Test Case	Expected Result	Actual Result	Action Taken
Player W key input	Nothing	Nothing	None
Player W Key Input While colliding with rope item	Climb the Rope	Climbed the Rope	None
Player D Key Input	Move Right, change animation frame	Moved Right, Changed multiple animation frames	Added a timer to check time since last animation frame change to prevent too quick animations
Player D Key Input	Move Right, change Animation frame	Moved Right, slower More controlled animation change	None
Player A Key Input	Move Left, Change Animation	Moved Left, Animated, facing wrong direction	Implemented inverse width animations as discussed in Implementation
Player A Key Input	Move Left, Change Animation, Face correct Direction	Moved left, animated, faced left	None
Player K Key Input	Create and shoot player arrow.	Player Arrow created and shot in direction facing	None
Player Space Key input touching floor	Player Jump	Player Jumped	None
Player Space Key touching wall side	Player Jump / Wall Climb	Player Jumped / Wall Climbed	None
Player Space Key in air	No Jump	Carried on falling	None
Player Space Key Input Hermes Helm Active	Flight	Player gradually Rose in flight	None
No input	velocity removed, player stops	Player stopped	None
Player Q Key Input Items not on cooldown	Current Item should change	current Item didn't change	Didn't register q key in time because it was checking something else. Swapped checks to check for input first.
Player Q Key Input Items not on	Current Item should change	Current Item changed	None
Player Q Key Input Items on Cooldown	No change	No Change	None
Player E key input	Active item should Spawn	Active Item Spawned	None
Active item duration ended	Active item should be destroyed and set to null, set cooldown	Destroyed and set null, cooldown set	None
Active item Golden Fleece	Player heal 1 heart	Player healed multiple hearts	Added a bool that gets sets false after healing once so that multiple hearts aren't healed
Active item Golden Fleece	Heal 1 heart	healed 1 heart	None
Active item Flame cloak	Fire spawn around player, follows player and hurts enemies	Followed player, hurt enemies	None
Active Item Hermes Boots	Movement speed should increase	Movement speed increased	None

Active Item Hermes Helm	Space should fly	Flew instead of jumped	None
Active item Medusa Head	Stun / pertrify any enemies in range in direction facing	Enemies petrified	None
Active Item Bomb item	create bomb, that after delay should destory fake walls around it and hurt	Correct behaviour	None
Active item Rope item	Rope should be created. Player should be able to climb it using W key	Correct behaviour	None
Active Item Poseidons Staff	Wave should spawn in front of player , dealing damage and pushing enemeis	Correct behaviour	None
Item Sprites created in appropriate positions and animate	Item Sprites created in appropriate positions and animate	Item Sprites created in appropriate positions and animate	None
Player collided with enemy	lose life, temporary invincibility to prevent losing all life immediatly	lost life, temporary invincibility to prevent losing all life immediatly	None
Player Torch Update run	player should lose some fuel, torch brightness should dim slightly (probably not notible unless waiting for a while due to being percentage based)	Player lost some fuel, torch dimmed by a fraction.	None
Player Torch follow player	torch should follow the player, slightly off centre	Correct behaviour	None
Player camera	Should follow the player and display a zoomed in view of the the maze, giving sight of a small area around the player	Correct behaviour	None
Player left Shift input with shield	blue bubble around player appears, invincible , energy drains	Correct behaviour	None
Player left Shift input with shield, no energy	nothing	Correct behaviour	None
Player left Shift input, no shield aquired	nothing	Correct behaviour	None
Player petrified	No actions possible	couldn't act, but velocity carried on, slid into enemy and took damage.	Petrified check was preventing velocity removal. Added velocity removal when petrified
Player petrified	No actions possible, no sliding	Coludn't act, didn't carry on sliding	None
Enemies see player within their range	Player should be spotted when within the range between the enmies position + / - sight range	Player spotted within correct range	None

