Design Plan

 $Dungeon\ Dudes\ -\ OOP,\ Mod\ O\ Practical\ 2B$

170D Class: 23-001



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1 Project Summary

Dungeon Dudes is a text based RPG based off medieval lore. The task for this project was to implement a single character or monster based off asssignment and as a class, create a fully functioning game.

2 Bench Marks

Day 1

- 1. Read through manual and provided code to understand how program operates.
- 2. Start to build out Wizard class based off requirements in manual.
- 3. Work through main logic methods (take damage, attack, level_up)

Day 2

- 1. Complete Wizard Class: All special skills
- 2. Complete Item generator for Wizard

Day 3

- 1. Build unit tests for Wizard and Item Generator
- 2. Code meets all requirements(pycodestyle, mypy, complieall .)
- 3. Documentation

3 Requirements

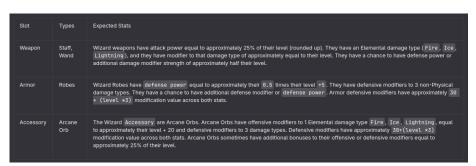
1. Wizards Skills:

Skill	Level	Mana Cost	Description
Attack			Wizard attacks deal damage with a base of their attack_power. Wizard attacks deal damage of the type of their equipped weapon.
Magic Armor			passive: Wizards defensive modifler against all non-Physical damage is improved by their intelligence / 5 -rounded up. Wizards take 30% less damage from the first source of Physical damage each combat. Wizards take 15% less damage from Physical damage sources when over 50% mana. Wizard defense power mitigates Ice, Fire, and Lightning damage in addition to Physical damage.
Fireball			The Wizard launches a fireball at their enemy dealing Fire damage based on Intelligence \times 3. The Wizard burns the enemy for additional damage based on their Intelligence \times 1 the following round
Blink			The Wizard Escapes the Battle and returns to town
Blizzard			The Wizard summons a blizzard to the battlefield. The Wizard deals Ice damage based on their Intelligence x1 to all enemies this round and for each round for the remainder of the battle.
Mana Regeneration			passive: The Wizard gains 15% of their Maximum Mana back at the end of each battle. Healing Potions now restore 15% of the Wizard's maximum mana, and an additional 15% maximum hit points, in addition to their other effects.
Lightning Bolt			The Wizard strikes their opponent with Lightning , dealing Intelligence x5 based damage
Elemental Affinity			passive: Whenever the Wizard casts a spell which deals Fire, Ice, or Lightning damage, they gain a 25% damage bonus to the next Fire, Ice, or Lightning damage spell they cast this combat - if it deals a different type of damage.
Reflect Damage			For the remainder of the combat, whenever the Wizard is damaged, a % of the damage equal to the Wizard's level (rounded up) is stored. This stored damage is added to the Wizard's next damaging attack as Lightning damage.
Improved Passives			passive: 25% of Magic Armor's non-Physical damage modifier bonus now applies to Physical damage (rounded up), Mana Regeneration end of battle and healing potions effects now restore 25% of maximum mana.
Mana Burn		All (min 1)	Consume all your remaining mana to do Fire, Ice, and Lightning damage to an enemy, the base damage of each damage type is 50% of the consumed mana (rounded up)
Elemental Master			Passive: Wizard's deal +50% damage if they've dealt Fire, Ice, and Lightning damage this combat.
Damage/Variance	Elemental	Fire, Ice, Lightning	Wizards deal Elemental damage with their attacks. Their damage variance is base damage \bullet ((current/maximum mana / 2) - 0.15) (-6.15 - 0.35). Their equipment variance follows the same formula as Fighter variance.

2. Wizard Stat Growth:

Stat	Initial	Per Level	Description
Hit Points	60		Health Points
Strength			
Agility			Wizard Agility translates to defense power at 2 agility = 1 defense power Agility also decreases the chance you'll be surprise attacked in battle.
Intelligence			Wizard Intelligence translates to attack power at 1 intelligence = 1 attack power. Intelligence directly increases the damage of several Wizard spells.
Mana (Special)			Wizards use Mana to cast spells
Experience		50x ²	Wizards progress levels slower than average.

3. Wizard Equipment:



4 UML Graph

