

Design Descriptions

Parent Class: Space class

Classes that will be derived from Space Class: HospitalRoom, WeaponsRoom, ArmorRoom, NeganRoom, ZombieRoom, and ExitRoom

Player (rick) will start at hospital. – Player its own class

- From hospital, can go top (to weaponsRoom), left (to neganRoom), right (to zombieRoom), and down (to armorRoom) → ExitRoom will be accessible only from ZombieRoom.

- hospital will have restore option that always replenishes 10 health (if health at 100, nothing happens) → changed to random restore

Rick will have:

- Health, strength, items, defense and a training indicator

- Starting health will be 100

- Starting strength will be 1

- Starting items will be none

- Starting training indicator will be set to 0 → with training, increase strength

- Starting defense will be set to 0 → with defense, take less damage

Negans room

- function to battle and every time Rick wins, he gains a point in training indicator (gain a book)

- for every point in training indicator, increase strength

- battle function will be two dice rolls

- if Rick loses battle, health reduced and returned to hospital with no extra attributes.

Weapons Room

- have random die roll that can roll from 1- 5 and have user guess a number between 1 and 5

- if guessed correctly, gain a gun which gives Rick 5 more strength.

Armor Room

-choose out of 3 boxes (contents will be unknown to user at first, but won't change throughout game)

-box 1, old spoiled food – strength goes down by 10

-box 2, empty

-box 3, armor → random roll of 1 and 2

-if roll 1 give 5 to defense

-if roll 2 nothing happens

Zombie Room

-battle function

-if Rick wins, gain a key which allows him to enter exit room.

-if Rick loses, return to hospital room with reduced health

Exit Room

-random function to determine if exit successful or game over.

Test Plan and Results

Description/Test Plan	Expected results	Actual Results
Make sure pointers pointing to other rooms/spaces are working properly. -In hospital room, right pointer should lead to zombie room. - Have cout statement in zombie room default constructor to display if object was created correctly.	From hospital: right->set to new zombie room "New Zombie room created"	As expected -However, had to change exit room. -Originally was going to have zombie room point to exit room. However, could not fix compilation errors so made exit room its stand-alone space. This way, it can be accessed from the zombie room with no errors.
Game should end based on 3 different conditions 1. Number of rounds are depleted 2. Player loses all health 3. Player entered zombie room and made exit or died	While loop with conditions that all 3 must be met or else, loop is terminated and game ends 1. Move to 10 different rooms and game should end	As expected

	2. Manually set player health to 0 after 1 round, game should end 3. Have player enter zombie room and win and game should end	
Zombie vs player will be based on health. First to 0 health wins. -if player loses to zombie and 10 rounds has not ended, player should be returned to hospital with half the health player had before entering zombie room and battling. -if zombie loses, player should be allowed to enter exit room	1.Player health started from 100 set to 0 during zombie battle → return to hospital with 50 health. 2.Zombie health set to 0 → Player enters exit room	-exit room outline changed as mentioned earlier but everything else was expected
Hospital Room main function -random roll to recover health	-die rolls 10, health increases by 10	-as expected
Weapons Room main function -roll random die for player and room	-player guesses rolled number → player strength increases -player does not guess rolled number → nothing happens	-as expected
Armor Room main function -3 boxes with different outcomes 1. health decreased 2. nothing happens 3. either nothing happens or health increases	1. health goes from 100 to 90 2. health has no change 3. health goes from 100 to 110 or no change	- as expected
Negan Room main function -some battle function which returns an int to compare to user int. If player int is greater, awarded with increased strength, else decreased health	-Set negan strength to 10 player to 1 → negan wins and player health decrease -set negan strength to 1 and player to 10 → player strength increases	-as expected
ZombieRoom main function -battle function for zombies vs player -Zombie should return high attack values so game does not end after first round	-Player enters with 10 health and 1 strength → zombie wins and player returned with decreased health -Player enters with 200 health and 50 strength → player wins and has chance to exit	- as expected
Exit Room main function -random roll to determine if player wins	-roll 1 → player loses -roll 2 → player escapes and wins	- as expected