Group 19

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Software Requirements

HuaRong Path Game System

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## System Objective

In this project, we are developing a traditional Chinese game – Huarong Path, which is based on the famous story of the Three Kingdoms. Players could choose different play mode to enjoy the game.

## Domain Analysis

A screenshot of a cell phone

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The Menu is the initial UI interactive with player:

* It contains ‘About’ page to introduce the game rules and history.
* It contains the Game mode – Standard and Random Mode. In the Standard Mode, player is able to choose one from 5 standard games. In the random mode, player is able to choose a difficulty lever, and our system will randomly choose one game for the player. (the game difficulty is defined by the best step)

In the game UI:

* There is a 5×4 table that contains 10 chesses. The largest one is called Cao Cao that occupies 2×2 blocks. There’re two 1×2 chesses Fei Zhang, Yun Zhao, three 2×1 chesses Yu Guan, Zhong Huang and Chao Ma, along with four Zu that occupies 1×1 block.
* There is always 2 blank block. Player should move the chesses to help Cao Cao reach the center position in the under line.
* During the game, the player could undo the current step, restart the game and go back to the menu.
* When the player succeed the game with best solution, the game announcement will indicate.

## Use Cases

The system can achieve the following use cases from player’s perspectives:A close up of a map

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## Activity Diagram of Choosing a Game

A close up of a map

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## Sequence Diagrams of Playing

A screenshot of a cell phone

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## Software Requirements

### R1: GameEngine

* R1.1: The player should be able to move chess in the table
  + Current step will be updated with each move
  + The game will announce ending when Cao Cao is at the final position
* R1.2: The player should be able to undo
  + Current step will reduce by each undo
  + Player could undo until the game initial state
* R1.3: The player should be able to restart
  + The game will back to the initial state with 0 current step

### R2: MenuUI

* R2.1: The player should be able to choose game mode
  + The player should be able to choose one specific game from Standard mode
  + The player should be able to choose difficulty from Random mode
* R2.2: The player should be able to back to Menu when he is playing the game
* R2.3: The player should be able to read about page and back to Menu