

Battle

- Sword, shield and bow are not removed from the player's inventory or the list of entities once they have reached max durability and hence can no longer be used in battles
- Having more than one sword, bow or shield stacks the damage
- Having more than one ally will stack the ally attack and defense in a battle

ZombieToastSpawner

- Only swords can destroy a zombie toast spawner
- Multiple zombies can spawn on the same square
- zombies can spawn into any static entity that is not a wall or boulder
- Destroying a zombie toast spawner will not decrease weapon durability'
- If there are more than one open squares on a spawning tick, spawn only one zombie and spawn it on the first open square found.

Tick(ItemusedId)

- The id passed in corresponds to an existing entity
- When both exceptions are thrown, InvalidActionException will be thrown first

Bomb

- A bomb cannot explode other bombs, exit and portals

Key

- assume all keys in the dungeon will have a corresponding door, and vice versa

Dungeon

- assume that entities will not be created on top of other entities as part of the initial dungeon
- Assume there is a maximum upper bound for calculating distance for mercenaries moving towards players
- Assume that's only one map for each dungeon

Controller

- assume all fields in the config file will be integers
- assume there will only be one player entity in the map
- assume only one game is active at a time
- assume the health will always be > 0

Boulder

- Assume the boulders can be pushed onto exit
- Assume the boulders cannot be pushed onto locked door, portal or wall
- If the boulder lands on an item, the player does not collect the item
- Can push boulder into spawner

Portal

- Assume we can't teleport when there is a locked door or a boulder next to the corresponding portal

ZombieToast

- If the planned move was blocked, then the zombie toast will stand still

Player

- the items in a players inventory follow the players positions when the inventory is requested via `player.getInventory`
- when a player and an enemy are in the same square battles are resolved in the order that enemies were added to the dungeon
- Blocked by zombie toast spawner
- Durability of weapon not increase if invincible

Hydra

- If the planned move was blocked, then the hydra will stand still
- Hydra will run away if player uses invincibility potion

Assassin

- Player using invincibility potion does not affect assassin movement
- Once bribed, the assassin will teleport to the square the player was previously in for the next tick
- Allied assassins are unaffected by swamp tiles

Mercenary

- Allied mercenaries will not move randomly when the player
- Once bribed, the mercenary will teleport to the square the player was previously in for the next tick
- Allied mercenaries are unaffected by swamp tiles

Swamp Tiles

- Swamp tiles do not affect boulders
- Swamp tiles do not affect allies
- Enemies that spawn on swamp tiles will not be slowed
- Swamp tiles cannot be overlapped for a single position

Logic

- If an entity is activated it won't be deactivated again that same tick by the effects of it activating another entity.
- Assume the boulder goal includes the `LogicalSwitch`
- Assume player can collect `LogicalBombs`
- A wire deactivates when the entity powering it turns off

Sceptre

- A sceptre cannot be used again after it has been used once to mind control an enemy
- A sceptre will remain in the players inventory after it has been used
- The mind control duration starts decreasing in the next tick after it has been used(not when it has been called in the interact method, but in the tick movement or tick items used methods)
- A sceptre cannot control multiple enemies

Sunstone

- Player uses sunstone to open doors before a key

Time travel

- assume there is no time travel within time travel itself
- assume Time Turner will not be consumed
- assume old player won't build item
- assume enemies track current player during time travel
- assume older player won't interact with enemy
- assume the merc cannot step on time travelling portals/push boulders to get closer to the player
- assume past battles are included in the dungeon response after time travel
- assume older player wont have weapon, potions when battle