Course: ENSF 607 - Fall 2020

Lab#: Lab 6

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Exercise 1

All file for Exercise 1 can be found in clientServer package.

```
Server [Java Application] /Library/Java/JavaVirtu
Server is now running.
```

```
Client [Java Application] /Library/Java/JavaV
please enter a word:
abcdedcba
abcdedcba
abcdedcba is a Palindrome.
please enter a word:
radar
radar
radar is a Palindrome.
please enter a word:
TV
TV
TV is not a Palindrome.
please enter a word:
```

Exercise 2

All file for Exercise 2 can be found in dateTimeServer package.

```
DateServer [Java Application] /Library/Java/Java
Date Server is now running.
```

```
DateClient [Java Application] /Library/Java/JavaVirtualMachine:
Please select an option (DATE/TIME)
DATE
DATE
2020-11-314
Please select an option (DATE/TIME)
TIME
TIME
21:13:55
Please select an option (DATE/TIME)
```

Exercise 3

Deserialized mySong.ser output

```
<terminated> ReadRecord (1) [Java Application] /Library/Java/J
1999 I have a dream ABBA 23.5
2012 Dream On Aerosmith 12.0
2008 Grace like rain Todd Agnew 6.7
1999 Old soul Thea Gilmor 4.5
1999 Rolling in the deep Adele 11.98
1999 I see stars Cindy Alxander 23.5
2000 I am Eighteen Alice Cooper 14.5
```

Deserialized allSong.ser output

```
<terminated> ReadRecord (1) [Java Application] /Library/Java/JavaVirtualMachi
1999 I have a dream ABBA 23.5
2000 S.O.S. ABBA 14.5
2013 Waterloo ABBA 30.0
2012 Dream On Aerosmith 12.0
2008 Grace like rain Todd Agnew 6.7
1999 Old soul Thea Gilmor 4.5
1988 Honey Bunny Adam Gilmor 6.7
2000 Poison Arrow ABC 7.95
1988 How Long? Ace 12.45
1991 Straight From the Heart Bryan Adams 9.9
1999 Rolling in the deep Adele 11.98
1999 I see stars Cindy Alxander 23.5
2000 I am Eighteen Alice Cooper 14.5
2013 Waterloo ABBA 30.0
2012 Smile Lily Allen 12.0
2008 Tear in your hand Tori Amos 6.7
1999 Crash about to happen Brett Anderson 4.5
1988 O Superman Laurie Anderson 6.7
2000 Do-Re-Mi Julie Andrews 7.95
```

Exercise 4

All file for Exercise 4 can be found in threadPoolTicTacToe package.

Console

```
🔲 1 GameServer [Java Application] /Library/Ja.../Home/bin/java  (Nov. 9, 2020, 9:29:04 p.m.)
🔲 2 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:15 p.m.)
🔲 3 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:17 p.m.)
🔲 4 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:20 p.m.)
🔲 5 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:21 p.m.)
🔲 6 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:22 p.m.)
🔲 7 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:23 p.m.)
🔲 8 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:23 p.m.)
✓ 🔲 9 GameClientCLI [Java Application] /Library/.../Home/bin/java  (Nov. 9, 2020, 9:29:24 p.m.)
```

Server

```
GameServer [Java Application] /Library/Java/JavaVi
Client 1 connected.
Client 2 connected.
New game started at server!
Client 3 connected.
Client 4 connected.
New game started at server!
Client 5 connected.
Client 6 connected.
New game started at server!
Client 7 connected.
Client 8 connected.
New game started at server!
```

Client 1 and Client 2 in Game 1 (thread 1)

```
Game room 1 Player 1 joined
Welcome to TicTacToe. Game started at server!

Your mark is assigned as 'X'. Sorry you can't choose, but perhaps that's the story of life. Now enter your name:
TV
Referee started the game...
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
TV, what row should your next X be placed in? Enter an integer:
0

TV, what column should your next X be placed in? Enter an integer:
0
|
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |  X  |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |  X  |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |  O  |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
TV, what row should your next X be placed i
```

```
Game room 1 Player 2 joined
Welcome to TicTacToe. Game started at server!

Your mark is assigned as 'O'. Sorry you can't choose, but perhaps that's the story of life. Now enter your name:
Monitor
Referee started the game...
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |  X  |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
Monitor, what row should your next O be placed in? Enter an integer:
1

Monitor, what column should your next O be placed in? Enter an integer:
1
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
 row 0 |  X  |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 1 |     |  O  |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
 row 2 |     |     |     |
       |     |     |     |
       +-----+-----+-----+
```

