

Assumptions

<i>Entity</i>	<i>Assumptions</i>	<i>Undefined Behaviour (for Milestones 1 + 2)</i>
PLAYER		
Inventory	<ul style="list-style-type: none"> • Size is infinite • Items used will always have the correct itemID • Items are kept after player dies 	
Player	Will not spawn on a tile that would restrict movement (Walls and boulders) If health is below 0, the player is dead	
STATIC ENTITIES		
Wall		
Exit	<ul style="list-style-type: none"> • If the player completes exit as the final goal upon dying, the player wins • Goal is only removed from the goals string if it is the last remaining goal 	
Boulder	<ul style="list-style-type: none"> • Boulders can be moved onto collectables. • Boulders can't be moved onto exit or static and moving entities (e.g. enemy, portal), or any interactable objects. • Boulders are only able to be pushed by the player (not zombie or mercs or allies) • Boulders should not be able to soft-lock the player (block them from progressing). 	
Floor Switch	<ul style="list-style-type: none"> • Static entities with the exception of boulder can not spawn on floor switch 	

	<ul style="list-style-type: none"> ● Moving entities and collectable treat floor switch as an empty tile ● Moving entities can not activate floor switches 	
Door		
Portal	<ul style="list-style-type: none"> ● If a bomb explodes with a portal in range, the portal is unaffected. ● If the player enters a portal and the other portal is blocked by a wall/boulder, the player will not go through the portal. ● If the player cannot travel through a portal, they will stay on the tile before the portal. 	<ul style="list-style-type: none"> ● The behaviour of boulders and doors next to portals ● The behaviour of chained portals with a blockage at the end of the chain ● The behaviour of an infinite portal chain ● Battles occurring on a portal
Zombie Toast Spawner	<ul style="list-style-type: none"> ● Zombies cannot spawn at all if the spawner is surrounded by 4 static entities. <ul style="list-style-type: none"> ○ Zombies cannot spawn on the spawner itself. ● Zombies cannot spawn on cardinally adjacent squares with static entities in them. ● Currently, zombies still spawn if the player destroys the spawner on the same tick a zombie is supposed to spawn. ● Currently, weapons (even those besides swords can destroy zombie spawners. ● Currently, destroying zombie spawners does not affects a sword's durability. ● Player can't move onto a zombie toast spawner 	
MOVING ENTITIES		
Spider	Spiders can move through zombie spawners If health is below 0, it is dead	<ul style="list-style-type: none"> ● Whether multiple spiders are able to spawn on the same tile

Zombie Toast	<ul style="list-style-type: none"> • Zombies are blocked by portals. • Zombies can spawn on other zombies • If health is below 0, it is dead • If a zombie toast spawns on the player, a battle will commence • Zombies will always select a random valid movement 	
Mercenary	<ul style="list-style-type: none"> • Currently, portals have no effect on mercenary movement towards the player. • If health is below 0, it is dead 	<ul style="list-style-type: none"> • When a player bribes multiple mercenaries, their position relative to the player is undefined (can all be in the same square, can snake-style follow around) • The behaviour of mercs when the player is using an invincibility potion with portals involved is undefined • The movement of mercenaries on the same tick a player consumes an invincibility potion is undefined
COLLECTABLE ENTITIES		
Bomb	<ul style="list-style-type: none"> • Bombs are exploded in random order, if detonating on the same tick • Bomb does not become an obstacle when placed • Bombs detonate after the player moves and before the enemies move • Bomb destroying enemy contributes to enemy goal 	<ul style="list-style-type: none"> • If an exit is destroyed by a bomb in a dungeon with an exit goal or a switch is destroyed by a bomb in a dungeon with a boulders goal, the behaviour is undefined • Whether bombs can explode other bombs is undefined
BUILDABLE ENTITIES		

	Buildables only interact with the player	<ul style="list-style-type: none"> Where there are multiple options for creating a buildable entity, the precedence items is undefined
BATTLES AND WEAPONS		
Battles	If defense is high enough, damage is 0, they can never gain health. Damage dealt for instances where health would below 0 is its raw number, not capped	<ul style="list-style-type: none"> For multiple battles occurring in the same tick, the order in which the battles occur is undefined Picking up collectables on the same tile that would initiate a battle is undefined
Weapons in battle	<ul style="list-style-type: none"> Durability goes down while invincible Only one instance of each item is used, but both durability of a sword and a bow can reduce in one battle, however not two swords 	<ul style="list-style-type: none"> Whether having multiple swords (and other weapons of the same type) stack damage or are used one at a time is undefined behaviour
GAME / GOALS		
Game Goals	There will never be an unacheviable goal, nor will actions cause an achievable goal Only one game is active at a time There can not be more than one instance of the same type of goal <ul style="list-style-type: none"> Bomb destroying enemy contributes to enemy goal Durability of items will never be 0 in config 	<ul style="list-style-type: none"> If a player achieve the goal and dies on the same tick, the behaviour is undefined The behaviour of the interface when multiple exceptions errors occur is undefined
Movement	Enemies moving away from the player but can't stand still	
APPROVED ASSUMPTIONS	<ul style="list-style-type: none"> Entities will not be created on top of other entities as part of the initial dungeon 	

ON FORUMS	<ul style="list-style-type: none">• There is a maximum upper bound for calculating distance for mercenaries moving towards players.• All fields in the config file will be integers.• There will only be one player entity in the map.• All keys in the dungeon will have a corresponding door, and vice versa.	
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