Enemies Reaction to player spotted	skeleton should rise and move towards player, Medusa should move forwards into range and try to petrify, Griffin should charge in the direction the player was spotted for a random amount of time with increased speed, can't change direction until charge is done	All enemies acted appropraitly	None
Ghost test	Shouldn't react to player at all, should keep generating random points to move to and going there	Kept generating points and moving to them, sometimes teleported.	Axis position was being reset when didn't need to move along relative axis. Removed line that did that.
Ghost test	Shouldn't react to player at all, should keep generating random points to move to and going there	Proper movement behaviour	None
Minotaur Test	Should spawn after 2.5 minutes	Spawned on time	None
Minotaur Test	Should generate a path to the player every 5 seconds	Path updated on time, followed path	None
Enemies Animation	All enemies should have animation that changes after a timer when moving	Animation worked fine	None
Griffin Wander behaviour	when player not spotted and charging, should wander a random genned distance before changing direction	Correct behaviour	None
Spawn Manager	spawn manager should spawn a random amount of each object (not maze cells) into level within ranges	Correct behaviour	None
Despawn Manager	Should destroy and remove object from vector when collected, destroyed or dead	Correct behaviour	None
Treasure	each piece of loose treasure should random gen a vlaue under 100 and create it's colour based on the number	Correct behaviour	None
Treasure Chests	when player walks over a chest, should gen a number and give the appropraite corresponding item. Items should be added to the aquired item vector if not already received	All numbers gave correct items. Items pushed into vector if not aquired yet. Correct Behaviour	None
Treasure Chests	Once Opened, should change texture	Correct behaviour	None
Collision Listener listens to all collisions and runs appropriate methods if needed	Collision Listener listens to all collisions and runs appropriate methods if needed	Correct behaviour	None

Texture loader should load all textures successfully and be accessible form all files with textureloader.h included	Texture loader should load all textures successfully and be accessible form all files with textureloader.h included	Correct behaviour	None
Textures	All textures should get set over relevant item correctly	Correct behaviour	None
Sound Manager	sounds loaded properly, can be muted and turned down, sounds play in appropraite places they've been used	Correct behaviour	None
Maze generation	Algorithm digs through the maze using random directions to choose which cell to dig into next. Maze array is updated with the correct ints for the cells types	Correct behaviour	None
Maze generation	End of generation takes the output and creates the appropriate cell type and adds it the cells vector for draing and	Correct behaviour	None
Maze generation	Fully surronded wall cells correctly filtered out and not created as wall cells to reduce performance impact	Correct behaviour	None
Levels saved	Randomly generated levels are saved so they can be used in the retreat run through the maze	Correct behaviour	None
Retreat run	Levels are reloaded correctly and look the same as first time through them	Correct behaviour	None
Save And Load	Data gets output to txt file on pressing save and correct data is read from the txt file on pressing load	Correct behaviour	None
All menu Buttons work as intended	All Menu buttons work as intended	Correct behaviour	None
Gui displays correct information and gets updated	Gui displays correct information and gets updated	Correct behaviour	None
Options Menu	Sound slider and mute button correctly update the sound volumes	Correct behaviour	None
Level Manager	Game states are correctly handled and all lead to appropraite functions and events. Transitions between states are correct	Correct behaviour	None
Level Manager	Level deletion and menu deletion functiosn completely delete objects, not leaving anything unintended on the	Correct behaviour	None

Level Manager	Level Creation fully creates a maze, places the player, creates enemies, traps, treasure, and treasure chests	Correct behaviour	None
Level Manager	Exit properly created and takes the player to the next level	Correct behaviour	None
Level Manager Update	Correctly draws and updates all objects and elements of the game that are used during gameplay	Correct behaviour	None
Level Manager Update Draw Culling	Only draws objects within view of the player's camera, everything else isn't	Correct behaviour	None
Upgrades and upgrade menu	Buttons correctly upgrade the relevant stat and the costs get updated. Correct amount of treasure removed from player	Correct behaviour	None
Upgrades, not enough treasure	Buttons shouldn't upgrade the stat or remove any treasure	Correct behaviour	None
MiniMap draws the white and red rectangles in another view to show the local area	Should show about twice as much as the camera (estimate, not actual measurement). White rectangles represent walls and red enemies. Should get updated when an enemy moves or	Correct behaviour	None
Trap triggers	Traps should be triggered when hitting the body/ taking the idol/ landing on top of the spikes	All traps triggered in correct ways	None
Trap Effects	Spikes should kill if landing on top of them but can be walked through, arrow trap should create an arrow that is hsot at player, idol should spawn a boulder after a delay and stun should stun the	Correct behaviour	None
Trap Positions	All trap triggers should be spawned on the floor. Secondary effects should be spawned nearby and not in walls	Appropriate spawns	None
Trap animations and textures	should animate for medusa stun trap while all should have appropriate textures for texure loader	Correct behaviour	None
Player arrows should fly straight ahead, unaffected by gravity	Player arrows should fly straight ahead, unaffected by gravity	Correct behaviour	None

Player arrows should despawn on collision with appropraite objects	Player arrows should despawn on collision with appropraite objects	Despawned with ceartin objects. Collided with unintened objects	Updated fixture filters to prevent collisions with the unintended objects
Player arrows should despawn on collision with appropraite objects	Player arrows should despawn on collision with appropraite objects	Despawned on hitting enemy or wall. No collision with other objects	None
Player Arrows should damage enemies	Player Arrows should damage enemies	Correct behaviour	None