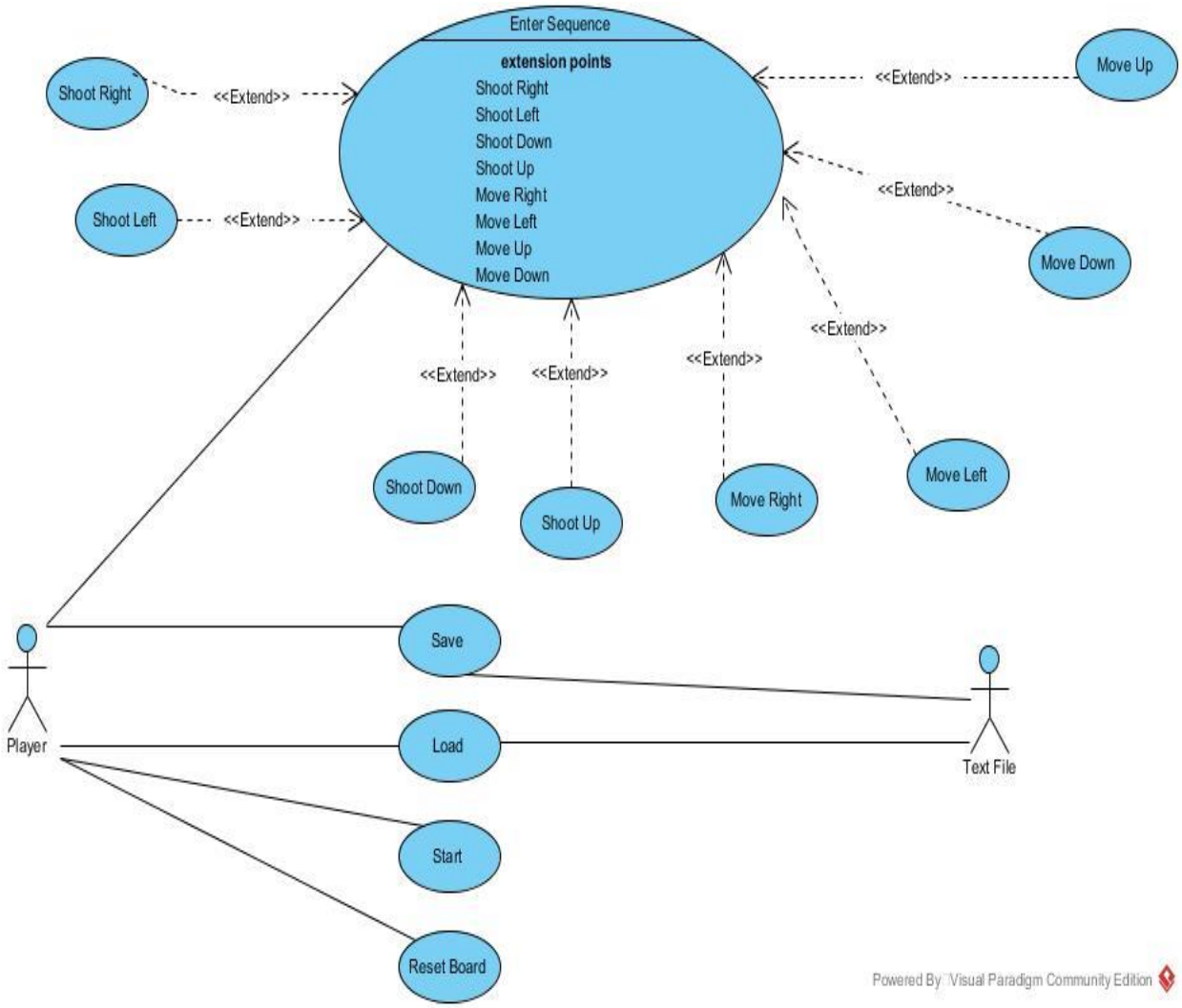
DOCUMENTATION

How to compile:

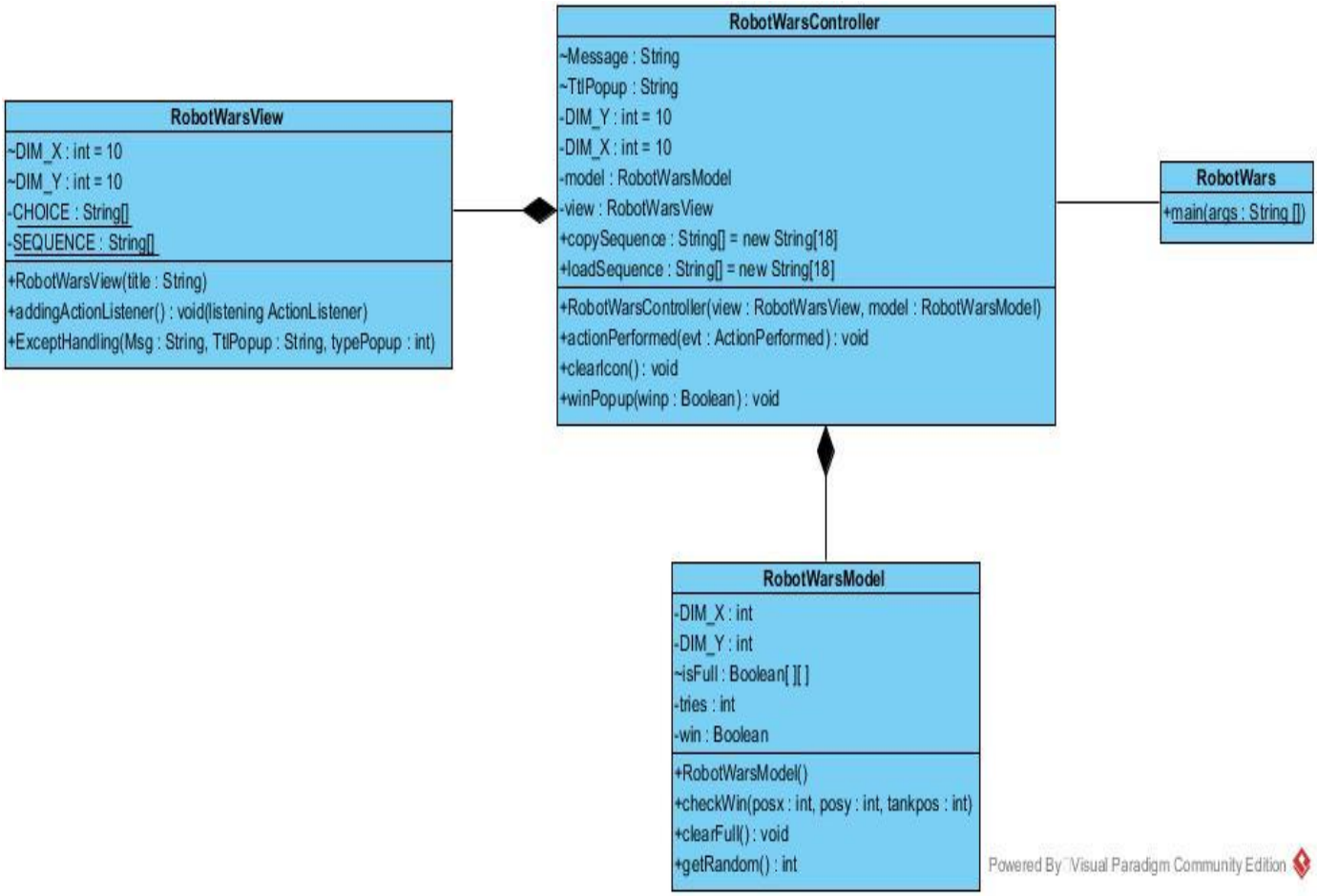
i. type in the following in the command line : javac RobotWars.java

