**CS246 Final Project: Watopoly Demo**

**Text Display**

**Before Game Start**

**Testing mode**

The player can add “-tesing” to start the testing mode, in this mode, you can control the number that the dice rolls.

**Loading mode**

The player can add “-load <filename>” to load the game which has been saved before, the format of file would be explained later in the file.

**Starting the Game**

Players need to input the number of players and the characters to stand for each player.

**During the Game**

**roll:**

The player can only call the command once during his turn.

Using this command, the player can roll two dices and moves to the sum of the two dices and tack action on the square they landed on:

* Buy:

If the building can be bought, the player would be asked if he/she wants to buy this building, the player can enter “yes” to buy the building or “no” to refuse.

* Pay:

If the building has already owned by others, the player would be forced to pay tuition or rent to the owner. If the player is not able to pay, he/she should call “trade” “improve” or “bankrupt” command described below.

* Other events:

Special events would happen when players land on non-properties.

SLC:

The player would be forced to move to some squares.

Needles Hall:

The player would either gain or lose some amount of money. If the player is not able to pay, he/she should call “trade” “improve” or “bankrupt” command described below.

Coop Fee:

The player needs to pay $150 coop fee to the school.

Collect OSAP:

The player will receive 200 dollars if he/she normally passed or lands in “Collect OSAP” square, sending back by SLC does not count.

DC Tims Line:

There will be nothing happened if the player lands on DC Tims Line. If the player is sent here by the event in SLC, there would be some special events happened.

Goose Nesting:

Attacked by geese.

**next:**

The player can call next after he/she finished all action he wants to do. If the player has the liabilities, like tuition, the game will automatically take the amount. If the player is not able to pay for the debt and he/she forgets to call “bankrupt” command during the player’s turn, the game would automatically call “bankrupt” command for the player and starts the auction.

**trade <name> <give> <receive>:**

The player can trade with other players by following the rules:

* The player cannot give the other player money and receive money in return.
* The player cannot trade a building with improvement.

The other player can accept or refuse the trade after the current player calls the “trade” command by entering “yes” or “no”.

**improve <property> buy/sell:**

* Buy:

The player can buy improvement for a property he has owned, he must have the all the buildings with corresponding monopoly to improve that building.

For example, if the player owns AL and he wants to improve it, he must own ML in Arts1 monopoly block as well.

The improvement level can go up at most 5, with 4 bathrooms and 1 cafeteria.

* Sell:

The player can sell improvement of a building he owns.

**mortgage:**

When the “mortgage” command is called, a list of buildings the player can mortgage would be printed on the screen. The list includes the buildings with improvement. If the player changes his mind, he can enter none to give up the action. If the building the player wants to mortgage has improvement, the system will automatically sell all the improvement as well.

**unmortgage:**

When the “unmortgage” command is called, a list of buildings the player can unmortgage would be printed on the screen. The player should have enough money to unmortgage the building.

**bankrupt:**

The player can only declare bankrupt if he is not able to pay for the liability. After the declaration of bankruptcy, the system will start the auction.

**assets:**

The game will display all assets the current player owns including money, Tims cups, and buildings.

**all:**

Display assets of every players in the game.

**save <filename>:**

The “save” command will save the current game status in the file as the following:

Who’s turn

numPlayers

player1 char TimsCups money position canRoll

player2 char TimsCups money position canRoll

……

AL owner improvements

….

If the player is in DC Tims, it will be saved as the following:

Player char TimsCups money position canRoll NotInTimsLine(as 0)

Player char TimsCups money position canRoll InTimsLine(as 1) TurnsInTimsLine

**use:**

The player can choose to use game props bought from eshop in Needle Hall, specific description would be shown in the Enhancement part.

**Ending the Game**

If every player except one player have declared bankruptcy, the game would be finished, and the remaining player would be the winner.

**Special Features and Enhancement**

When players arrive at the NeedlesHall, they will have a chance to buy some special items at the eshop in it!

The eshop in Needles Hall was implemented in Factory Design Pattern, which sells special items for players.

The eshop in Needles Hall will sell several game props as following for fun playing:

* Missile:

The player should input the name of the target player and the target property, which will destroy the target property(set the owner of the property to nullptr and others can buy this property). Note that this missile cannot destroy a improved property.

* RemoteRoller:

The player can control the number rolled by two dices.

* Mine:

The player can put it on a square, when a player steps on that square, he/she cannot roll for the next round.

Besides, if the player uses the item but gives invalid input, the used item will not be consumed!