Lab 6 Report

Client 3 and Client 4 in Game 2 (thread 2)

```
Game room 2 Player 1 joined
Welcome to TicTacToe. Game started at server!

Your mark is assigned as 'X'. Sorry you can't choose, but perhaps that's the story of life. Now enter your name:
Man
Referee started the game...
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
row 0  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 1  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 2  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
Man, what row should your next X be placed in? Enter an integer:
2

Man, what column should your next X be placed in? Enter an integer:
2


          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
row 0  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 1  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 2  |     |     |  X  |
       |     |     |     |
       +-----+-----+-----+
```

```
Game room 2 Player 2 joined
Welcome to TicTacToe. Game started at server!

Your mark is assigned as 'O'. Sorry you can't choose, but perhaps that's the story of life.
Woman
Referee started the game...
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
row 0  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 1  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 2  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
          |col 0|col 1|col 2
       +-----+-----+-----+
       |     |     |     |
row 0  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 1  |     |     |     |
       |     |     |     |
       +-----+-----+-----+
       |     |     |     |
row 2  |     |     |  X  |
       |     |     |     |
       +-----+-----+-----+
Woman, what row should your next O be placed in? Enter an integer:
```
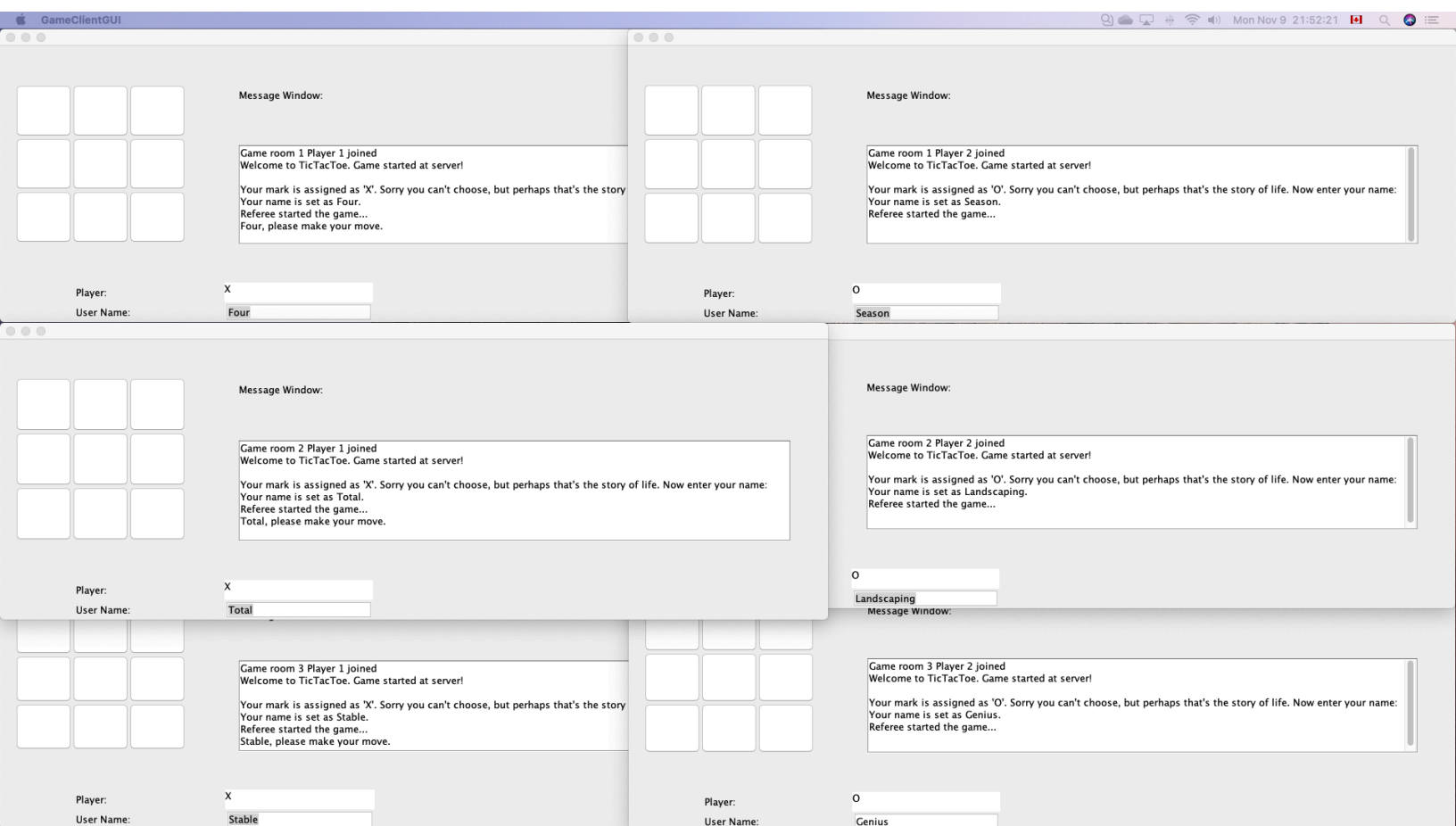
Exercise 5

Server

GameServer [Java Application] /Library/Java/JavaV
```
Client 1 connected.
Client 2 connected.
New game started at server!
Client 3 connected.
Client 4 connected.
New game started at server!
Client 5 connected.
Client 6 connected.
New game started at server!
```

Multiple Clients

Play till end

Top window

Message Window:

```
Mark set. Now wait for opponent's move.
Total, please make your move.
Mark set. Now wait for opponent's move.
Total, please make your move.
Mark set. Now wait for opponent's move.
THE GAME IS OVER: whoever using X is the winner!
Game Ended ...
```

Player: X

User Name: Total

Bottom window

Message Window:

```
Referee started the game...
Landscaping, please make your move.
Mark set. Now wait for opponent's move.
Landscaping, please make your move.
Mark set. Now wait for opponent's move.
THE GAME IS OVER: whoever using X is the winner!
Game Ended ...
```

Player: X

User Name: Landscaping

Lab 6 Report