WarCraft II User Manual

Getting Started

- Supported Platforms: Windows, MacOS, iOS, Linux (RedHat and Debian distributions) and web browsers.
- Controls: A keyboard and mouse are required. Headset is optional.
- Disk Drives: A hard drive with free space is required to play WarCraft II. Make sure you have optimal space to install WarCraft II.
- Game settings can be saved into a file and loaded every time we run the game's executable.
- Not all the features mentioned here are implemented by all the groups

Starting a SinglePlayer Game

The Game presents us with the Main Menu at the beginning. Users will be prompted at game startup to select their gameplay preferences.

Users can choose between game modes: Multiplayer or SinglePlayer, and can select their preference of map. Change your sound and network settings in the options menu. Clicking Single Player Game will take you to the Map Selection Screen. Each map, listed on the right, offers different terrain styles and differences in difficulty to the game play itself.

After selecting the map, single player users will be prompted to select the game AI preferences of their choice. This allows users to choose the level of difficulty of the AI (easy, medium, or hard) as well as assign colours to the bot and user themself. Select from one of 8 colors for yourself and the given amount of AI players.

Users can cancel at any time during the beginning process. A simple click of the "Play Game" button will allow users on all platforms to begin their game.

Starting a MultiPlayer Game (not available on Windows or Mac)

Multi Player Game directs us to another interface letting us choose a Direct Connect or Server Connect game.

- Network Options Menu
  - This menu is where options related to the network settings can be set which are used when setting up a multiplayer game. In order to join a multiplayer game via direct connect, enter the host address and port number in the Network Options Menu before clicking direct connect from the main menu.
- Direct Connect menu includes: Host MultiPlayer Game and Join Multiplayer Game. Hosting a game lets us choose the map and player's colour.

- ○ "Host Multi Player Game" allows the user to use their computer as the host machine for a LAN game. If the player chooses this option, they will then be directed to a menu that will allow them to select game options and other players on their network will be able to connect to their game using their address and port information that they set in their Network Options Menu.
    - ○ "Join Multiplayer Game" allows the user to join a LAN game that is already being hosted by someone on their network.
- ● Server Connect menu lets us enter username, password and includes: Host MultiPlayer Game and Join Multiplayer Game
    - ○ Hosting a game lets us choose the map and player's colour.
    - ○ Joining a game presents us with a list of available, joinable servers currently hosting a game.
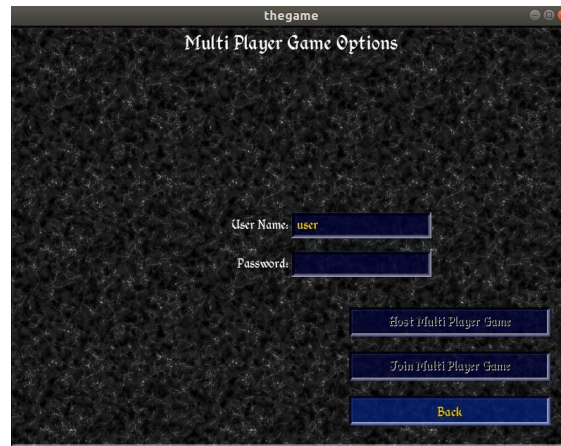

Gameplay

- ● Initially all players start with a town hall and 1 peasant on default map and just 1 peasant on other maps. Originally players can command up to 5 peasants/footmen/archers, however this can be increased through building certain types of buildings.
- ● New peasants can be trained in the Town Hall. By upgrading the Town Hall to a Keep, you can create Footmen.

- The minimap in the top shows how much of the map has been explored so far and where you are on the map. Clicking the minimap will open that part of the map on the screen.
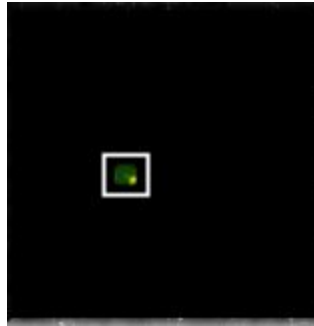
- Clicking a building allows you to perform the buildings action (covered in detail later).
- Clicking a peasant gives one of 5 options:
  - **Move**: Move to a place that you click on the map. If you run into an enemy during movement, battle will commence.
  - **Attack**: Click on an enemy to attack them.
  - **Rebuild**: Click on a building that has sustained damage to have the peasant move to the building and restore its health. If the building is being built, the peasant will help speed up the building.

