EXPECT:** Nothing should happen 2. Move to a flag checkpoint in the level 3. Restart the game (‘R’), then press 'L' on the keyboard    * **EXPECT**: Player position is reset to the previous checkpoint position 4. Exit the game, re-launch, press 'L'    * **EXPECT**: saved state persists and is loaded, player position resets to most recently-visited checkpoint |