**User documentation**

**Requirements**

The game was developed for and tested on Windows 10. However, it should work on some macOS and Linux systems too. The specific system requirements for running Unity games such as this one can be found at the official Unity system requirements page [9].

**Installation**

This game requires no installation.

**Starting the game**

The Fighter.exe file starts up the application. Upon starting, a window is displayed which allows the user to choose graphics settings like resolution and quality. The user can start up the game by clicking the ‘Play!’ button in the lower right corner of the window. The window also allows changing some input settings, but these don’t actually change any settings of the game, so they can be ignored.

**Menus**

All the UI elements in the menus can be interacted with by using the left mouse button to click or drag them.

**Main menu**: Appears automatically when the game is launched. Contains 3 buttons – the ‘play’ button which starts the game, the ‘settings’ button which transfers the user to the Settings menu, and the ‘quit’ button which quits the application.

**Settings menu**: Can only be accessed through other menus. Contains a slider and a ‘return’ button. The slider controls the volume of the music being played (it is set to zero by default). The ‘return’ button returns the user to the previously displayed menu.

**Pause menu**: Appears if the user presses the escape key during the game. Contains 3 buttons – the ‘continue’ button which resumes the game and the ‘settings’ and ‘quit’ buttons which fulfil the same function as in the Main menu. The user can leave the menu by pressing the escape key again.

**Game Over menu**: Appears when only one team remains. Contains 3 buttons – the ‘play again’ button which restarts the game and the ‘settings’ and ‘quit’ buttons which fulfil the same function as in the Main and Pause menus.

**Game environment**

**GUI**

**Minimap:** The minimap is a square situated in the lower left corner of the screen. It provides the player with a view of the entire game world. The player’s units and buildings are displayed on the map as blue dots, while the enemy’s units and buildings are red dots. The Monster units, which don’t belong to either team, are violet dots.

**Menus:** In the lower right corner of the screen is the main game menu (MGM for short). This menu consists of 9 squares which can display different icons that the player can interact with. Besides MGM, there are 3 other menus that appear in the game under various conditions. They are: the spellbar, the equipment menu and the item database. They all consist of slots like the ones in MGM which can be filled with icons. The spellbar appears at the bottom of the screen while the equipment menu and the item database appear in the centre.

**Sliders:** In the upper right corner of the screen, a unit’s level slider can appear which displays the unit’s current level and the amount of experience that it has gained since last levelling up. Above each unit are its health- and manabars which show how much health and mana the unit has left. The healthbars are also present above buildings.

**Text fields:** In the upper left corner of the screen, the amount of the player’s resources is displayed in white text. If the player tries to do some action which requires more resources than he/she currently has, a notification appears in red text in the middle of the screen.

**Entities**

There are two basic types of entities in this game which form the backbone of the gameplay – units and buildings.

Units:

* Worker: The only unit incapable of fighting. It allows the player to build all the buildings available in this game. Can be created in a Base building.
* Warrior: A melee fighter unit. Can be created in a Barracks building.
* Archer: A range fighter unit. Can be created in a Barracks building.
* Mage: A mid-range fighter unit. Can be created in a Barracks building.
* Monster: A melee fighter unit. The only unit that cannot be created in any building. Units of this type don’t belong to any team.

Buildings:

* Base: The sturdiest building. Allows the player to create Workers.
* Barracks: Allows the creation of fighter units.
* Farm: Produces resources. The most vulnerable building.
* Tower: An offensive structure. Can attack enemy units/buildings by shooting arrows at them.

**Rules**

The goal of this game is to destroy all of the enemy’s units and buildings. In the beginning, every agent starts out with a single Base and 1000 resource units. These units are a sort of currency that can be exchanged for the creation of units and buildings. In order to win, the player must make use of the units and buildings that he/she creates to destroy the enemy.

All fighter units can level up by killing other units which increases their stats, like power, speed, or amount of health points. This means, that besides just using resources to generate more units and overpower the enemy with numbers, the player can fight quantity with quality.

**Game controls**

The game consists of two modes – the strategic mode and the 3rd person mode. Each offers different ways of interacting with the world and each has different controls.

**Strategic mode**

In this mode, the mouse is the player’s most important means of communication with the game.

**Selecting entities**: By left-clicking a unit or a building, the player can select it. By left-clicking and dragging the mouse cursor, the player can create a rectangle and select all the units inside it. This works only for units though, not buildings. Left-clicking causes the selected entities to be deselected. A selected unit has a green highlight around it. A selected building has an orange arrow hovering above it.

