Team 7 Game Milestone Five: Grand Finale

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Overview

Listed below is the milestone for Team 7: Mystic Crusaders. We have the proposal portions inserted below, with commentary on how each goal is accomplished.

Game Proposal Features

Week: March 29

- ❏ Debug

  Complete. Improved functionality of current codebase by fixing some overlooked issues, and improving on issues caused by init and destroy in a few old files

- ❏ More skills (number of skills depend on the difficulty of implementation): tentatively going with fire, ice and lightning classes

  Complete. See previous milestones, where we have included a new skill for lightning. In the end, we decided that having 3 core skills that are upgradeable would be more beneficial to a player than a bunch of skills that don't help the player much and overwhelms them in decision paralysis.

- ❏ Improve the efficiency of collision detection

  Complete. Monsters are no longer hit the tree, with the new feature added, they can now go around the obstacles to chase the player.

Week: April 5

- ❏ Improve visual effects (animation)

  Complete. We have extensive animation for our games, and most recently we have included a new part on introductions.

- ❏ Audio (music)

Complete. Added background music changing with user state: home screen, tutorial screen, shop screen, introduction story, forest battle, desert battle, spaceship battle.

❏ (if we find a better-animated library, include a physics engine for fire effects)

Phoenix's fire effect completed in the last milestone.

Week: April 12

❏ Improve UI to enhance the user experience

Complete.

- Change the background of the skill tree. Now all the backgrounds of the skill tree are identical.
- Showing skill points and hero level in the game. Now players can know whether or not they have free points to level up the hero's skills, as requested from earlier.
- File save. The items purchased by players can be saved in a json file so when players close the game and start the game again they don't have to buy the items again from the shop.
- Finish the entire shop screen. The shop feature is fully implemented. Players can purchase items in the shop before starting the game. In the shop, players can see the item stock, item description, item price, and their money in the shop screen

❏ Improve visual effects (animation)

See April 5 on improving visual effects.

Week: April 19 – **Grand Finale**

❏ Verify milestone completion

Complete. All main features have been implemented in the past.

Milestone requirements

❏ **Development**: All features implemented in the previous milestones should be working, or improved upon if it's the case.
❏ **Robustness**: Sustain progressive, non-repetitive gameplay across one or more levels for 10min including all new features. No verbal explanation should be required at any point during the gameplay.
Complete. Game has complete tutorial, offers cues as to how to progress, and offers multi-level gameplay that allows players to strategically upgrade their hero for maximum survivability.
❏ **Usability**: Include a self-explanatory tutorial introducing the player to the game mechanics.

- ❏ **External Integration**: Include integration of one or more external tools or libraries (physical simulation (PhysX, Bullet, ODE, etc …), game engines, or alternatives)
  Complete. Included external libraries: JsonCpp, Freetype
- ❏ **Advanced Graphics**: Implementation of one or more advanced graphics features including visual effects (Particle Systems, 2.5D(3D) lighting, 2D dynamic shadows) and/or advanced 2D geometric modifications (2D deformations, rigged/skinned motion).
  Complete. On forest scene, the trees are waving implemented by fragment shader. Phoenix releases particles.
- ❏ **Advanced Gameplay**: Implementation of one or more advanced gameplay features including advanced decision making mechanisms based on goals (path planning, A*, or similar), or some form of group behavior if applicable to the game; more complex physic interactions with the environment (e.g. gravity, bouncing, complex dynamics).
  Complete. Advanced decision making is implemented into the AI, where AI avoids moving towards a certain area after one of the enemies is hit in that direction, attempts to advance on the player in a mob-like fashion all at once, intelligent obstacle avoidance. Enemy can power-up other enemies to form a more dangerous army.
- ❏ **Accessibility**: evaluate and optimizing user-game interactions (choice of user gestures, ease of navigation, etc …).
  Complete. The user can skip the story introduction.
- ❏ **Audio**: There should be audio feedback for all meaningful interactions in the game as well as a background music with tones reflecting the current state of the game.
  Complete. We have interactions audio feedback with fireball, iceblade, lightning strike, phoenix, laser bolts, enemy communication, level up and death. The background music changes with user state: home screen, tutorial screen, shop screen, introduction story, forest battle, desert battle, spaceship battle.