Team 28

Sanctum of the Chalice

Team Members

- Alec Hartline
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Problem Statement

In the classic dungeon-crawler genre, a stat based combat and interaction system is typically favored. This, with pseudorandom modifiers to a large amount of strategy based mechanics, can make for a frustrating experience. Players can often feel as though their tactical efforts in such games are futile. For example, in many roguelike dungeon-crawlers, players may try to 'outplay' enemies, only to find that in the end, the outcome of an encounter is determined by just the difference in their stats. This often leads to an extremely binary gameplay experience. In *Sanctum of the Chalice*, players will have the opportunity to 'outplay' enemies and sticky situations through time manipulation and movement mechanics. There exist games that try to prioritize strategy over stat-check gameplay (a popular example would be Crypt of the Necrodancer), but many of them introduce only a single mechanic to do so, and all of them stray too far from the classic roguelike dungeon-crawler.

Project Objectives

- Build a top down roguelite dungeon-crawler game with charming 16 bit style pixel art, unique time based gameplay, and an endearing, latent form of lore
- Develop a game engine built to allow for an engaging and smooth user experience along with frontend rendering and support for various game mechanics
- Create a tile based procedurally generated level system consisting of 'dungeons' to provide players a unique experience every playthrough
- Implement a "time warp" mechanic that allows players to revert their character to a prior position from limited list of remembered positions
- Design a distinctive tick based combat system controlled by stat points and items that allows for outplay potential using the time mechanic

Stakeholders

Users: Fans of retro style roguelike/roguelite games that desire a strategic aspect added to the classic dungeon-crawler experience.

Developers: Alec Hartline, Shubham Jain, Phoebus Yang, John Pesce, Taehoon Kim

Project Manager: Tara Williams

Project Owners: : Alec Hartline, Shubham Jain, Phoebus Yang, John Pesce, Taehoon Kim

Project Deliverables

- A user interface built on AWT and Swing that is capable of rendering sprites, animations, and particles while processing player input
- A class system utilizing Java OOP models that outlines a hierarchy for all game objects, entities, and items
- An artificial intelligence system that facilitates entity decision making and path finding
- A robust JSON property system that allows for easy addition and modification of dungeon parameters, objects, entities, and items
- Custom serialization of game states for saving and loading player progress
- An OpenAL based sound system to play music and provide entities like enemies and environmental objects audio cues