**Menu**: If the player has selected a single entity, be it a unit or a building, the entity’s icons are shown in the main game menu. The player can interact with these icons by left- and sometimes also right-clicking them, although these two actions are never interchangeable. It could be loosely said that left-clicking an icon means activating it, while right-clicking means deactivating it. Pointing at an icon with the mouse cursor causes its description to appear.

If the selected entity is a building, one of the displayed icons is the ‘destroy building’ icon, which allows the player to destroy that building by left-clicking the icon. The Base and the Barracks also display other icons, which allow the creation of units. Left-clicking these icons causes a unit to start being created, while right-clicking them causes a unit to stop being created.

If the selected entity is a Worker, the displayed icons are the buildings that it is capable of building. Left-clicking these icons causes an outline of the building to appear. The player can then either command the Worker to go build that building by left-clicking somewhere on the map where the building can be built (indicated by the fact that the outline remains green), or just make the outline disappear by right-clicking anywhere. If the outline turns red, it means that the corresponding building cannot be built there. If the player commands the Worker to go build a building, but then right-clicks somewhere while still having the Worker selected, the Worker ignores the command to build.

Finally, if the selected entity is a fighter unit, the icons displayed in the main game menu are the items in its inventory. They can be used/equipped by left-clicking them and destroyed by right-clicking.

**Navigating units:** Once the player has one or more units selected, he/she can navigate them across the map by right-clicking on the place he/she wants them to go. Even if the player sends some units to some destination, they can still end up engaging in a battle with some enemy, if they get too close to it. However, if the player sends them to some destination while they are fighting, they go there without engaging in further battle.

If the player right-clicks on an enemy building/unit while having fighter units selected, they go attack that entity. However, only if the entity is a building do they not engage in battle with other enemy entities that they might meet along the way.

**Camera movement**: The player can move the camera in 4 ways. First, by placing the mouse cursor near any of the edges of the screen causes the camera to move in that direction. The camera cannot be moved outside of the map though. Second, the player can transport the camera to any point on the map by clicking on the desired location on the minimap. Third, by holding down the R key and then pressing any of the arrow keys, the player can rotate the camera. Finally, by scrolling the mouse wheel, the player can make the camera zoom in/out. The camera cannot zoom in/out arbitrarily though. If zooming out any further would cause it to get outside of the bounds of the map, it stops, and there is also a limit to how close it can get by zooming in.

**Base and Barracks**: When the player has either a Base or a Barracks selected and right-clicks somewhere on the map, the building’s ‘spawn destination marker’ is moved there. This element tells the units where they should go after being instantiated.

In this mode, the player can switch to a unit’s 3rd person mode by selecting only that unit and pressing the tab key.

**3rd person mode**

In this mode, the keyboard becomes much more significant.

**Movement and attack:** The unit which the player is controlling can be moved by pressing the W, A, S and D keys (W – go forward, A – turn left, S – go back, D – turn right).

The player can trigger the unit’s attack by clicking the left mouse button. If the unit has a range or a mid-range weapon equipped, the weapon shoots a projectile at the point on which the player has clicked, unless he/she hasn’t clicked on any GameObject. In that case the weapon fires in the last direction in which it has fired.

If the given unit has a range weapon equipped, pressing the Q key causes it to switch to the aim camera. This camera can be moved simply by moving the mouse. The player can still move the unit with the W, A, S and D keys while using this camera and fire projectiles using the left mouse button.

**Menus:** The main game menu permanently shows items in the unit’s inventory. They can be interacted with the same way as in the strategic mode – left-clicking them uses/equips them, right-clicking them destroys them.

Pressing E causes the equipment menu to appear which shows what items are equipped by what parts of the unit’s body. In this case, left-clicking the item icons does nothing while right-clicking them unequips them and places them inside the unit’s inventory.

In this mode, the player can also interact with the unit’s spellbar, which is displayed at the bottom of the screen. It displays icons corresponding to different spells, which can be cast by left-clicking the icons and, in some cases, deactivated by right-clicking them.

**Camera:** Pressing any of the arrow keys causes the camera to rotate. However, unlike in the strategic mode, the camera rotates around the unit, not around itself. The camera can also be zoomed in/out by scrolling the mouse wheel.

**Loot Boxes:** In 3rd person mode, the player can inspect the insides of loot boxes. This can be done by getting close enough to the loot box and left-clicking it. A 4 by 4 matrix of squares then appears in the middle of the screen, some of which have item icons in them. The player can store these items inside the unit’s inventory by left-clicking them.

In this mode, the player can switch back to strategic mode by pressing tab.