

Revolution Geometry

Abstract

A RTS lane defense game, with two opposing sides looking to destroy the opposing nexus. An assortment of magic abilities, troops, and weapons are used to further along a line of defense. This game is similar to games like Stick Wars, Epic War 4, and Age of War 2.

Progression

You will initially control a freely moving “Commander” character, and be able to summon troops to aid you in your fight. There will be a Mana counter that is stored and will be used as a currency system to enable you to deploy troops. Troops will be found in a menu type of bar on the bottom with a deck of cards. You’ll be dealt randomly a set of Utility cards(4) that can be used during battle which can either heal up your nexus, or help you progress farther down the lane. You’ll also have the units that you can use on the bottom menu that will spawn the units on to the field, that also have to be ready for deployment. There are also specific utility troops that can help you generate more currency and help defense.

Win Condition: Nexus of other player is destroyed OR the computer’s Commander Unit is destroyed

Lose Condition: Your nexus is destroyed OR Commander unit is destroyed.

Features

Different Kinds of Units(Expandable):

****Units will be implemented using interfaces/superclasses that detail what each does.**

The important part is how the units interact with the enemy and with each other. A priority queue will be the underlying structure for this general behavior.

- Your troops will target units that are CLOSER in proximity. This means that all the enemy’s troops are placed in a priority queue that puts the closest enemy on the top of the list of targets.
- Enemy troops have this same behavior.
- Troop deployment is also dictated by an queue. Wait time for each troop will be different. In that waiting period, troops will be stored in an arraylist and will dequeued accordingly.

Commander Characters(Special Units, *Have Special move)

User Controlled Unit:

- User directly controls a set unit (this unit can be changed to any one of your troops, but the default is your “commander” unit). The controlled unit can go anywhere the player wants it to go. It’ll move toward the most recent location of the right mouse-click.
- To change this controlled unit to a new unit , you just left click on the new unit.

COMMANDERS

Leo - Increased Stats

Allard - Increased Stats

Jeffrey - Increased Stats

Magic(AOE damage)

- Wizard (Range: 10 damage, Life: 120, Cooldown: 20 seconds, Speed: Normal*Does AOE damage)
- Healer (Area Heal: 50 health, speed:, cooldown: 20 seconds, Speed: Normal)

Range

- Archer (Range: 15 damage, Life: 100,Cooldown: 10 seconds, Speed: Fast)

Melee

- Swordsman (Melee: 20 damage, Life: 200,Cooldown: 5 seconds, Speed: Normal)
- Calvary (Melee: 40 damage, Life: 450,Cooldown: 45 seconds, Speed: Fastest)

Special(Large Units)

- Giant(Melee: 30, damage, Life: 1000,Cooldown: 90 seconds seconds, Speed: slow
*Increased Size)

Infrastructure:

- Nexus(Life: 5000)
- Miners(Life: 100,Cooldown: 120 seconds)

Utility Cards(Deck) (few examples)

**Randomly shuffles a deck of cards, then uses priority queue to take out cards, and to reshuffle cards back into deck.

Examples:

- Meteor
- Revival(Most Recent death): shall use a stack in implementation
- Heal(Nexus)
- Barricade(Nexus defense +)

Scoring

Scores will be based off of time, currency acquired, and troop deaths(which will subtract from your score). Highscores then will be generated, after each run and then sorted. Replay button will be used after each run(if you want to compare previous scores, press the replay button to play again, do not exit). Exiting the GUI, will reset all scores.

MVP

1. Set up the board, have the bottom menu set up
2. Both Nexuses are set up
3. Have commander character setup
4. Set up deployment of troops that will be used to attack the enemy
5. Troop interaction with enemies