  - **Mine**: Selecting a mine will cause the peasant to go to the mine and take the gold back to the nearest town hall. Selecting a forest will cause the peasant to go to the selected forest and harvest lumber,which will be taken back to the Town Hall. Trees will disappear once all the lumber has been harvested from them. The peasant will go to the nearest tree to the Town Hall after delivering wood.
  - **Build**: Build the selected building provided the player has enough gold and lumber.
  - When a player is defeated or all enemies on the map are defeated, we can return to the game's Main Menu.
  - The player has the functionality to pause/resume the game at wish, during which the player is presented with a menu that contains Options, Exit, Return to Game buttons.
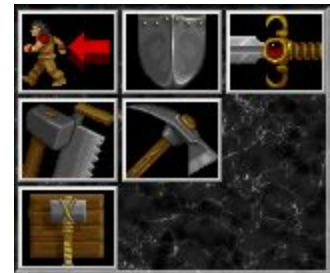
Apple/Linux/Windows

Users will mainly interact with the characters and the objects on the map using their mouse.

To Select a character: Click on the Object of interest
To move to a selected location: Double click on the location, after clicking on the object
To interact with an object with another object: Click on the object and then double click on the object to interact with

Note:
      - On iOS, Users will interact with the game by touching the screen
      - On MacOS, Mouse drag on character to select it

To Select a character: Long press the character
To pan the map: Drag the screen the move viewport
To select a group: long press on a character to select one character, then tap the character to select a group
To move: tap on map to move the selected character

Goal: To wipe out the enemy AI units before they kill all of yours.

Panning the map:
MacOS and Windows: Use the arrow keys to pan. Pressing the top arrow key pans the window up, pressing the right arrow key pans the window right, pressing the left arrow key pans the window left, pressing the bottom key pans the window down.
MacOS allows users to use their touchpad to pan the map.
Placing on the edges of the map. Placing the mouse on the top edge will pan the map upwards, placing the mouse on the right edge will pan the map to the right, placing the mouse on the bottom edge will pan the map downwards and putting the mouse on the left edge will pan the map to the left.
iOS: Panning the map can be done by swiping a single finger across the game screen

Gathering Resources:

Click a Peasant and then tap the resources desired.
- **MacOS**: Mouse drag on the peasant and click near trees to move peasant close to trees. Once near trees hit 'h' to chop wood.
- **Gathering Lumbe**r: Click on a Peasant and then click once on a tree,
- **Gathering Gold**: Click on a Peasant and then click once on a gold mine once on Windows
- **Gathering Stone**: Click on a Peasant and then click twice on the rocks (not available on Windows, not available on mac)

On Windows, you can right click on mine or trees to begin the action

Building:
- On Mac: Press keyboard to build buildings
  - Press1 . build a townhall on the cursor pointing direction
  - Press2 . build blacksmith on the cursor pointing direction
  - Press3 . build barrack on the cursor pointing direction
  - Press5 . build farm on the cursor pointing direction
  - Press6 . build lumbermill on the cursor pointing direction
  - Press7 . build scouttower on the cursor pointing direction
  - Hold P and move cursor to see where users to put their buildings
- Users can use peasants to build buildings.
- Lumber Mill is a repository for wood.
- Farms increase the amount of peasants by 4
- Stones can be quarried from rocks. Blacksmith is a repository for stone.

- Walls can be built for protection against peasants. They take 10 seconds to build, cost 100 points and they can be repaired by peasants. If a wall is built by a player, they offer no visibility. (not available on Windows)
- When the users click on the peasant, in the "menu" at the bottom it will show a "build" option.
- When the user clicks on the build option, it will give users several options on which buildings can be built and allow the users to place the building on the map.
- The users can place the building anywhere that is legal and it will show green if it is legal and red if not.
- Users can build Gold Mine over gold vein. Gold mines take 2 minutes and are built from gold veins. They cost 100 wood and the players building them can't see their gold mine. (not available on Windows)

Generating Units:
MacOS:
- Select barack and press w,e,r: footman, archer and ranger respectively
- Select townhall press q: peasant

Defending and Battling:
Users can defend various buildings from enemy teams by clicking the individual enemy player and choosing between a method of fighting presented on the screen.

Upgrades (not in Windows version and not in Mac version):
Ranger Tracking Ability: Rangers that have this ability could walk through the forest.