ii. type in java RobotWars

1. Use Case Diagram



2. Class Diagram

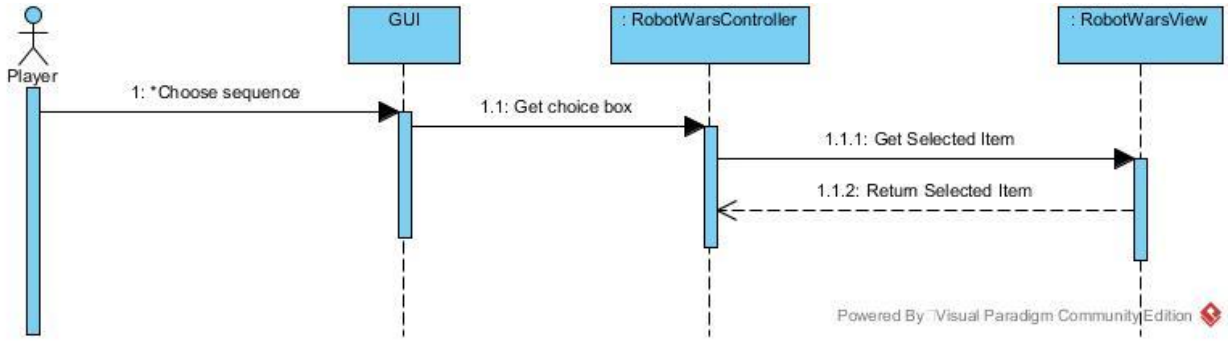


The design pattern implemented is the Model View Controller design pattern.

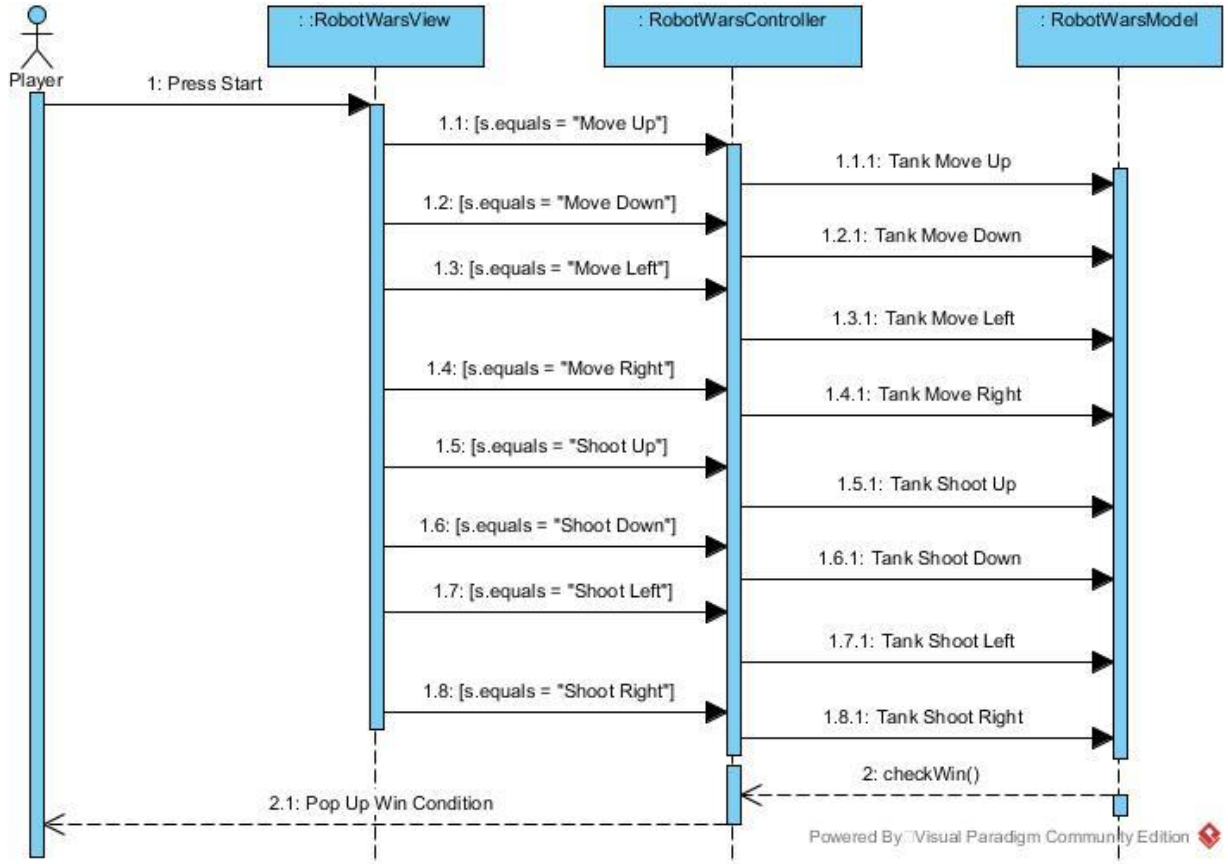
RobotWarsController class acts as the controller, RobotWarsModel class acts as the Model, RobotWarsView class acts as the view.

