



Jungle Game Version 22.11

User Manual

Group 3

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Introduction

JungleGame is a game application based on the beast chess, with the latest version of v2022.11. It's a local command-lined-based game, which allows 2 players playing on a single terminal at the same time. The goal of the player is to eat all the opposite side's chesses or move into the opposite side's den.

Game Rules

Rank: ELEP > LION > TIGE > LEOP > WOLF > DOG > CAT > RAT

1 Games rules for 8 kinds of animals

- 1. Elephant(rank 8):
 - it can't move into the river
 - it can capture same/lower rank enemy except rat
 - it will be attacked by enemy Rat if they are both in lan
 - it will not be attacked by enemy Rat if the Rat just came from the river
- Lion(rank 7) or Tiger(rank 6):
 - they can't move into the river, but can jump over the river (by "jump" command)
when there is no rat in that river
 - they can capture same/lower rank enemy
- Rat(rank 1):
 - it can move into the river
 - it can capture enemy rat if they are both in land or river

- it can capture enemy elephant if the rat original position is in land.
 - it can't capture enemy elephant from river
 - Leopard(rank 5), Wolf(rank 4), Dog(rank 3) and Cat(rank 2):
 - they can't move into the river
 - they can capture same/lower rank enemy

2 Games rules for special positions

- Trap: An animal may capture any enemy in one of the player's trap squares regardless of rank.
 - Den: if an animal go into the enemy den, it will win the game

3 Games rules for winner

- Move an animal onto the den on the opponent's side of the board, or
 - Capture all the opponent's animals

How to play the game

1 Start

Open the game file `Jungle.py` to start the game.

```
python Jungle.py
```

Then, the game will have a welcome page:

```
lukuer@Lukuers-MacBook-Pro SE-Project-main % python Jungle.py

-----
| -WELCOME TO JUNGLE GAME DEVELOPED BY GRP3- |
| Type "help" if you need instructions anyt- |
| -ime during the game. Cheers and ENJOY!   |
| |
| Game Version: V22.11                         |
| (Last updated on Nov 17, 2022)                 |
| Developer list:                               |
| Pan Yalu, Qi Shihao, Yu Fengkai, Wang Ming |
| (All rights reserved)                         |
-----
```

At first preference option will be shown for you to choose their sides:

Please choose your preferred side:

You can either choose to enter **up** or **down**, the side where the game starts with. The chess color of the upper side is yellow, and that of the downside is blue.

You will see a chessboard with cheeses colour marked respectively on two sides. Empty squares with coordinate represent vacant lands, and squares with slashes represents water. Each side's three traps and one nest are marked “-TRAP-” “-NEST-” on top of the square.

LION	[18]	-TRAP-	-DEN-	-TRAP-	[58]	TIGE
[07]	DOG	[27]	[37]	[47]	CAT	[67]
RAT	[16]	LEOP	[36]	WOLF	[56]	ELEP
[05]	///[15]/// [25]//	[35]	///[45]// [55]//	[65]		
	++++++ ++++++		++++++ ++++++			
[04]	///[14]// [24]//	[34]	///[44]// [54]//	[64]		
	++++++ ++++++		++++++ ++++++			
[03]	///[13]// [23]//	[33]	///[43]// [53]//	[63]		
	++++++ ++++++		++++++ ++++++			
ELEP	[12]	WOLF	[32]	LEOP	[52]	RAT
[01]	CAT	[21]	[31]	[41]	DOG	[61]
TIGE	[10]	[20]	[30]	[40]	[50]	LION

There are 8 kinds of cheeses on each side: LION(Lion), WOLF (wolf), RAT (rat), LEOP (leopard), CAT (cat), DOG (dog), TIGE (tiger), and ELEP (elephant). Each represented animal has a rank for availability during the attack:

ELEP > LION > TIGE > LEOP > WOLF > DOG > CAT > RAT

As the round starts, you will see the instruction for each round, as shown below :

Please input your commands:

2 Accepted commands & formats

There are 5 types of accepted commands: **move**, **jump**, **help**, **defeat**, and **exit**.