Footman can be upgraded to knights:

Single Player Save and Load:
Players could save their current game progress to an outside file. And they could restore their game progress later. This feature is only available for single player game.

Unit Grouping:
Players could assign a building or a group of up to 9 units to a single key. To do this, select what they want to assign, then hold down Control and select a number on the keyboard between 0-9. Then, when you want to select what you assigned, simply press the number of the group that you want.

Text Notifications:
Users will receive some text notifications at the lower left corner of the viewport whenever they trigger certain events. For example: When a peasant finishes building a building, it will print "Work Complete." When a building is destroyed by an enemy, it will print "Building Destroyed."

In-Game Communications:
Players could communicate with other players during the game. They could press left or right ALT button to invoke the chatbox and communicate with others.

Pre-Game Communications:

Players could also do pre-game communications in map/color selection mode. Users are able to chat with one another.

Tools

The WCMapEditor QT application instantiates a main window for all user interactions from editing a map to testing soundsets for Warcraft 2.

Getting Started

Creating a New Map

- A new map could be instantiated by clicking "New" in the toolbar located at the top of the window. A map creation dialog will pop up and allow the customization of the map. Once created, a map project tab is open.
- You can specify the Name of the Map, Dimensions, and the Number of Players for the map
  - Name
    - This will be the name to display for the map
  - Dimensions
    - This will specify the size of the map
  - Number of Players
    - You can change the value of the Spinbox to determine how many players will be allowed on the map

Import a Map

- An imported map could be instantiated by clicking "Import" in the toolbar located at the top of the window. A file browsing dialog will pop up and allow the selection of a .map to be selected in order to import an existing map.

Loading a Tileset

- A new tileset could be imported by clicking "Add Tileset" in the bottom right corner of the window. A tileset import dialog will pop up and allow the selection of the tileset path to the image and its size.
- A new terrain could be imported by following the same steps when importing a new tileset; however, can only be imported with a .dat file
  - Map View
    - Click on "Add tileset" and link to the tileset file (Terrain.dat for example from the Linux repository)
  - Resource Dialog
    - Click on the "Resource" tab and open
    - Select the "Terrain Tileset" tab
    - Click the "Import" tab and link to the tileset file (Terrain.dat for example from the Linux repository)

Loading Assets
- The assets will all be loaded at once from a folder (img folder for example from the Linux repository)
- The folder should also be in the same directory as the folder with relevant asset information (res folder for example from the Linux repository)
- You can load the assets either from the resource tab or on the map editor itself
    - Map View
        - Click on "Add Assets" and link to the asset directory (generally the img folder)
    - Resource Dialog
        - Click on the "Resource" tab and open
        - Select the "Assets" tab
        - Click the "Import" tab and link to the asset directory (generally the img folder)
        - Asset Properties
            - Using the 'Properties' button, users can view stats such as Armor, Gold/Lumber cost, and Capabilities for a selected asset in the dialog
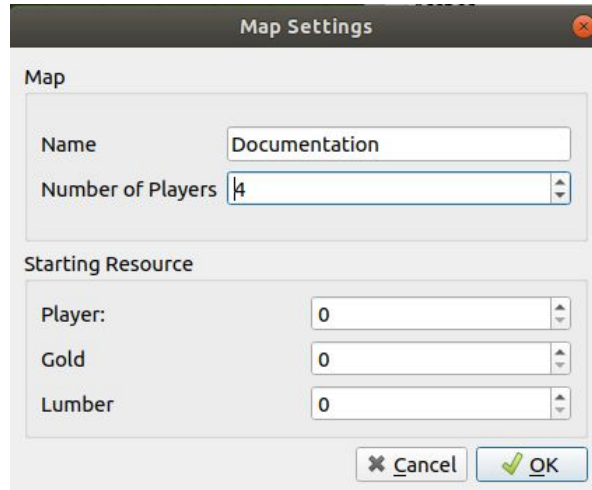
Loading Resources
- New resources can also be added to this tab to view them individually, which includes the tilesets, assets, music, sounds
- **Loading Tilesets**
    - See the "Load a Tileset" section above
- **Loading Assets**
    - See the "Loading Assets" section above
- **Loading Music/Sounds**
    - Import the sound file that you want with the path to the file
    - **Music** files must be in .mp3 format
    - **Sound** files must be in .wav format

Map Properties/Settings
- Map settings could be altered by clicking the "Map" menu item. The properties can only be adjusted when a new map is created or imported and the map tab is selected.

