# User Manual
for
Monopoly

Prepared by:

MAN Furui (19081789d)
LIU Sicheng (19079181d)
WANG Meng (19078543d)
XING Shiji (19079008d)

The Hong Kong Polytechnic University
Software Engineering
Course Project
Prof. Yu PEI

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Chapter 1

Overview

This software is an Java implementation of the game Monopoly, supporting multi-color prompting and player interactions.

In this document, the deployment procedures and gameplay hints are provided. User are highly advised to read sections on User Input and Prompt to be aware of the software's workflow.

Also you can refer to the Software Requirements Specification Document for more details on Monopoly's game rule, and API document / API Revision document on the methodologies of the software.

Chapter 2

Deployment

2.1 Environment

This application is developed based on Java JDK 11 with only one dependency `JUnit` 5.7.0.

2.2 Dependencies

To deploy the project, first open the directory with IntelliJ IDEA and then install the dependency by downloading from `File - Project Structure` or refering to IntelliJ IDEA official guide.

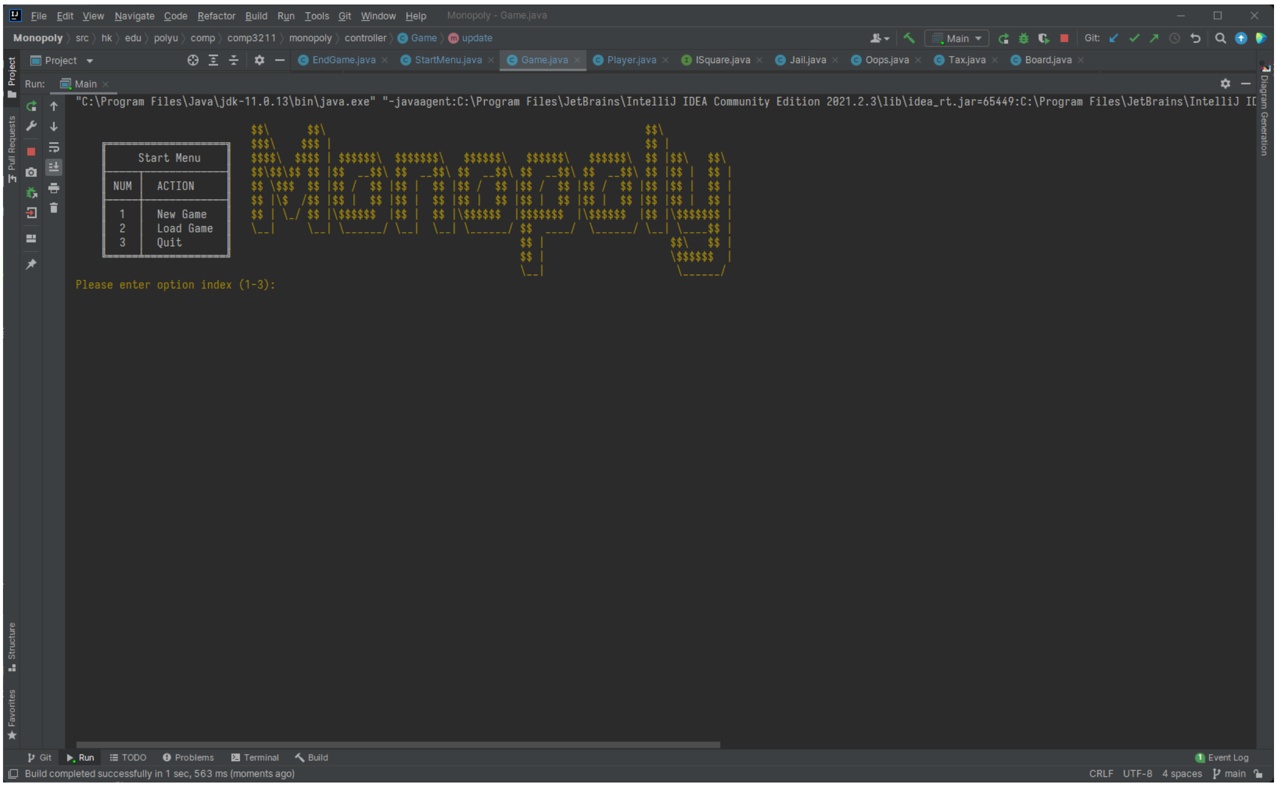
An alternative that would bypass dependency installation is to `/test` folder as excluded so that the JUnit is not involved.