2.1 move

The “Move” command is in charge of all one-step moves for each chess, with a specific direction. Below is the format of input that should be followed:

Format:
move <chessname> <direction>

Example:

```
move leopard down
```

```
Now is downside player's turn!
Please input your command (move/jump/help/defeat/exit): move leopard down
-ROUND 2-

-----+-----+-----+-----+-----+-----+
| LION | [18] | [28] | [38] | [48] | [58] | TIGE |
-----+-----+-----+-----+-----+-----+
| [07] | DOG | [27] | [37] | [47] | CAT | [67] |
-----+-----+-----+-----+-----+-----+
| RAT | [16] | LEOP | [36] | WOLF | [56] | ELEP |
-----+-----+-----+-----+-----+-----+
| //////////////// | //////////////// |
| [05] //|[15]//|[25]// | [35] //|[45]//|[55]// | [65] |
-----+-----+-----+-----+-----+-----+
| //////////////// | //////////////// |
| [04] //|[14]//|[24]// | [34] //|[44]//|[54]// | [64] |
-----+-----+-----+-----+-----+-----+
| //////////////// | //////////////// |
| [03] //|[13]//|[23]// | [33] //|[43]//|[53]// | [63] |
-----+-----+-----+-----+-----+-----+
| ELEP | [12] | WOLF | [32] | [42] | [52] | RAT |
-----+-----+-----+-----+-----+-----+
| [01] | CAT | [21] | [31] | LEOP | DOG | [61] |
-----+-----+-----+-----+-----+-----+
```

Chess name should be within the 8 types of cheeses. There are 4 allowed directions: **left**, **right**, **up**, and **down**.

You can move a rat into the river:

Now is upside player's turn!							
Please input your command (move/jump/help/defeat/exit): <u>move rat down</u>							
-ROUND 5-							
		-TRAP-	-DEN-	-TRAP-			
LION	[18]	[28]	[38]	[48]	[58]	TIGE	
		-TRAP-					
[07]	DOG	[27]	[37]	[47]	CAT	[67]	
[06]	[16]	LEOP	[36]	WOLF	[56]	ELEP	
	/\ /			/ /			
[05]	//RAT	///[25]//	[35]	///[45]// [55]//	[65]		
	++++++	++++++		++++++	++++++		

2.2 jump

The “Jump” command is for animals to go across the water. Any animal except rats is not allowed to stay at the water square. Thus they will be directly transmitted across the river and land on the other nearest side of the water. Below is the format of input that should be followed:

```
Format:  
jump <chessname> <direction>
```

Example:

```
jump lion up
```

```
Now is downside player's turn!
Please input your command (move/jump/help/defeat/exit): jump lion up
```

-ROUND 18-

			-TRAP-	-DEN-	-TRAP-		
LION	[18]	[28]		[38]	[48]	[58]	TIGE
				-TRAP-			
[07]	DOG	[27]		[37]	[47]	CAT	[67]
[06]	[16]	LEOP	WOLF	[46]	LION	[66]	
[05]	///RAT	///[25]//		[35]	///[45]//	///[55]//	[65]
	++++++	++++++		++++++	++++++	++++++	++++
[04]	///[14]//	///[24]//		[34]	///[44]//	///[54]//	[64]
	++++++	++++++		++++++	++++++	++++++	++++
[03]	///[13]//	///[23]//	RAT		///[43]//	///[53]//	ELEP
	++++++	++++++		++++++	++++++	++++++	++++
ELEP	[12]	WOLF	[32]	[42]	[52]		[62]

2.3 help

The “help” command is for getting help information (including game rules and commands accepted) for players. Input the “help” command in the terminal:

```
Please input your command: help
```

You can select 4 kinds of help information by entering the option number:

1. Rank of the chess

Please input your command (move/jump/help/defeat/exit): help								
-SELECT THE GAME INFO YOU WANT TO REFER-								
1.	Rank of the chess	2.	Square categories	3.	Command guides			
4.	JungleGame rule guide							
Enter your option:								
1								

Name	Elephant	Lion	Tiger	Leopard	Wolf	Dog	Cat	Rat
Rank	8	7	6	5	4	3	2	1
Chess	ELEP	LION	TIGE	LEOP	WOLF	DOG	CAT	RAT