- You can edit and save the values of the map including the Number of Players, Current Player, and starting resources like Gold and Lumber
  - **Number of Players**
    - Change the value of the Spinbox to specify the number of players you would like (maximum of 8 players)
  - **Player**
    - This will be the current player to set the resources for
    - You can change the value of the Spinbox to change which properties of each player you want
  - **Gold**
    - Change the value of the Spinbox to specify the amount of starting gold you would like for the specified player (default is 0 gold)
  - **Lumber**
    - Change the value of the Spinbox to specify the amount of starting lumber you would like for the specified player (default is 0 gold)
- Once a map is created and all resources are imported, select the object instantiated in the corresponding window and click or drag the cursor within the map editing window, left window, to edit the map.
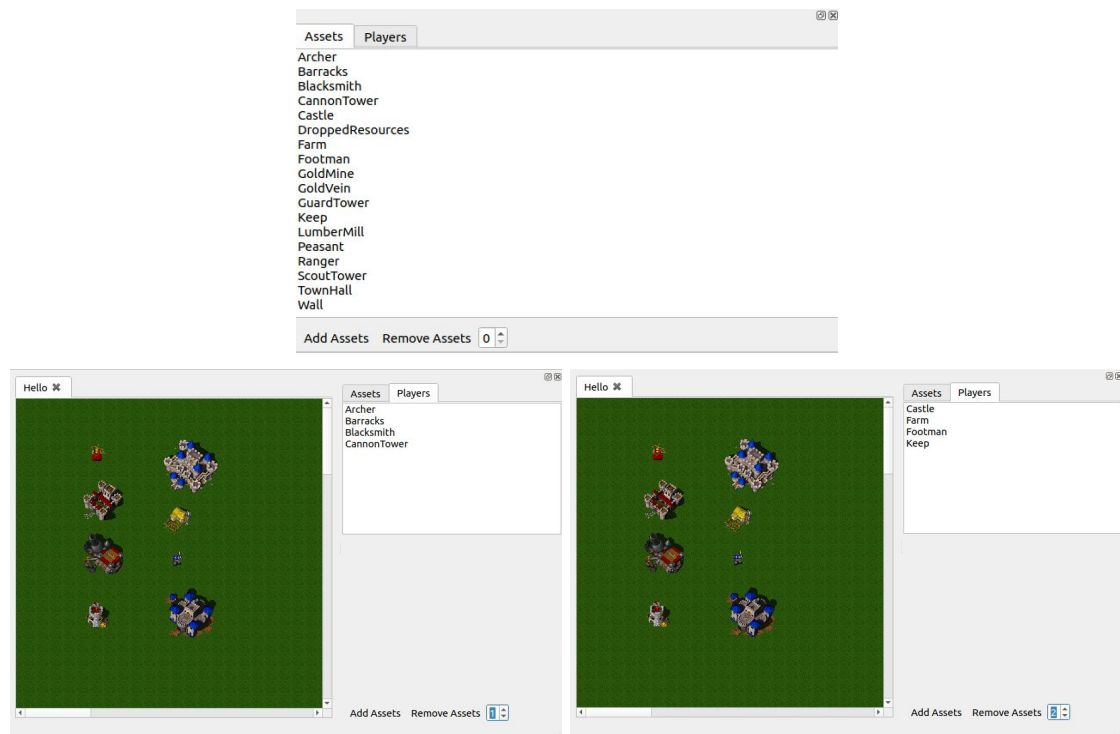
Editing the Map
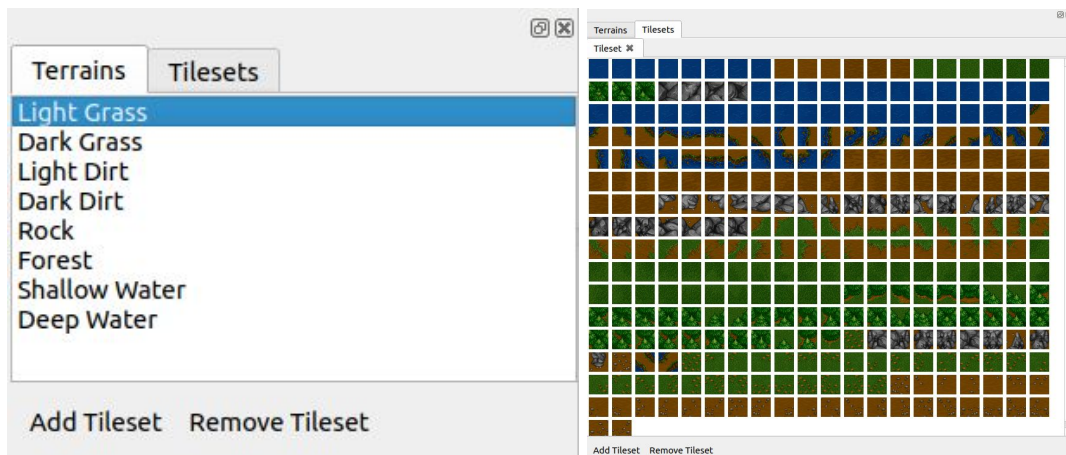
- **Placing Tiles**
    - Ensure that the tileset is already imported
    - Tiles will 'blend' with other tiles to give map a more natural look and visual appeal
    - For simpler tile placement that auto configures the terrain, select the name of the tile you want to place
        - Once selected, you can place the tile anywhere on the map
    - There is also the Tilesets tab, which includes every single tile variation that is added from the tileset file that you import
        - Once selected, you can place the tile anywhere on the map
    - Please note that some tiles CANNOT be placed over another tile, due to non-compatibility
        - E.g., Deep water over Light Grass/Dark Grass
        - For proper placement, you may need to place them next to compatible tiles, such as Shallow Water onto Light Dirt, or Light Grass onto Dark Grass