2.3 Building and Execution

After installing the dependency, build the project and execute the `main` method in the following Java Class:

`hk.edu.polyu.comp.comp3211.monopoly.Main`.

You should be able to see the following welcome message in the console.



```
"C:\Program Files\Java\jdk-11.0.13\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2.3\lib\idea_rt.jar=65449:C:\Program Files\JetBrains\IntelliJ ID
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    ║  1  ║ New Game  ║     $$ | \_/ $$ |\$$$$$$  |$$ |  $$ |\$$$$$$  |$$$$$$$  |\$$$$$$  |$$ |\$$$$$$$ |
    ║  2  ║ Load Game ║     \__|     \__| \______/ \__|  \__| \______/ $$  ____/  \______/ \__| \____$$ |
    ║  3  ║ Quit      ║                                               $$ |                    $$\   $$ |
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                                                                      \__|                     \______/
Please enter option index (1-3):
```

Build completed successfully in 1 sec, 563 ms (moments ago)

Figure 2.1: Welcome Message Demonstration

Chapter 3

Gamplay

3.1 Game Rules

The game rules are covered in both the Requirement Specification Document and the Course Project Description Document. Details will not be covered here for simplicity.

3.2 User Input

The game accepts q or Q or quit every time when it requires user input, and by doing so you interrupt from the current stage of the process and return to the previous stage. Note that no record will be saved from the interrupt and thus no un-do is supported.

Be aware that the quit command are not supported for ALL cases. For example, when player interacts with the property squares and opt to buy the not yet owned property just arrived in, quit command at this stage will not work, due to the confusing between quit from the current interactions and quit from the current game. However, the quit option is active after this turn of the player.

The game will prompt an warning (in red) to indicate an invalid input from the user, which indicates more specifically about the format of accepting input. Then it will prompt again and repeat the process infinitely until a valid input is detected.

When loading a game from a local game save, the index rather than complete game save file is used to simplify user input. For more details, observe the following loading game save demonstration.

3.3 Prompt

3.3.1 Color Notation

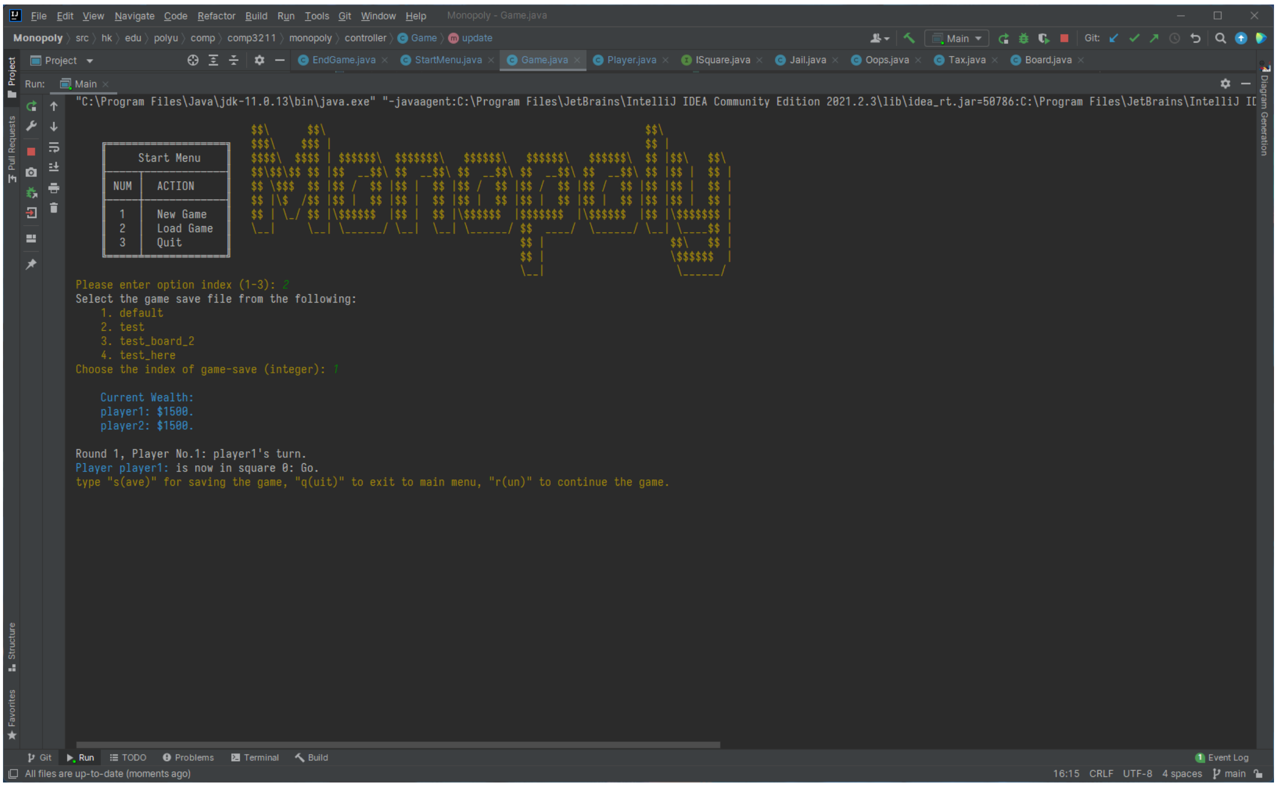
This command-line game is colorized to provide a better user experience. Normally it conforms to the following colorization notation:

- White(Black):

  The color implies text responsible for control flow, which is vital for the game to run.

- Red

  This color implies warning and errors. User should attend to what the warning states and change user input by the instruction accordingly.


File Edit View Navigate Code Refactor Build Run Tools Git Window Help Monopoly - Game.java
Monopoly 〉 src 〉 hk 〉 edu 〉 polyu 〉 comp 〉 comp3211 〉 monopoly 〉 controller 〉 Game 〉 update
Main
Git:
Project
EndGame.java
StartMenu.java
Game.java
Player.java
ISquare.java
Jail.java
Oops.java
Tax.java
Board.java
Run: Main
Pull Requests
Structure
Favorites
Diagram Generation
Git
Run
TODO
Problems
Terminal
Build
Event Log
All files are up-to-date (moments ago)
16:15 CRLF UTF-8 4 spaces main

```
"C:\Program Files\Java\jdk-11.0.13\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2.3\lib\idea_rt.jar=50786:C:\Program Files\JetBrains\IntelliJ I

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    ║  1  ║ New Game ║   $$ | \_/ $$ |\$$$$$$  |$$ |  $$ |\$$$$$$  |$$$$$$$  |\$$$$$$  |$$ |\$$$$$$$ |
    ║  2  ║ Load Game║   \__|     \__| \______/ \__|  \__| \______/ $$  ____/  \______/ \__| \____$$ |
    ║  3  ║ Quit     ║                                             $$ |                    $$\   $$ |
    ╚═════╩══════════╝                                             $$ |                    \$$$$$$  |
                                                                   \__|                     \______/

Please enter option index (1-3): 2
Select the game save file from the following:
    1. default
    2. test
    3. test_board_2
    4. test_here
Choose the index of game-save (integer): 1

    Current Wealth:
    player1: $1500.
    player2: $1500.

Round 1, Player No.1: player1's turn.
Player player1: is now in square 0: Go.
type "s(ave)" for saving the game, "q(uit)" to exit to main menu, "r(un)" to continue the game.
```

Figure 3.1: Load Game Save Demonstration

- Yellow

  This color implies the demand for user inputs. In most cases, user input follows directly after the characters in yellow.