2. Square categories

```
Enter your option:  
2  
  
----- ----- ----- -----  
| | | //////////////| | -DEN- | | -TRAP- | |
| | | //////////////| | | | | |  
| ----- | | +++++++| | ----- | | ----- |  
L A N D W A T E R D E N T R A P
```

3. Command guides

```
Enter your option:  
3  
  
- "move"  
    You should match your input with the following format:  
    move <animal_name> <direction> (e.g. move lion left)  
- "jump"  
    You should match your input with the following format:  
    jump <animal_name> <direction> (e.g. jump wolf up)  
- "help"  
    Obtain help information. Just type "help".  
- "defeat"  
    Surrender to your opponent.  
- "exit"  
    End the game.
```

4. JungleGame rule guide

a. Game rules for 8 kinds of animals

```
Enter your option:  
4  
  
a. What are the rules for each animal?  
b. What are the rules for each positions?  
c. How to win the game?  
  
Enter your option (a/b/c):  
a  
  
-Game rules for 8 kinds of animals-  
1. Elephant(rank 8):  
    1) it can't move into the river;  
    2) it can capture same/lower rank enemy except rat;  
    3) it will be attacked by enemy rat if they are both in land;  
    4) it will not be attacked by enemy rat if the Rat just came from the river.  
2. Lion(rank 7) or Tiger(rank 6):  
    1) they can't move into the river, but can jump over the river (by "jump" command) ;  
    when there is no rat in that river;  
    2) they can capture same/lower rank enemy.  
3. Rat(rank 1):  
    1) it can move into the river;  
    2) it can capture enemy rat if they are both in land or river;  
    3) it can capture enemy elephant if the rat original position is in land;  
    It can't capture enemy elephant from river.  
4. Leopard(rank 5), Wolf(rank 4), Dog(rank 3) and Cat(rank 2):  
    1) they can't move into the river;  
    2) they can capture same/lower rank enemy.
```

b. Game rules for special positions

```
Enter your option:  
4  
  
a. What are the rules for each animal?  
b. What are the rules for each positions?  
c. How to win the game?  
  
Enter your option (a/b/c):  
b  
  
-Games rules for special positions-  
1. Trap: An animal may capture any enemy in one of the player's trap squares regardless of rank.  
2. Den: Any animal steps into the enemy's den first will declare their victory.  
3. Water: Only rats are allowed to step into the water zone.  
    Animals except lions/tigers cannot jump across the water.  
4. Land: All animals are allowed to step by.
```

c. Game rules for winners

```
Enter your option:  
4  
  
a. What are the rules for each animal?  
b. What are the rules for each positions?  
c. How to win the game?  
  
Enter your option (a/b/c):  
c  
  
-Games rules for winner-  
1. You win if your animal steps into the enemy's den!  
2. Also, you win if all the enemy's animals are eliminated.
```

2.4 defeat

The “defeat” command is used when a player wants to defeat the game. Once inputting “defeat”, the game will end automatically. The opposite player will win.

```
Please input your command: defeat
```

```
Please input your command (move/jump/help/defeat/exit): defeat  
  
You will admit your defeat and surrender to your opponent. Please confirm again (yes/no):  
yes  
  
Upside player wins the game!  
  
(Total number of rounds: 1 )  
Have a good day and see you next time! :)
```

2.5 exit

The “exit” command is used to quit the game once the player doesn’t want to play again. To exit a game, input “exit” in the terminal. The system will send a warning message in the terminal, and ask for the player’s confirmation again.

```
Please input your command: exit
```

```
Please input your command (move/jump/help/defeat/exit): exit
```

```
-WARNING!!!-
```

```
Be aware that the whole game will be terminated without saving the current chessboard!
```

```
Confirm your exit? (yes/no):
```

After the player confirms “yes”, the system will wish the player “Have a good day, and see you next time!”, but will not announce that which player wins.

```
Confirm your exit? (yes/no):
```

```
yes
```

```
Have a good day and see you next time! :)
```

```
(Total number of rounds: 1 )
```

3 Invalid commands

3.1 Input nothing

If you input nothing:

```
Please input your command (move/jump/help/defeat/exit):
```

```
Command cannot be empty.
```

