Dungeon Game

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1. Introduction

For our project we are going to make a roguelike in which you progress through a randomly generated dungeon and fight enemies. This game will be made using the Unity game engine and will be written in C#. Wikipedia defines a rogue like as being “a subgenre of role-playing video game characterized by a dungeon crawl through procedurally generated levels… , and permanent death of the player character”. The game will be played from a top down perspective.

1. Main features

Our main features for our game include:

* 1. Character creation
  2. Procedurally generated dungeon layout
  3. Real-time combat system
  4. Character movement
  5. Sound effects
  6. Multiple enemy types

1. Design Patterns

Character creation - Builder design pattern

Sound - singleton

Enemy generation (room) - Factory

Enemy object - prototype

Things need to be done:

* Character
  + Player spawn : Bradley
  + Abilities/attacks
  + Tile remove (bomb or digging) : Bradley
* Map generation : Bradley
  + Spawning in items/win condition
  + Spawning in character
  + Spawning in enemy
* Character creation screen: Yumi
* Classes (?)
* Outfits (?)
* Enemy generation : Ben
  + Enemy movement
  + Player-enemy interaction (combat)
* Menus: Ben
* Win condition
  + Item collection
* Sounds
* Visual assets: Yumi
  + 32x32 px
  + Player character:
    - ~~Idle~~
    - ~~Forward walk~~
    - ~~Back walk~~
    - Left/right walk
    - ~~Alternate color~~
  + Weapon (stick)
    - Swing front/back - Unity-side animation
    - Swing left/right
  + Map textures
    - Stone
    - Dirt
    - Grass
  + Enemy:
    - Idle
    - Forward walk
    - Back walk
    - Left/right walk
  + Bomb
    - Fuse countdown
  + Collectible item (candy)

Essential stuff that needs to get done

* Spawn enemies on map (done?)
* Create combat system
  + Weapon animation (swing/poke)
  + Weapon hitbox (melee only)
  + Projectile + projectile hitbox (ranged only)
  + Enemy hitbox (done?)
  + Player/enemy stats
    - Health
    - Attack
    - Defense (optional)
  + Health UI (enemy + player)
    - Enemy -> either health bar/number/some type of damage indication
  + Update character creation UI
  + Game over screen/defeat state
* Player/collectible interaction
  + Counter
  + Success screen