Saving the Map
- Allows you to save the map
- Once you save the map, a settings file will be generated based on what files you imported so you don't need to import them again
- You must have at least 1 peasant for each player to save the map
- You must have it saved as a .map file for the extension

Placing/Removing Assets

- **Placing**
  - Select player number for which asset is being placed in spinbox under Assets/Players tabs
    - Can place them anywhere on the map
    - Assets placed for different players should differ in color, i.e. red archers vs. blue archers
- **Removing**
  - There are 2 ways to remove assets; removing with the mouse or removing them based on the player
  - **Mouse**
    - Right-click on the asset you want to delete and it will remove the asset
  - **Per Player**
    - Must have a map open
    - If there's no assets associated with the player, nothing is shown
    - Select the "Players" tab and you can cycle through each player's associated assets with the Spinbox next to "Remove Assets"
    - Select the asset you want to remove and click "Remove Assets"

Resources
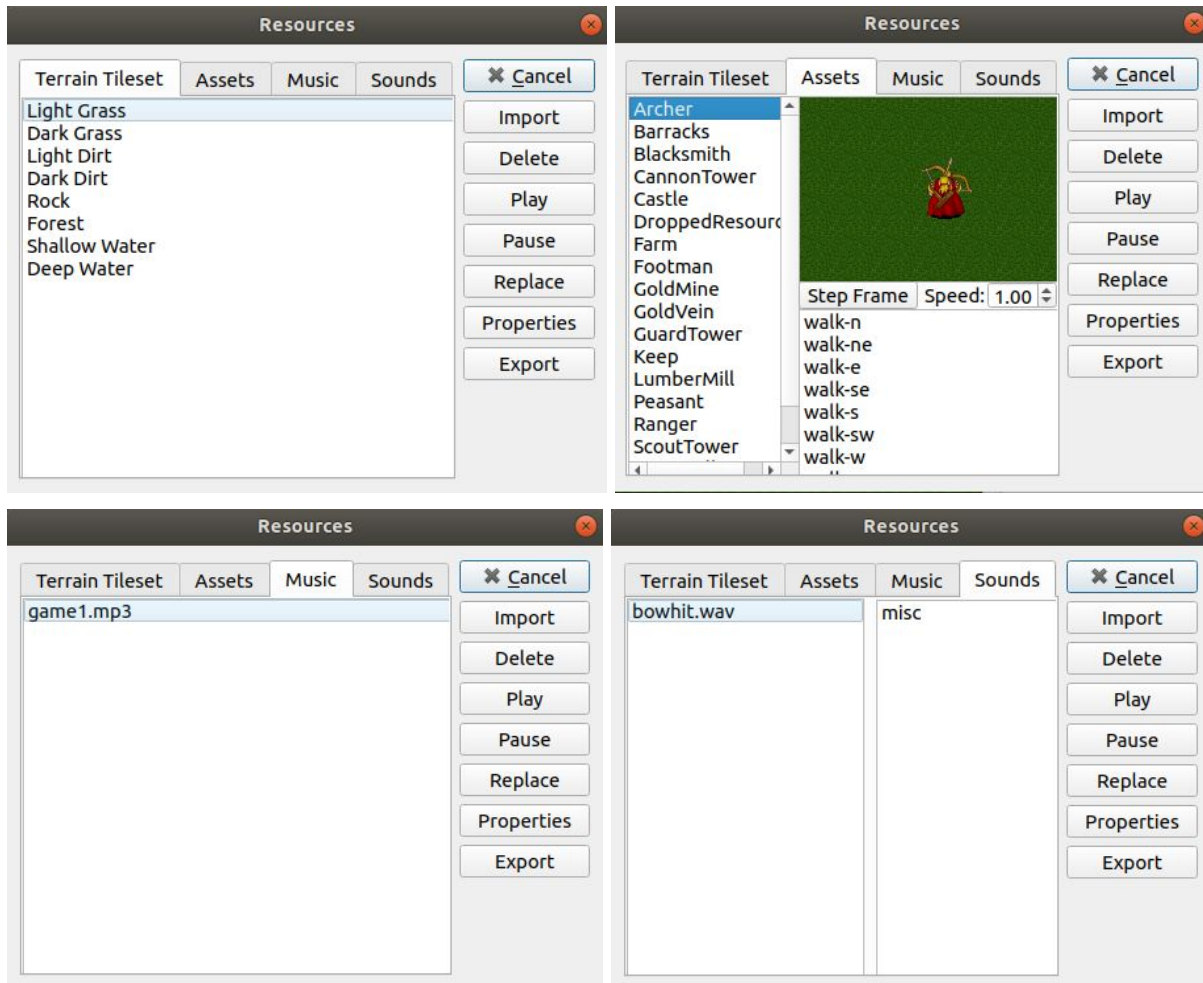
- **Terrain Tileset**
  - Displays the name of the tilesets imported
- **Assets / Animations**
  - Displays the animations for the assets
  - Select the asset you want to display the animations/frames for
    - To start the animation, you select a frame and it automatically starts the animation for that frame
  - "Step Frame" goes through each frame one by one for the animation
  - "Speed" Spinbox changes the speed of the animation (max of 2.00)
  - 'Properties' button allows you to see all of the relevant information about that asset, including build times, gold cost, hit points, etc.
- **Sounds**
  - Press the 'Play' button to listen to the sound file
  - Press the 'Pause' button to pause a song or sound that is currently playing
  - Press the 'Delete' button remove an imported song/sound file from the dialog