3. Sequence Diagram

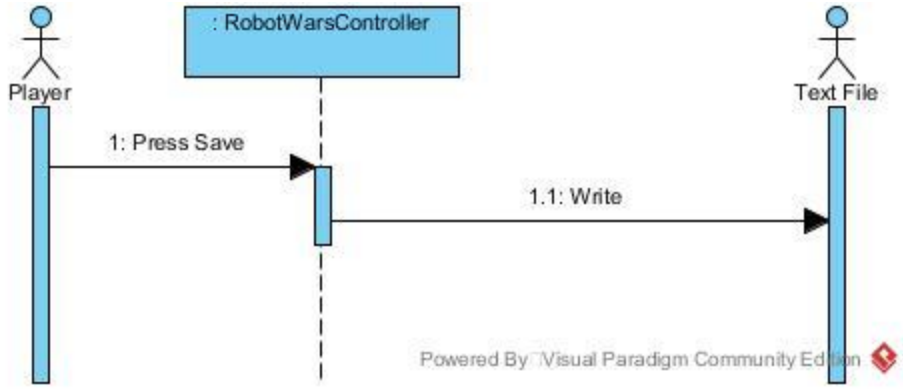
3.1 Enter Sequence



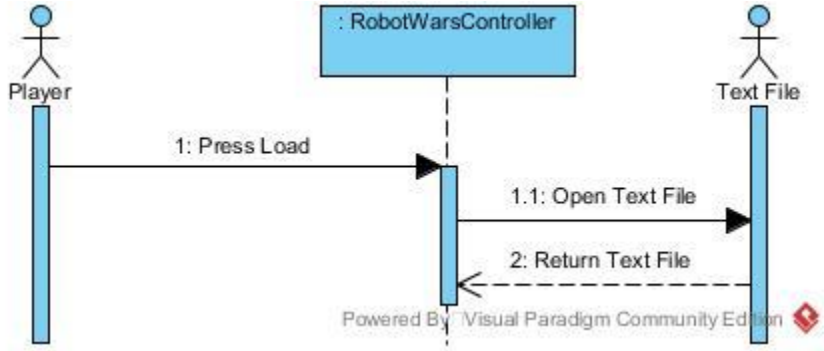
3.2 Start



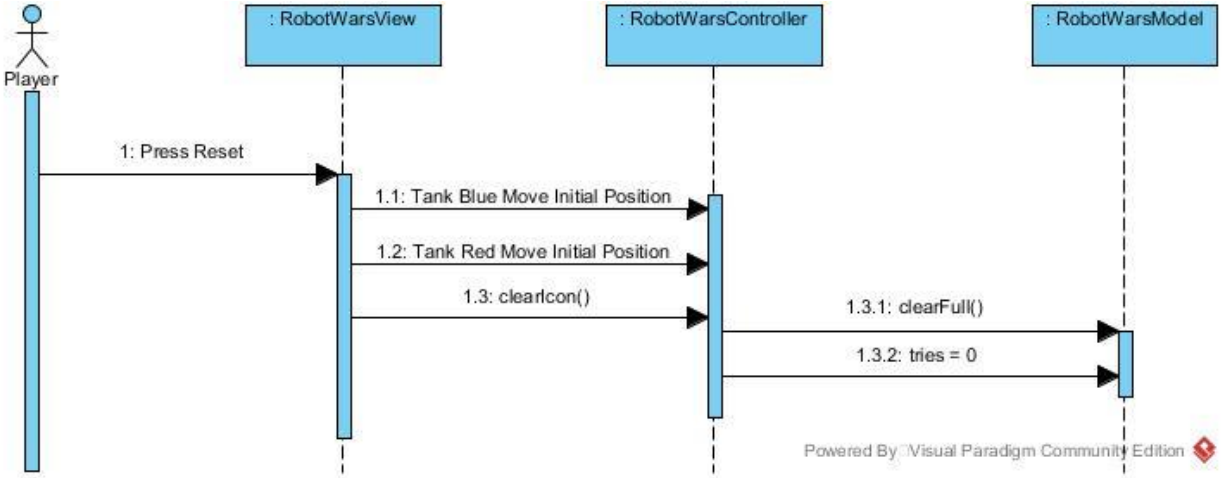
3.3 Save



3.4 Load



3.5 Reset Board



USER MANUAL

1. Starting a game

1.1 First interface

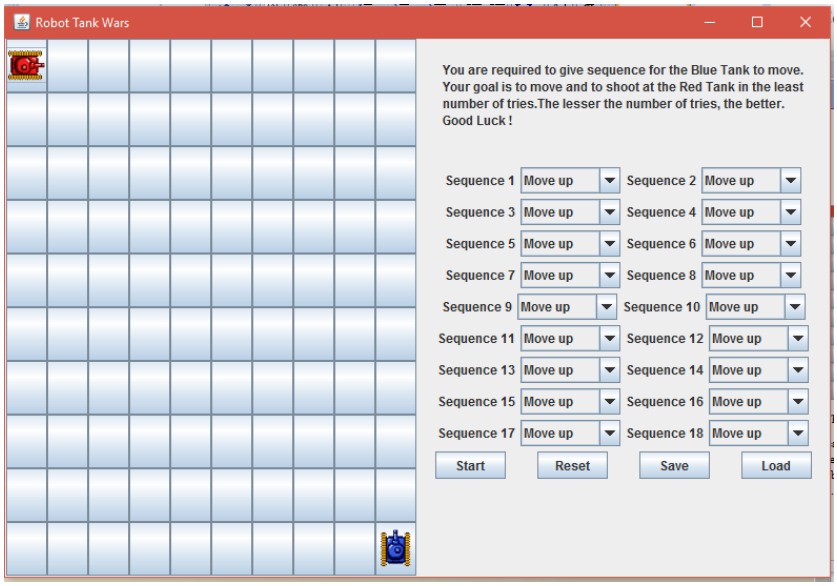


Figure 1: The first interface that greets the user

When the user first launch the programme, the board will be displayed. As per the instruction, the red tank which is the computer robot will be placed at the top left of the board while the blue tank which is the human tank is placed at the bottom right of the board.

There will be a total of 18 drop-down boxes which is displayed at the right portion of the interface. The purpose of each drop down box is for the choosing of sequence by the user.

At the bottom of the right portion of the interface, there are 4 buttons which are namely 'Start', 'Reset', 'Save' and 'Load'.