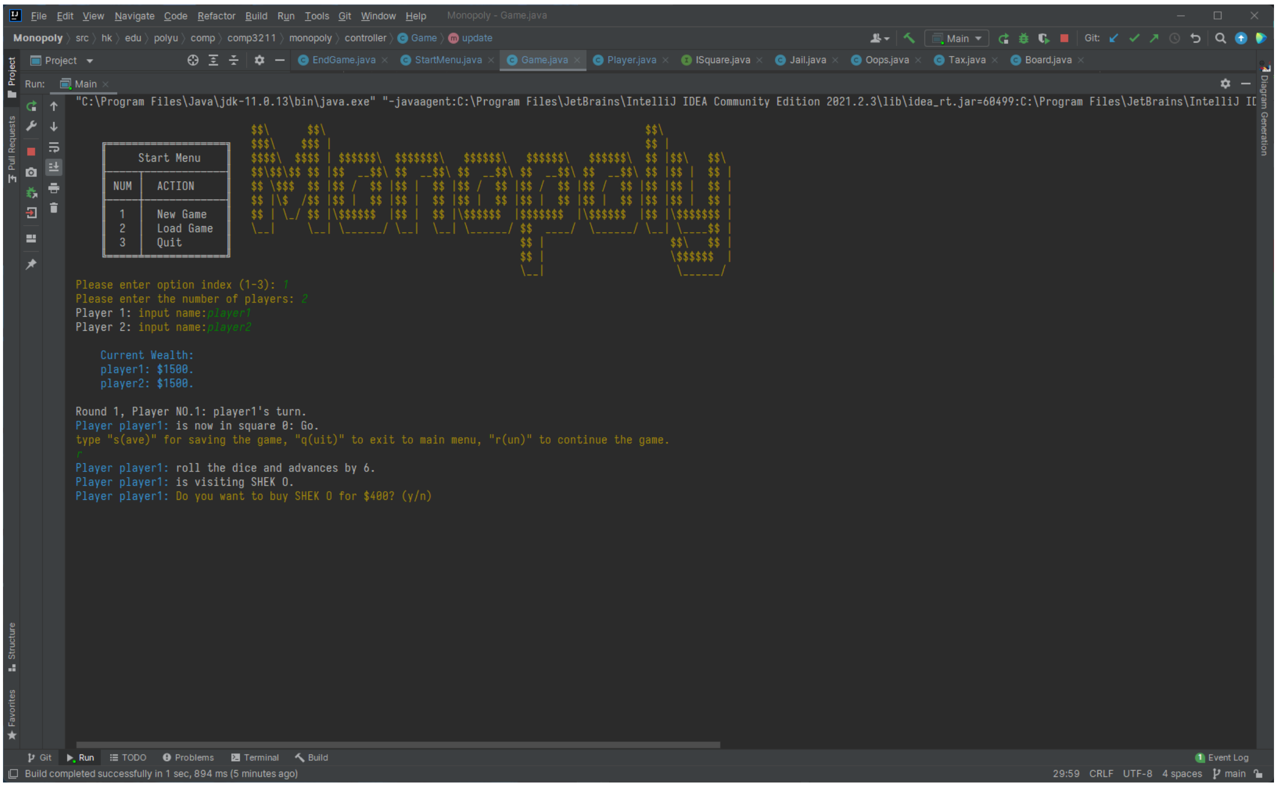
- Green

  This color implies user input, which conforms to the default of IntelliJ IDEA settings.

- Blue

  This color implies information and especially mark for those that are active at the time of execution. For example, prompts for player name will be in blue to highlight the current active player, followed by the actions taken or needed, which are colored by their use respectively.

3.3.2 Prompt Sample


File Edit View Navigate Code Refactor Build Run Tools Git Window Help
Monopoly - Game.java
Monopoly › src › hk › edu › polyu › comp › comp3211 › monopoly › controller › Game › update
Main
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Tax.java
Board.java
Run: Main
Project
Pull Requests
Structure
Favorites
Diagram Generation
Git
Run
TODO
Problems
Terminal
Build
Event Log
Build completed successfully in 1 sec, 894 ms (5 minutes ago)
29:59 CRLF UTF-8 4 spaces main

```
"C:\Program Files\Java\jdk-11.0.13\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2.3\lib\idea_rt.jar=60499:C:\Program Files\JetBrains\IntelliJ ID

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    ║ NUM ║   ACTION   ║    $$ \$$$  $$ |$$ /  $$ |$$ |  $$ |$$ /  $$ |$$ /  $$ |$$ /  $$ |$$ |$$ |  $$ |
    ╠═════╬════════════╣    $$ |\$  /$$ |$$ |  $$ |$$ |  $$ |$$ |  $$ |$$ |  $$ |$$ |  $$ |$$ |$$ |  $$ |
    ║  1  ║  New Game  ║    $$ | \_/ $$ |\$$$$$$  |$$ |  $$ |\$$$$$$  |$$$$$$$  |\$$$$$$  |$$ |\$$$$$$$ |
    ║  2  ║  Load Game ║    \__|     \__| \______/ \__|  \__| \______/ $$  ____/  \______/ \__| \____$$ |
    ║  3  ║  Quit      ║                                              $$ |                    $$\   $$ |
    ╚═════╩════════════╝                                              $$ |                    \$$$$$$  |
                                                                      \__|                     \______/
Please enter option index (1-3): 1
Please enter the number of players: 2
Player 1: input name:player1
Player 2: input name:player2

    Current Wealth:
    player1: $1500.
    player2: $1500.

Round 1, Player NO.1: player1's turn.
Player player1: is now in square 0: Go.
type "s(ave)" for saving the game, "q(uit)" to exit to main menu, "r(un)" to continue the game.
r
Player player1: roll the dice and advances by 6.
Player player1: is visiting SHEK O.
Player player1: Do you want to buy SHEK O for $400? (y/n)
```

Figure 3.2: Colorization Rule Demonstration