  - Replacing music/sounds
    - Import the song/sound to be replaced using the 'Import' button

- Make sure to be in the right tab: 'Sounds' for sound files and 'Music' for song files
    ■ Select the song/sound to be replaced in the list of imported files; the item should be highlighted
    ■ Replace the song/sound by using the 'Replace' button
- **Export**
    ○ This exports all of the files that you imported into a folder
    ○ For example, if you imported assets and a tileset, a folder will be created in a directory of your choosing and it will save those files in a folder so you can reference them again

Publishing
- **Downloading**
    ○ The user can download a map from the warcraft 2 website for use in the map editor. The file is saved within the user's indicated directory and must then be imported into the editor.
    ○ A url to the website is provided; however, the name of the map to be downloaded as well as the directory to download the file to is required.
- **Uploading**
    ○ The user can upload a map to the warcraft 2 website and is saved within the user's account within the web server.
    ○ A url to the website is provided; however, the name of the map to be uploaded is required. A dropdown is provided to allow users to select any open projects as well as a checkbox to allow users to select any saved .map files.

AI

The user could add custom Lua scripts using the provided API that bridges Lua to C++. This allows the user to add custom difficulty/scenario scripts written in Lua, as well as editing the Lua scripts and seeing the changes reflected in real-time.

All documentation regarding scenario building and the Lua/C++ API is found within the ECS160Docs repo. These describe the logic that goes into determining AI difficulty levels and AI types, as well as suggestions when building custom scenarios. All scripts are located within the /scripts/ folder, and can be added to as the user desires.