2. Entering sequence

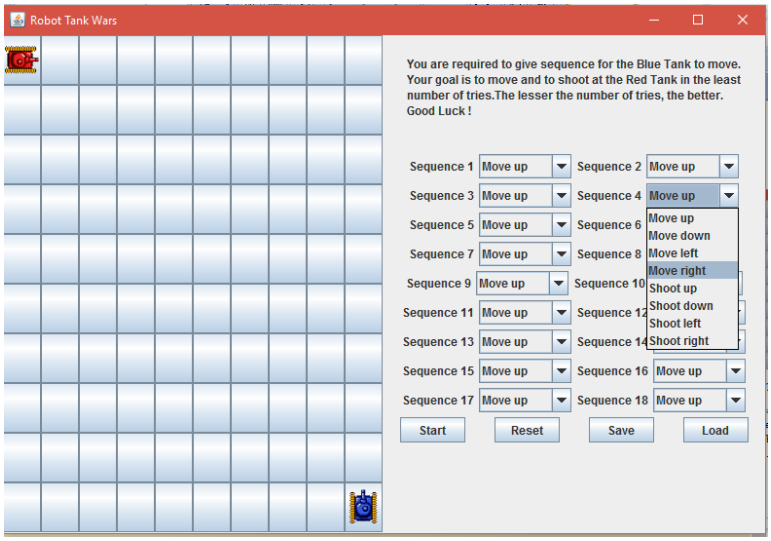


Figure 1.2: The user choosing the sequence

There is a total of 8 sequence the user can choose from which are Move Up, Move Left, Move Right and Move Down. The user will need to plan their sequence to successfully shoot the red tank. The sequence of the red tank will be random each round. After entering all sequence, click 'Start' to begin executing the sequences.

2. Errors

2.1. Out of Bounds

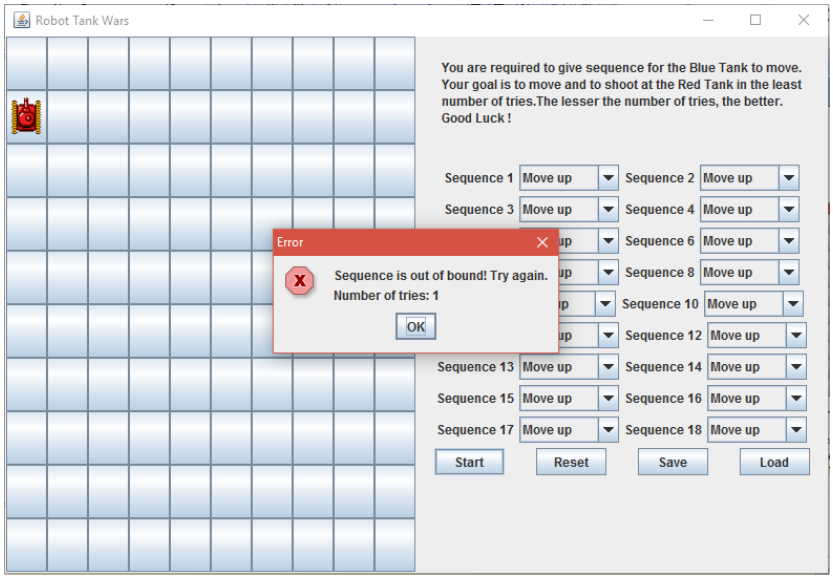


Figure 2.1.1: An error window warning the user of exceeding the boundary of the board

If the user enters serues if sequences that would cause the tank to exceed the limit of the board's 10x10 grid, an error window will be displayed and the positioin of the blue tank will be reset to the initial location

