# **Testing Plan**

### **Unit Testing**

- Sceptre
  - o Can be crafted with one wood, two arrows and one key
  - o Can be crafter with one treasure and one sunstone
- Midnight armour
  - o Can be crafted with a sword and a sun stone
- Dungeon Builder
  - o Test can generate dungeons
- Light bulbs
  - o Test light bulbs will always be created off

#### **Integration Testing**

- Sun stone
  - o Can be used to unlock door
  - o Can be used interchangeably with treasure (e.g., building)
- Light Bulb
  - o Test are connected to boulder and switch
- Wire
  - o Test connection to switch and entities via switches
- Switch door
  - Test opened without a key
  - Test should remain open as long as it is connected to an active switch/circuit

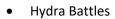
## System-Unit Testing via controller

- Sun stone
  - Can be picked up by player
  - When used as a key, does not disappear
- Sceptre
  - Test effect duration of mind control
- Time turner
  - o Test can be picked up by player
  - o Test can be used
  - Test when used rewinds the game back 5 ticks
  - Test older self exists as its own entity
  - o Test battle older self
  - o Test older self takes original path and eventually time travels as well
  - o Test player inventory persists across time
  - Test entities' position and existence is correct in the game state
- Time Travelling Portal
  - Test can teleport
  - Test can time rewind the game to a state 30 ticks ago
  - Test older self exists as its own entity
  - o Test battle older self
  - Test older self takes original path and eventually time travels as well
  - Test player inventory persists across time
  - o Test entities' position and existence is correct in the game state
- Light bulb
  - o Test can be lit up by placing a boulder on an adjacent switch
- Hvdra Movement
  - Tests that a Hydra's movement works as a zombie

- Dungeon Generation
  - o Test dungeon generation from origin
  - o Test dungeon generation end at origin
  - Test dungeon generation standard
  - Test dungeon generation negative coordinates
  - o Test dungeon generation large coordinates
  - Test dungeon generation large negative coordinates

## System-Integration Testing via controller

- Sun stone
  - Test can be used to unlock door
  - Test cannot be used to bribe mercenaries or assassins
  - o Test count towards treasure goal
- Sceptre
  - o Player with sceptre mind control mercenaries and assassins automatically become allies
- Midnight armour
  - o Can be crafted with a sword and a sun stone if no zombies currently in dungeon
  - Test midnight armour provides extra attack damage/ protection lasts forever
- Swamp Tile
  - Test slows movement of all entities
  - Test does not slow the movement of player
- Persistence
  - o Test the position of player is the same
  - o Test the inventory of the player is the same
    - Treasure
    - Key
    - Potions
    - Wood
    - Arrows
    - Bomb
    - Sword
    - Sun Stone
    - Bow
    - Shield
    - Sceptre
    - Midnight Armour
  - Test that the durability of the weapons is the same
    - Sword
    - Bow
    - Shield
    - Arrows
  - o Test all the positions of entities are the same
    - Walls
    - Exit
    - Boulder
    - Floor switch
    - Door
    - Portal
    - Zombie Toast Spawner
  - Test status of potions are still effective
  - o Test health of enemies are the same
  - Test ally mercenary
  - Test the progress of goals are still the same



 $\circ\quad$  Tests that Hydra's are damaged and healed correctly, as well as the player