<Civil\_War>

Use-case Specification:<Conscription>

Version: <0.3>

Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Description** |
| 2021/05/ | 0.1 | First draft. | ChenHan Group |
| 2021/05/15 | 0.2 | Update after Elaboration iteration. | ChenHan Group |
| 2021/06/19 | 0.3 | Finish all documents | ChenHan Group |
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catalogue

1. Brief Description 4

1.1 Purpose 4

1.2 Arrange 4

1.3 Definition, initial and acronym 4

1.4 Reference 4

1.5 Overview 4

2. Flow of Events 4

3. Derived requirements 4

Use-Case: < AI Judgement on putting up chess pieces >

**Brief Description**

How AI choose to put up chess pieces

**Actor Brief Descriptions**

AI: A player who is controlled by the system.

**Preconditions**

The game situation can be initialized. The AI worker works successfully.

**Stakeholders and Interests:**

1.Gamesystem: The AI player can gain a favorable situation for yourself.

**Basic Flow of Events**

1. The player puts up chess pieces.

2. It’s turn to AI player’s round.

3. Firstly AI player starts use the Minmax algorithm and AlphaBeta algorithm to search situations.

4. It firstly decides a depth to search.

5. It search a next situation by putting a step.

6. For a certain situation, AI will give a weight for this situation.

7. If searching is AI's turn and it's the leaf of the searching tree, it will come back to father node and update the α value and the β value of the father node. If α>β, stop putting a step and return.

8. It will stop searching until all the valid situations were extended.

9. Then it will choose a situation which has the biggest value.

# The use case ends.

**Alternative Flows**

\*a. In the searching situation, it find a min node which β value is smaller than it's father node's α value.

1. It will mask this node.

2. Then it won't search the child node of this node.

2a. In the searching situation, it find a max node which α value is bigger than it's father node's β value.

1. It will mask this node.

2. Then it won't search the child node of this node.

2b. Player choose the dismiss army button instead of conscripts.

1. The Game Windows pop up.
2. Player choose the number to dismiss
3. System determines whether the number of dismiss operation is legal.
4. This operation success and this round end.
5. Update the data on this area next round.
6. Show the data of the area next round.

# Derived requirements

None