

COMP2511 - Dungeon Mania - Assumptions

Spiders

Assumption: If a spider starts its movement below a boulder, it will begin moving downward and left (anti-clockwise) rather than the normal clockwise direction.

- Confirmed on 7/7 in the forum thread this is an approved assumption.
- Tested in `public void testSpiderMovementStartAtBoulder()`

Assumption: If a spider is 'stuck' between two boulders, it will just not move.

- Confirmed on 7/7 in forum thread this is an approved assumption
- Tested in `public void testSpiderMovmentStuck()`

Design decision: Spiders will spawn on squares that only contain either nothing, walls or collectables. This means no follow on actions/battles should happen immediately on spawning. The spawn location is random based on the max coords of the 'current-grid' of entities, but if the random spot chosen is not suitable, then will just use a random spot on the bottom 'edge' of the current entities.

Zombies

Assumption: If a zombie toast spawner does not have any adjacent open squares (free from walls/boulders) then no zombie will spawn.

- Confirmed on 7/7 in the forum thread this is an approved assumption.
- Tested in `public void testZombiesDontSpawn()`

Assumption: Zombies cannot push boulders

- Saw on forum we can make our own assumption about this
- Tested in `public void testZombieMovementBoulder()`

Assumption: Zombie random movement can include not moving for some ticks.

- Saw on forum this is ok

Goals:

Assumption: For AND conditions, if one of the goals is an exit goal the exit goal must be satisfied last and only last

- Confirmed in spec
- Tested in complex cases of goals test -> since it's an AND operator, this assumption is irrelevant since the player has to exit and satisfy the other condition (which is implied in the assumption).

Assumption: Unwinnable games where the player is not dead results in a losing game:

- Will not be tested by automarking -> assumptions megathread 8/7/22
- N/A does not need to be tested

Potions:

Assumption: For a player under the influence of a potion, it will still go through portals and doors.

- Not confirmed in spec

- Tested in public void testIsInvisibleGoThroughPortal()

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Battles:

Assumption: The number of ally defense and attack scales in proportion to the amount of allies (e.g. 2 allies with 3 attack = $2 \times 3 = 6$)

- Confirmed in assumptions megathread

Assumption: Weapon and shield bonuses do not stack since only a single weapon/shield can be held by the player at a given time

- Confirmed in megathread → Undefined behaviour

Bombs:

Assumption: Bombs act like a wall if they have already been collected.

Boulders:

Assumption: Cannot be pushed by anyone other than the player, blocks others.

Portals:

Assumption: Cannot be used by anyone other than the player and his allies (mercenaries).

Assassin:

If the player is invincible, the movement is unaffected

Hydra:

If player invincible hydra runs away

Logic Switches:

Assumption: Logic switches can act like a wire and carry on activation circuit.

- Confirmed on megathread.
- Mon 25 Jul 4pm - It is undefined if logical entities (other than wires and switches) act like a wire as well and carry on the activation circuit.

Assumption: Wires have OR logic.

- Confirmed wires don't get created with a logic field but just propagate a switch

Assumption: Entities can move over lightbulbs and wires (no reaction is returned)

Assumption: Player does not use the key when they move over an already open switch door

- Confirmed in forum megathread this is undefined

Time Travel:

Assumption: Multiple past players is undefined in time travel. In our implementation only one past player is present

- Confirmed undefined in assumptions megathread and forum
- Tested in all time travel tests

Assumption: rewinding with time turner consumes time turner

- Confirmed in assumptions megathread and forum
- Tested in time travel exceptions tests

Assumption: Player carries out all previous actions (including build, use and interact)

- Confirmed in forum and assumptions megathread
- Buildables movement undefined
- Tested in linear, intermediate and complex time travel tests

Assumption: Mercenary movement correct when iterating to current time, undefined after time travel:

- Confirmed undefined in assumptions megathread and forum
- Generally tested in time travel bribe merc tests

Assumption: Player - player battles treat old players health and damage wise as enemies:

- Confirmed in forum and assumptions megathread (and mentioned in spec)
- Tested in time travel fight tests (fight, player lose, invisibility, midnight armour and sun stone).