Avant-Garde

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Game Design

Description
Avant-garde is an action-packed, 5v5, real time strategy, and medieval-themed game where the 5 players manage a developing kingdom together and fight the other players' kingdom to take over the continent.

Player Roles
Each player plays an important role within their kingdom:
the King, the Treasurer, the War Commander, the Scout, and the Missionary/Envoy. This forces the players to communicate strategies, to manage economy and workers, to direct and fight with troops, to explore unknown surroundings, and to expand their kingdom together. This also allows people with different play styles to enjoy the same game together.

Player Experience
In a fair and randomized map, players in first person perspective must work in a team to ultimately defeat the other team. The players will explore their role in the kingdom and make important macro decisions and use micro skills to maximize their chance of winning. The players must communicate and use their knowledge and information they have obtained on their surroundings and their enemy to craft a clever strategy in order to defeat the other team.

MacOS Vulkan

Begin Vulkan development on MacOS in under 5 minutes.
- 6 simple steps to begin Vulkan development
- Consistent compiled results with Windows & Linux
- Easier setup for future developers

MacOS

Using any code editor and terminal running shell script (VSCode Compatible):

1. Clone this repository
2. Install Homebrew if you don't already have it:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

3. Install CMake & GLFW with Brew:

```
brew install cmake glfw vulkan-headers glm
```

4. Install the latest Vulkan SDK (1.3.296.0), recommend putting the folder in the home folder i.e. `~` or `/Users/[username]` and name the folder VulkanSDK. If you installed else where or named differently, you need the modify the folder location in `/dev/setup_env.sh` within the cloned repository. Select `System Global Installation` when prompted.
5. From the repository's root directory, run the following commands:

```
cd dev
./build_unix.sh
```

6. You may need to give `build_unix.sh` some permission:

```
chmod +x build_unix.sh
```

👍 You are ready for development!

Completed, room for optimization.

Avant-Garde

"An action-packed, 5v5, real time strategy, and medieval-themed game where the 5 players manage a developing kingdom together and fight the other players' kingdom to take over the continent."

Supported Platforms
Windows, Linux, MacOS

Semester Goals

- Setup one CMake file to support Windows, Linux, and MacOS and compile Vulkan
- Finish Khronos Vulkan Tutorial
- Refactor code from Khronos Vulkan Tutorial
- Add simple user inputs
- Start the development of a Golang server in a Docker Container

Future Goals

- Design & import assets
- Golang server in a Docker Container using server-client connection with UDP
- Game resource/economy management, APIs
- User inputs & user interface
- First/Third person POV
- Physics & collision system
- Game design & balancing roles

Links

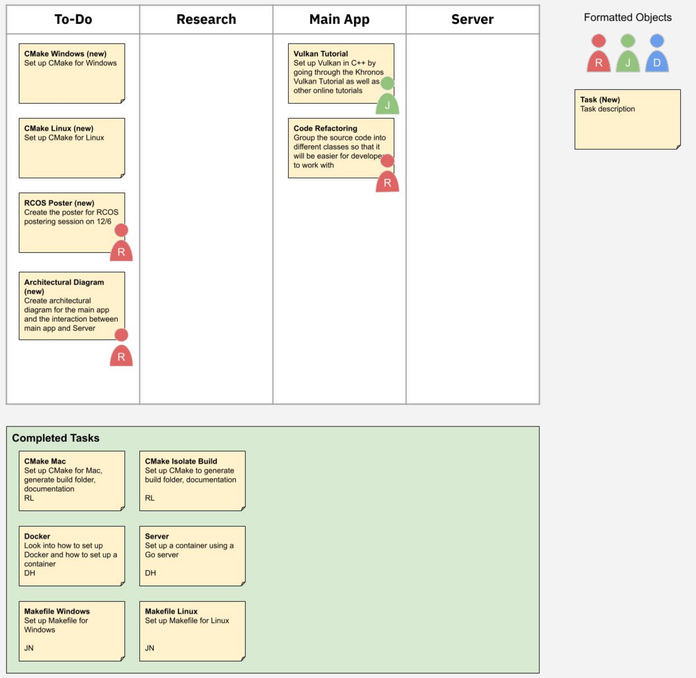
Main Repo

Server Repo

Task Board

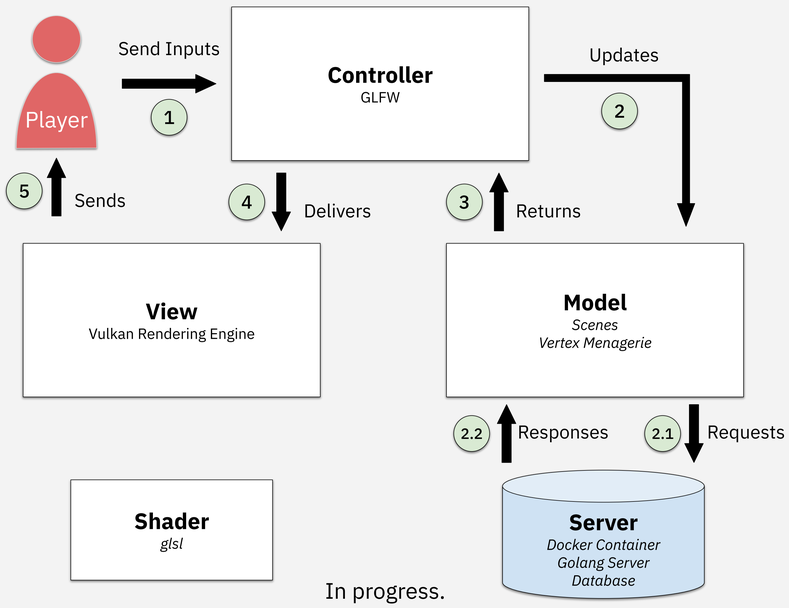
Project Management

Task board to manage students at different location.



Code Design & Refactoring

One giant code block to Model-View-Controller design.



In progress.