## Test Plan

| Test Scope | Description | Expected Results |
|---|---|---|
| **Map Generation** | 1. Call the Map Generation function with parameters 5 and 8.<br>2. Store the results of the above step in a triple Location pointer (e.g., Location ***map). Use this pointer and each of the Location tile-replacement functions. | • The map is 5 units tall and 8 units wide. All of the edge "tiles" are "#" indicating walls.<br>• The specified locations of each tile replacement are correct and the symbol displays appropriately. |
| **Player Movement/Controls** | 1. Place the player in a room of at least 5x5.<br>2. Use the WASD keys to move around.<br>3. Access inventory using I<br>4. Interact using E<br>5. Investigate using F<br>6. Access help using H<br>7. Exit using X | • WASD: W moves the player up, A to the left, S backward, and D to the right<br>• Inventory: User is prompted to enter 9 to exit<br>• Interact: User is prompted to select 1 of 5 directions to interact with<br>• Investigate: User is prompted to select 1 of 5 directions to investigate<br>• Help: All of the controls and a few notes are displayed to the user.<br>• Exit: User is asked if they're sure they want to exit. |
| **Item Interaction** | 1. Create an item and use setItem to store this on a floor tile<br>2. Move the player to the item and use the interact control on the tile. | • The floor tile should display with a "!"<br>• After interacting the player should be prompted that they have picked up the item. |
| **Tile Interaction** | 1. Insert 2 switches into a map of at least 5x5.<br>2. Insert a locked door into the same map.<br>3. For each switch, set the other switch as a dependent.<br>4. For one of the switches, set the door as the affected. Make sure the switch "Set Name" and door "Item Name" match exactly.<br>5. Interact with one of the switches. | • Both switches should interact simultaneously.<br>• The door should be unlocked after the switches are interacted with (this does not work in reverse) |

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| **Inventory** | 1. Play through the game and pick up every item.<br>2. Select "I"<br>3. For each item in your inventory, use A & B selections. | • Using the A selection displays the description for each item.<br>• Using the B selection will prompt the user to interact with something nearby.<br>• It is important to make sure that an attempt to view the inventory while it is full. |
| **Outside Playtest** | It is important on a project this large to get a fresh perspective on this. Have a person (not a classmate) play through the game and assist in pointing out any flaws. | • Record any issues noticed by observer or reported by player. |
| **Memory Leaks** | 1. Launch game and exit after launching.<br>2. Launch game and exit after picking up several items. | • In both cases, there should be no memory left in the heap nor should there be any errors. |