2.2. Overlap

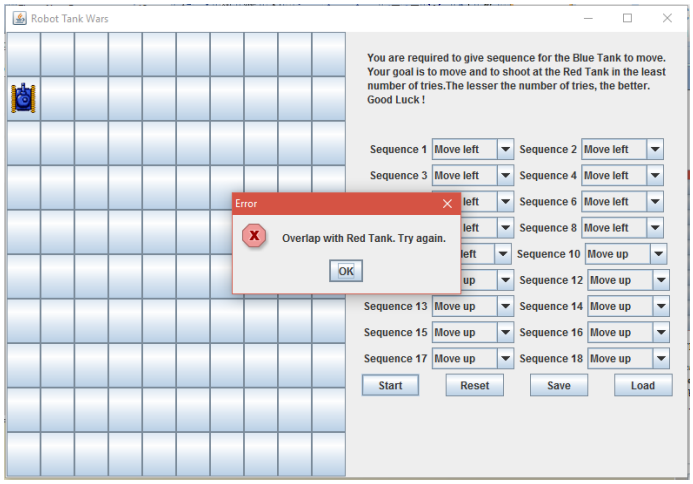


Figure 2.2.1: Example of the user tank sequence ends up overlapping with red tank

If the user enters a sequence where the blue tank ends up at the same grid with the red tank, an error window will be displayed stating that the user's tank overlaps with the red tank. The position of the blue tank and red tank will be reset to the original position

3. Winning Conditions

3.1 Victory

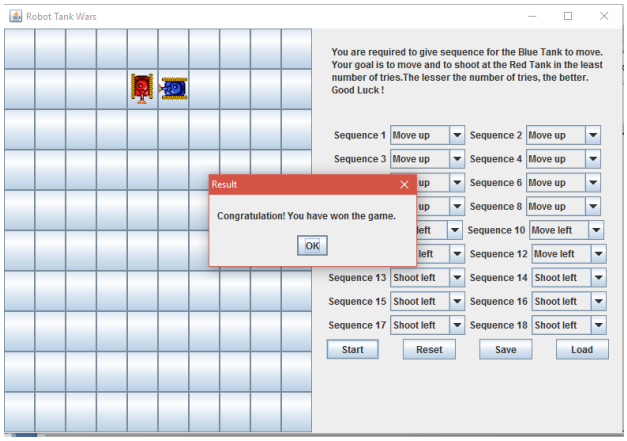
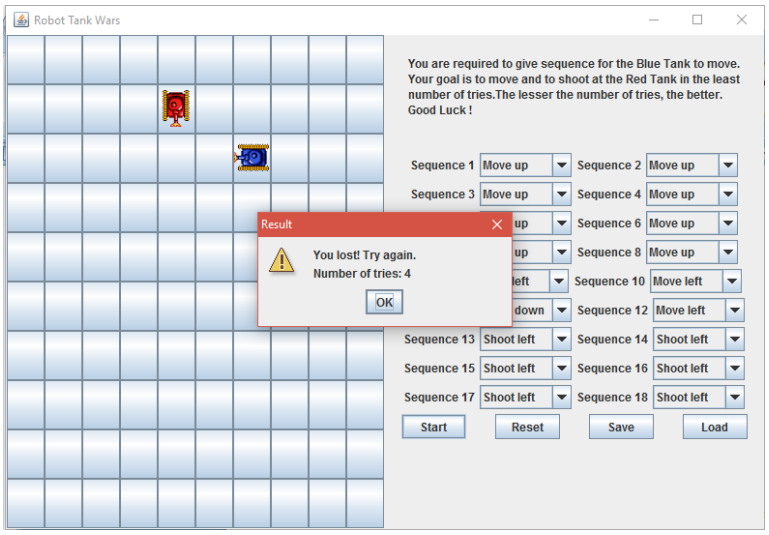


Figure 3.1.1: The window showing the user has successfully shoot the red tank

If the user manages to shoot the red tank after 18 sequence, it is considered as victory.

3.1 Lose



If the user fails to shoot the red tank after 18 sequence, it is considered as a loss. The number of tries the user has taken is also displayed.

Saving

1. If the user wishes to save the sequence, simply click the save button..