

Program steps of execution:

1. Explain rules
2. Place player at beginning of dungeon with health
3. Print map
4. Player moves (health is subtracted)
 - a. If player runs out of health: Game over
 - b. If player runs into monster
 - i. Without weapon: Game over
 - ii. With weapon: defeats monster
 - c. If player runs into item space: gain item
 - d. If player runs into key space: gain key
 - e. If player runs into locked door
 - i. With key: unlocks door
 - ii. Without key: nothing, still blocked
 - f. If player runs into weapon: gain weapon
 - g. If player runs into goal space: Game win

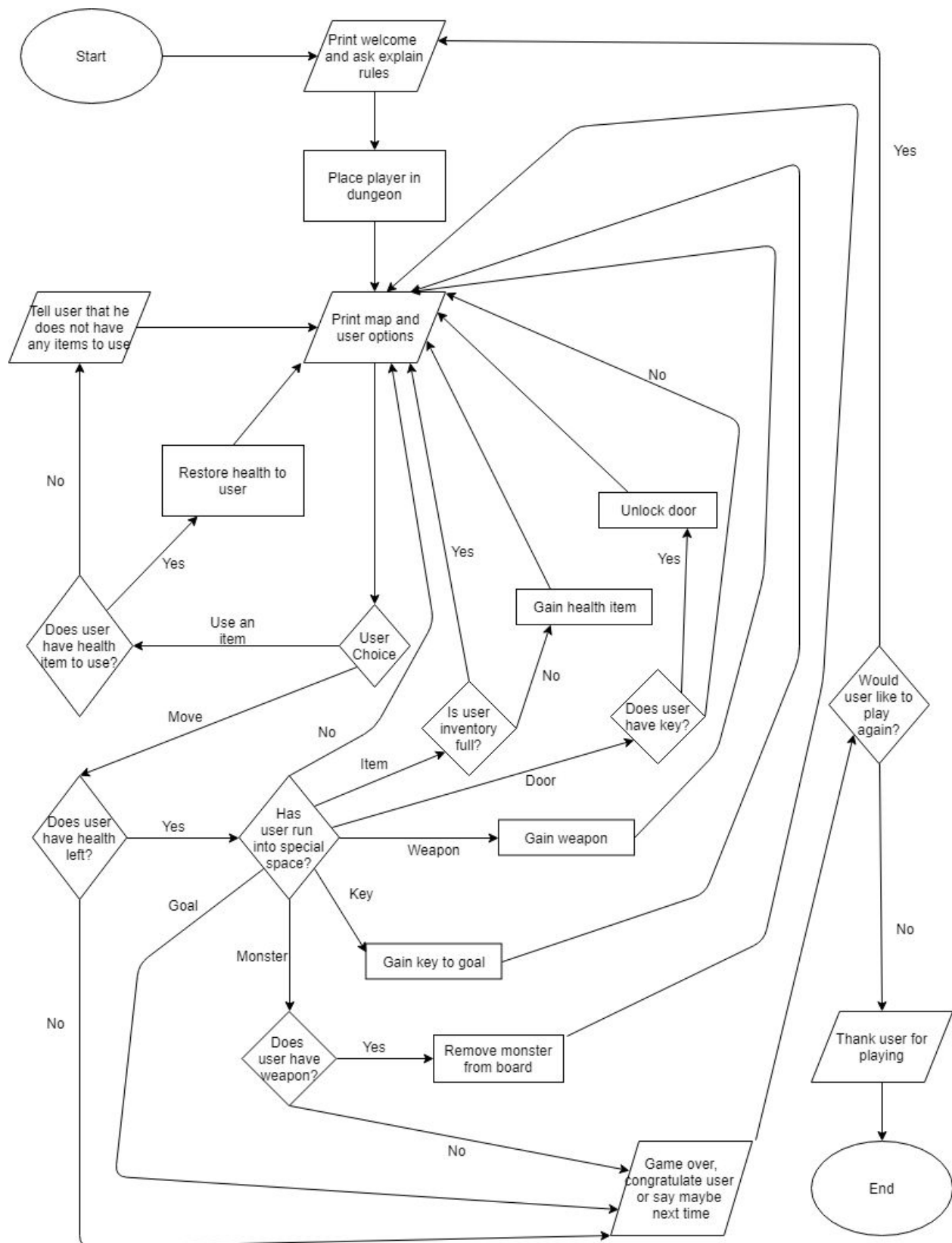
Classes:

1. menuQuestion
2. Space (**Abstract Parent**)
3. Empty (Space)
4. Edge (Space)
5. Item (Space)
6. Goal (Space)
7. Weapon (Space)
8. Key (Space)
9. Door (Space)
10. Sphinx (Space)
11. Being (**Parent**)
12. Player (Being)
13. Monster (Being)
14. Map

Functions:

