Team 7 Game Milestone Two: Minimal Playability

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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. However, we would like to note that the proposal was created before most of the game development took place, and as a result we have seriously overestimated what is achievable in the timespan we are given. Thus we have created a new version of the milestones' proposals, and would like to use it as our new proposal going forwards. Please see folder for further details.

Game Proposal Features

Week: February 8

- Gameplay
  - Basic visual effect of projectiles (small squares travelling in straight line)
    - Completed. All projectiles rotate and render correctly. Gameplay is smooth and stable for 2 minute execution time, and (actually) has good replay value. (Half of our group is trying to compete for a high score.)
  - Implement skill system. (not all skills, maybe with limited visual effects)
    - Completed - after every 20 enemies killed with MP-consuming ability, the skill levels up by using more MP, increasing in damage, and increasing in projectile count.
  - Implement interactions between different classes (hero, enemy)
    - Completed. Enemies are skilled and increase in difficulty with better AI and increased speed, attack speed, and respawn rate as the score rises.
  - When projectiles hits, destroy the projectile, and apply damage. Projectles has direction. (momentum may apply later if have no time)
    - Completed; momentum is also completed, which was something that was planned to be fleshed out at a later stage (see "Creative").
  - Basic enemy AI (decision tree, random behaviors based on distance, hp)
    - Completed.
    - Ranged enemies will approach hero when far away. Within certain range, they will random dodge hero's skills and fire lasers towards hero. The fire angle is randomized based on the fire rate. When hero

is close to them, the ranged enemies will try to escape and won't fire lasers.
- ■ Melee enemies will approach hero when far away. Within certain range, they will random dodge hero's skills but still approaching hero.
- ● Show basic UI (HP, MP, player level, map level), reset game after death
  - ■ Completed (Rendering team). Decided that basic UI with text display is not very valuable for the player, and instead implemented March 8th milestone's UI, with a graphical display. See "Creative Section".
- ● Rendering & basic physics-> camera & collision start
  - ○ Basic momentum with deceleration
    - ■ Completed (Gameplay team). Implemented momentum on collisions with boundaries (not previously mentioned - see "Creative").
  - ○ Start Screen Rendering
    - ■ Completed - not originally planned in this milestone. (Closest resemblance to milestone is in either Mar 1, or Mar 15. See "Creative".)
  - ○ Increase robustness of gameplay
    - ■ Completed. Fixed bug for camera-following, once the bug was discovered with another implemented feature.
  - ○ Render Start Screen UI
    - ■ Completed. See February 15.
- ● Asset
  - ○ more details in assets
    - ■ Completed - spritesheets for hero, enemy, and fireball (basic attack) created.
  - ○ Map details design
    - ■ Completed - new map is on display, increasing playability for gamers.
  - ○ Increase robustness of gameplay
    - ■ Completed. Fixed numerous bugs in various systems, and actively participated in code review.
  - ○ Create Start Screen UI
    - ■ Completed. See February 15.
- ● Verify on track for milestones
  - ○ Completed.

Week: February 15

Spring Break: A few team members out of Canada

- ● Progressive debug
  - ■ Completed - see February 8 milestone.
- ● basic user tutorial/help (Just for basic actions such as move and attack)
  - ■ Completed (Graphics and Rendering team). Start screen offers players instructions towards understanding gameplay, and has great visual appeal. Fixed numerous bugs related to the execution of Start

- Finish whatever is left from last week
  - Completed.

Milestone requirements

Milestone: Minimal playability - Feb 22, 2019

For this milestones you should continue to support all required skeletal game features. You should augment those with core gameplay logic, incorporate additional assets and features that allow for non-repetitive gameplay, introduce basic user help, and perform playability testing.

(75%) Milestone requirements (self reference):

- ❏ Sustain progressive, non-repetitive gameplay using all required features for 2 min or more (assume that you can provide users with oral instruction).
- ❏ You should implement state and decision tree driven (possibly randomized) response to user input and game state (create a decision tree data structure and reuse it for multiple entities)
- ❏ Provide extended sprite and background assets set as well as corresponding actions.
- ❏ Provide basic user tutorial/help.
- ❏ Stable game code supporting continuing execution and graceful termination.

(25%) Creative: You should implement one or more additional creative elements. These can include additional assets, rendering effects, complex gameplay logic, or pre-emptive implementation of one or more features from subsequent milestones.

- ❏ Hero can level up when he reaches certain points. The level-up can currently improve the ice arrow skill by increasing the number of arrows, range of arrows and damage. For the hero himself, the level up can increase the speed of recovering mp.
- ❏ Complex gameplay logic: enemies dodge hero's shots with random movement, and can decide to charge in or fall back when they are a certain distance from the player. Difficulty of player depends hugely on the current score the player has.
- ❏ Momentum System - fleshed out in good detail. First step towards momentum-conserving controls.
- ❏ Hero bounces off from map boundary - related to momentum as well
- ❏ Enemies' strength (attack speed, movement speed, respawn rate etc) increases as score increases.
- ❏ Hero is animated with spritesheet, original graphics (designed in-house) are used in all assets
- ❏ UI is graphical and displays HP and MP in real time; essentially the version needed for March 8th plan
- ❏ Additional assets (static enemy sprites): improved projectiles, improved UI appearance, spritesheets for various enemies, heroes and objects in the environment