3.2 Invalid commands in choosing side

Input an wrong command that except “up” or “down” at the beginning of the game: choosing preferred side. The game will ask to choose the preferred side again.

```
Please choose your preferred side (up/down): asdfhu
```

```
Please input 'up' or 'down'.
```

3.3 Invalid commands in inputting

Input an wrong command that except “move”, “jump”, “help”, “defeat” and “exit”.

```
Please input your command (move/jump/help/defeat/exit): move tigher upp
Please spell the full name of the chess correctly (e.g. 'tiger for TIGE').
```

4 Error messages

Apart from the 5 types of accepted commands (move, jump, help, defeat, and exit), the system also design some error messages to be sent in case invalid commands were inputted.

If a player’s next step movement can’t meet the requirements of Jungle Game, the system will print an error message for warning. The player need to input a right command again.

4.1 Moving out of range

If a player’s next step movement is out of the chessboard range, an error message will be printed. For example, if an Elephant’s position is (0,2), and want to move left:



4.2 Moving to a position that occupied by same side, or higher rank enemies animals

For Elephant, it doesn’t have the case that it will move to a position that occupied by a higher rank enemies. In case that an elephant want to move to a position that occupied by an enemy rat, this error message will also be sent.

- If an animal step to a position that already occupied by same side animals

For example, the dog want to move down. But that position has a same side leopard already.

	[07]	DOG	[27]	[37]	[47]	CAT	[67]	
		↓						
	[06]	LEOP	[26]	[36]	WOLF	LION	[66]	
	[05]	///RAT	///[25]//	[35]	///[45]//	///[55]//	[65]	
	[04]	///[14]//	///[24]//	[34]	///[44]//	///[54]//	[64]	
	[03]	///[13]//	///[23]//	[33]	///RAT	///[53]//	ELEP	
	ELEP	CAT	WOLF	[32]	[42]	[52]	[62]	
					-TRAP-			
	[01]	[11]	[21]	[31]	LEOP	DOG	[61]	
					-TRAP-	-DEN-	-TRAP-	
	TIGE	[10]	[20]	[30]	[40]	[50]	[60]	

Now is **upside** player's turn!
Please input your command (move/jump/help/defeat/exit): move dog down
Can't move to next step! The position is occupied by other animals.

- If an animal step to a position that already occupied by a higher rank enemy

For example, a wolf want to move right. But that position has an enemy lion already:

	[06]	LEOP	[26]	[36]	WOLF	LION	[66]	
						→		
	[05]	///RAT	///[25]//	[35]	///[45]//	///[55]//	[65]	
	[04]	///[14]//	///[24]//	[34]	///[44]//	///[54]//	[64]	
	[03]	///[13]//	///[23]//	[33]	///RAT	///[53]//	ELEP	
	ELEP	CAT	WOLF	[32]	[42]	DOG	[62]	
					-TRAP-			
	[01]	[11]	[21]	[31]	LEOP	[51]	[61]	
					-TRAP-	-DEN-	-TRAP-	
	TIGE	[10]	[20]	[30]	[40]	[50]	[60]	

Now is **upside** player's turn!
Please input your command (move/jump/help/defeat/exit): move wolf right
Can't move to next step! The position is occupied by other animals.

- If an elephant step to a position that already occupied by an enemy rat

For example, an upside elephant want to move down. But that position has an enemy rat already:

```

+-----+ //////////////// | //////////////// | +-----+
| [04] | ///[14]// / / [24]// | [34] | ///[44]// / / [54]// | ELEP |
+-----+ +++++++| +++++++| -----+ +++++++| +++++++| -----+
| //////////////// | //////////////// | +-----+
| [03] | ///[13]// / / [23]// | [33] | ///[43]// / / [53]// | RAT |
+-----+ +++++++| +++++++| -----+ +++++++| +++++++| -----+
| | | | | | | | | |
| ELEP | CAT | WOLF | [32] | [42] | DOG | [62] |
+-----+ -----+ -----+ -----+ -----+ -----+ |
| | | | -TRAP- | | | |
| [01] | [11] | [21] | [31] | LEOP | [51] | [61] |
+-----+ -----+ -----+ -----+ -----+ -----+ |
| | | | -TRAP- | -DEN- | -TRAP- | | |
| TIGE | [10] | [20] | [30] | [40] | [50] | [60] |
+-----+ -----+ -----+ -----+ -----+ -----+ |

Now is upside player's turn!
Please input your command (move/jump/help/defeat/exit): move elephant down
Can't move to next step! The position is occupied by other animals.