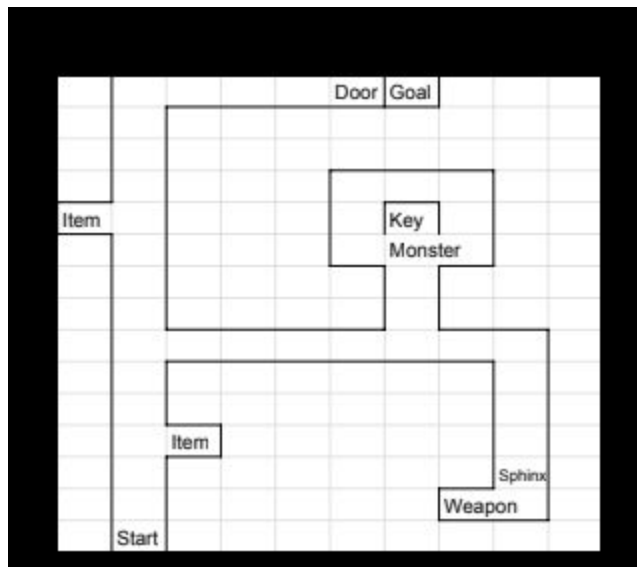
1. programStart
2. menu
3. sMenu
4. sResponse

Flowchart

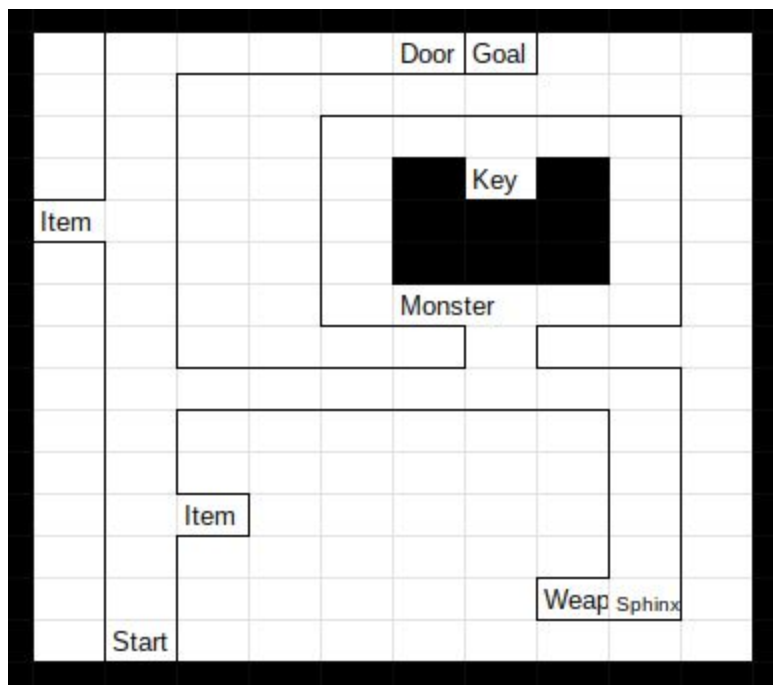


Dungeon Map

5/29/2019



6/4/2019 (Updated Map)



| Test Scope | Description | Expected Results | Observed Results |
|----------------------|--|---|--|
| User health | 1. Mechanics behind health and determining a game over from health | <ul style="list-style-type: none"> Health should decrement with each step Item use should increase health by 10 If health is zero then game should end | <ul style="list-style-type: none"> Runs as expected |
| Inventory Management | 1. Healing items should work as an inventory | <ul style="list-style-type: none"> Display correct number of healing items Using item should restore 10 health After use inventory should decrement If inventory is zero then should not be able to restore health and message should be given | <ul style="list-style-type: none"> Runs as expected |
| Monster mechanics | 1. Monster movement 2. Player-monster interaction | <ul style="list-style-type: none"> Monster patrols the hallway around key Monster should NOT leave hallway Monster should NOT walk into key If monster and player are in adjacent spaces game over should occur if user has not acquired weapon | <ul style="list-style-type: none"> Runs as expected |

| | | | |
|--------------------|--|---|--|
| | | <ul style="list-style-type: none"> If monster and player are in adjacent spaces and user has acquired weapon then user should slay monster and monster should disappear from map | |
| Map | <ol style="list-style-type: none"> Map should display correctly Changes in map | <ul style="list-style-type: none"> Map should print what is there correctly after each action Anytime user acquires item/key/weap on the item should disappear from map | <ul style="list-style-type: none"> Runs as expected |
| Difficulty balance | <ol style="list-style-type: none"> Game should be beatable | <ul style="list-style-type: none"> Game should be beatable | <ul style="list-style-type: none"> Runs as expected |
| Memory Leaks | <ol style="list-style-type: none"> Free up all allocated memory | <ul style="list-style-type: none"> No memory leaks | <ul style="list-style-type: none"> No memory leaks |