USER MANUAL

1. First, open the program and the program will be shown as below:

```
|>>>>>>>>>>>>>>>o<<<<<<<<<<<<<<<<<|
|    Welcome To Alien VS Zombie!  |
|>>>>>>>>>>>>>>>o<<<<<<<<<<<<<<<<<|

Press Enter to continue . . ._
```

2. Press Enter to continue and the program will display Default Game Settings. The program will also ask us either to change default setting or not. Typing 'y' will let us customize number of rows, number of columns, and number of zombies. Typing 'n' will let us play the game with default setting.

```
Do you wish to change default setting? (y/n) => y

Enter the number of rows: 7
Enter the number of columns: 7
Enter number of zombie(s):2
```

3. We can't enter even number for rows and number of columns as the program will ask us to enter number of rows/number of columns again.

```
Enter the number of rows: 2

Number of rows cannot be in even number.
```

4. After finished customizing, a board and Alien and Zombie(s) information are shown, as the game has already started.

```
       1   2   3   4   5   6   7
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  1| ^ | < | r | < | ^ | 2 | > |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  2| p | < | > | > | r | < | v |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  3| h | ^ | v | ^ | v | h | v |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  4| ^ |   | h | A | v | ^ | p |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  5| < | r | < | ^ | ^ | ^ | > |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  6| < | ^ | r | < | h | ^ | h |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
  7| < | r | < | v | ^ |   | h |
    +  -  +  -  +  -  +  -  +  -  +  -  +  -  +
       1   2   3   4   5   6   7

Alien :       Health 200  Damage 0
Zombie 1:     Health 250, Damage 15, Range 0
Zombie 2:     Health 200, Damage 15, Range 0
```

5. To know about command that can be used in this program, type 'help' at the 'Command >' line. List of commands will appear.

```
Command > help

        Commands
up     - Alien to move up
down   - Alien to move down
left   - Alien to move left
right  - Alien to move right
arrow  - Change the direction of an arrow
help   - Display these user commands
save   - Save the game
load   - Load a game
quit   - Quit the game
```

6. For Alien Movement, there are commands 'up', 'down', 'left' and 'right' which will move the Alien to the intended direction. For example, we will move up by using command 'up'.

```
Command > up
   + - + - + - + - + - + - + - +
  1| ^ | < | r | < | ^ | 2 | > |
   + - + - + - + - + - + - + - +
  2| p | < | > | > | r | < | v |
   + - + - + - + - + - + - + - +
  3| h | ^ | v | ^ | v | h | v |
   + - + - + - + - + - + - + - +
  4| ^ |   | h | A | v | ^ | p |
   + - + - + - + - + - + - + - +
  5| < | r | < | ^ | ^ | ^ | > |
   + - + - + - + - + - + - + - +
  6| < | ^ | r | < | h | ^ | h |
   + - + - + - + - + - + - + - +
  7| < | r | < | v | ^ |   | h |
   + - + - + - + - + - + - + - +
     1   2   3   4   5   6   7

Alien :      Health 200  Damage 0
Zombie 1:    Health 250, Damage 15, Range 0
Zombie 2:    Health 200, Damage 15, Range 0

Alien moves Up
Alien finds a arrow in upward direction.
Alien Damage is increased by 20.
Press any key to continue . . .
```

7. The program will then display what's happening in game. Then, by pressing any key, the Zombie(s) will take their turn. We don't have to decide their movement as we only play as Alien.

```
Zombie 1's turn.

Zombie 1 moves left
Zombie cannot attack. Alien is out of range.

Press any key to continue . . . .
   + - + - + - + - + - + - + - +
  1| ^ | < | r | < | 2 |   | > |
   + - + - + - + - + - + - + - +
  2| p | < | > | A | h | < | v |
   + - + - + - + - + - + - + - +
  3| h | ^ | v | p | v | h | v |
   + - + - + - + - + - + - + - +
  4| ^ |   | h | v | v | ^ | p |
   + - + - + - + - + - + - + - +
  5| < | r | < | ^ | ^ | ^ | > |
   + - + - + - + - + - + - + - +
  6| < | ^ | r | < | h | ^ | h |
   + - + - + - + - + - + - + - +
  7| < | r | < | v | ^ |   | h |
   + - + - + - + - + - + - + - +
     1   2   3   4   5   6   7

Alien :      Health 200  Damage 0
Zombie 1:    Health 250, Damage 15, Range 0
Zombie 2:    Health 200, Damage 15, Range 0

Zombie 2's turn.

Zombie 2 moves right
```

8. For command 'arrow', we can switch the direction of an arrow object in the game board. We will be asked to enter the row and column of the arrow object to switch, followed by the direction of the arrow object to switch to. For example, in row 1 column 1, the direction is up (^). We will change the direction to down (v).

```
Command > arrow

Enter row: 1

Enter column: 1

Enter direction: down
Press any key to continue . . .
   + - + - + - + - + - + - + - +
  1| v | < | r | < | 2 |   |   |
   + - + - + - + - + - + - + - +
  2| p | < | > | A | h | < | v |
   + - + - + - + - + - + - + - +
  3| h | ^ | v | p | v | h | v |
   + - + - + - + - + - + - + - +
  4| ^ |   | h | v | v | ^ | p |
   + - + - + - + - + - + - + - +
  5| < | r | < | ^ | ^ | ^ | > |
   + - + - + - + - + - + - + - +
  6| < | ^ | r | < | h | ^ | h |
   + - + - + - + - + - + - + - +
  7| < | r | < | v | ^ |   | h |
   + - + - + - + - + - + - + - +
     1   2   3   4   5   6   7

Alien :      Health 200  Damage 0
Zombie 1:    Health 250, Damage 15, Range 0
Zombie 2:    Health 200, Damage 15, Range 0

Command > _
```

9. The Alien's and Zombies' turns take place until the game ends, which is until either Alien or Zombie(s) die.

10. For each object in the board, the object has its own function:

Name	Appearance	Description
Arrow	^ (up), v (down), < (left), > (right)	• Changes Alien's direction of movement. • Adds 20 attack to Alien.
Health	h	• Adds 20 life to Alien.
Pod	p	• Instantly inflicts 10 damage to Zombie when hit by Alien.
Rock	r	• Hides a game object (except Rock and Trail) beneath it. • Reveals the hidden game object when hit by Alien. • Stops the Alien from moving.
Empty	Space	• Just an empty space on the board.
Trail	.	• Left by Alien when it moves. • Reset to a random game object (except the Trail) after Alien's turn ends.

11. The program can also be saved and loaded. To Save, type 'save' in command. The program will tell us that the game saved successfully if it is saved.

```
Command > save
Game saved successfully!
Press any key to continue . . .
```

12. To Load the program, type 'load' in command. The program will tell us that the game load successfully if it is loaded.

```
Command > load
Game loaded successfully!
Press any key to continue . . .
```

13. To Quit the program, type 'quit' in command. The program will ask us either we really want to quit or not. Typing 'y' will exit the program while typing 'n' will resume the program.

```
Command > quit
Do you really want to quit? (y/n) => y

Exiting game...
```