```

4.3 Moving into the river

Animals: Elephant, Tiger, Lion, Leopard, Wolf, Dog, and Cat

All animals except rat can't move into the river. If they want to move into the river, it will be error. For example, if a dog original position is (5, 2), and want to move up:

```

+-----+ //////////////// | //////////////// | +-----+
| [03] | ///[13]// / / [23]// | [33] | ///[43]// / / [53]// | RAT |
+-----+ +++++++| +++++++| -----+ +++++++| +++++++| +--+ +--+| -----+
| | | | | | | | | |
| ELEP | CAT | WOLF | [32] | [42] | DOG | [62] |
+-----+ -----+ -----+ -----+ -----+ -----+ |
| | | | -TRAP- | | | |
| [01] | [11] | [21] | [31] | LEOP | [51] | [61] |
+-----+ -----+ -----+ -----+ -----+ -----+ |
| | | | -TRAP- | -DEN- | -TRAP- | | |
| TIGE | [10] | [20] | [30] | [40] | [50] | [60] |
+-----+ -----+ -----+ -----+ -----+ -----+ |

Now is downside player's turn!
Please input your command (move/jump/help/defeat/exit): move dog up
Can't move into the river! Only rat can move into the river.

```

4.4 Jumping over the river

Animals: Elephant, Leopard, Wolf, Dog, Cat , and Rat

Only Tiger and Lion are allowed to jump over the river. If the another 6 animals want to have a jump movement, it will be error.

[06]	[16]	LEOP	[36]	WOLF	LION	[66]
[05]	///[15]// //RAT//	[35]	///[45]// // [55]//	[65]		
[04]	///[14]// // [24]//	[34]	///[44]// // [54]//	ELEP		
[03]	///[13]// // [23]//	[33]	///[43]// // [53]//	RAT		
ELEP	CAT	WOLF	[32]	[42]	[52]	DOG
[01]	[11]	[21]	[31]	LEOP	[51]	[61]
TIGE	[10]	[20]	[30]	-TRAP-	-DEN-	-TRAP-

Now is **upside** player's turn!
Please input your command (move/jump/help/defeat/exit): jump wolf down
Can't jump! Only Tiger and Lion can jump.

4.5 Jumping over the river when there's a rat in the river

Animals: Tiger and Lion

The tiger and lion are not allowed to jump over the river if there is a rat in the river.

For example, now there is a rat in the right side river. A lion want to jump over the river:

[06]	[16]	LEOP	[36]	WOLF	LION	[66]	
[05]	///[15]// //RAT	///	[35]	///[45]// /[55]	/	[65]	
[04]	///[14]// /[24]	///	[34]	///[44]// /[54]	/	ELEP	
[03]	///[13]// /[23]	///	[33]	///[43]// /[RAT]	/	[63]	
ELEP	CAT	WOLF	[32]	[42]	[52]	DOG	
				-TRAP-			
[01]	[11]	[21]	[31]	LEOP	[51]	[61]	
				-TRAP-	-DEN-	-TRAP-	
TIGE	[10]	[20]	[30]	[40]	[50]	[60]	

Now is **downside** player's turn!
 Please input your command (move/jump/help/defeat/exit): jump lion down
 Can't jump over the river because a rat is blocking the way.

4.6 Moving into the same side's den

All animals can't move to the den of its side. If an animal can move to its side's den, the game is hard to end because that animal can occupy the den until the den.

[01]	[11]	[21]	[31]	[41]	[51]	[61]	
TIGE	[10]	[20]	[30]	LEOP	[50]	[60]	
				-TRAP-	-DEN-	-TRAP-	

Now is **downside** player's turn!
 Please input your command (move/jump/help/defeat/exit): move leopard left
 Can't move to next step! You can't move to your side's den.