

Vocational Training Council (VTC)
Vocational Training Council - Pro-Act Training and Development
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1. Introduction

The goal of the program is to integrate competition field information and guide the craftsman in building walls and acquire the highest score by conquering territory and castles surrounded by walls. The program was developed using the Java programming language on the Processing platform. It consists of three main components: 1. User interface – For user interact with gameplay efficiently, 2. Server communication module – establish communication with the competition server through a pre-defined HTTP protocol. and 3. Game logic control - responsible for generating recommendation and controlling the craftsmen actions.

2. Graphic User Interface

An intuitive and user-friendly interface plays a pivotal role in enabling users to efficiently assess the match status and make informed decisions regarding the craftsman's actions (refer to figure 1). It should provide a comprehensive overview of the match, facilitate users to effectively navigate and manage the gameplay with ease and confidence.

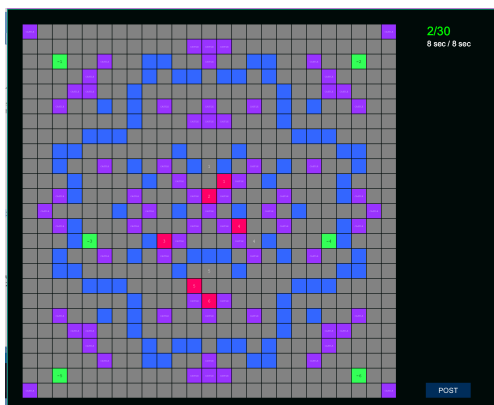


Figure 1. User Interface of software

The software gathers competition field information from the server and presents it visually using a flexible grid and colored tiles. The craftsmen information is shown in light red for opponents and light green for allies, along with numbers indicating their commanding order. Properties such as castles are displayed in violet, ponds in blue, opponents' walls in dark red, and allies' walls in dark green.

The grid tiles are updated by the server after each turn to show the positions of all craftsmen and their actions on the competition field. Within this dashboard, users can effortlessly keep track of essential information, such as the precise turn number and the remaining time for each turn.

3. User Control interface

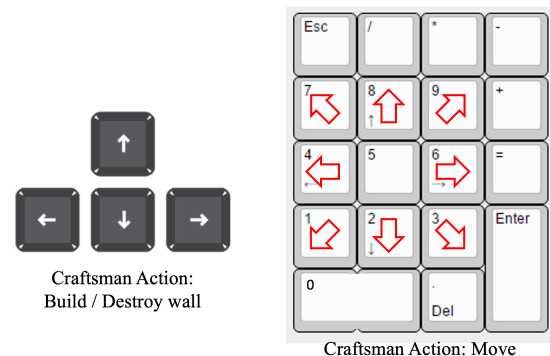


Figure 2. Shortcut key allocation

To facilitate quick decision-making for the six craftsmen, program has allocated the numpad keys to move them in any of the eight directions around their current position. On the other hand, the arrow keys are exclusively dedicated to building and destroying in the four adjacent areas. (refer to figure 2) All craftsmen actions are promptly sent to the server 500ms before the end of each turn.