

COM S/SE 319 : Software Construction and User Interfaces

Spring 2019

HW 4

[Total Points: 50]

Assignment Due: Sunday, March 10, 2019, 11:59 PM

[N.B.:5% penalty per day up to a maximum of 7 days after **March 10, 2019]**

Task:

Implement a **Turn Based human vs human tic-tac-toe game** with suitable **GUI**. Typically **Tic-tac-toe** (also known as noughts and crosses or **Xs** and **Os**) is a paper-and-pencil game for two players, **X** and **O**, who take turns marking the spaces in a **3×3 grid**. The player who succeeds in placing three of their marks in a horizontal, vertical, or diagonal row wins the game. The given example of the game is won by the first player, **X** which has been illustrated in the below figure 1 : (More about Tic-tac-toe:<https://en.wikipedia.org/wiki/Tic-tac-toe>)



Figure 1: Tic-tac-toe Game

You have to implement this task using **Java** code and **JavaFX** GUI components.

Check list:

1. Use the provided images (**included in the zip file**) for marking **X** and **O**. **[5 points]**
2. Show which player's turn while playing the game. **[5 points]**
3. Click on the blank cell to mark **X** or **O** (unmarked cell should be checked and marked cell cannot be marked again). **[10 points]**
4. When one player wins, stop the game and show "Congratulations, **X** win the game" or "Congratulations, **O** win the game" in your designed GUI. **[10 points]**
5. When all cells are filled in and no one wins, stop the game and show "**Draw**". **[10 points]**
6. When the game is over, show the option to restart a new game. **[5 points]**

What to Submit:

Submit via Canvas a **compressed file (.zip)** [rename it with your LAST NAME] containing the following:

- All of your **source code** (e.g., **.java** files). **[Task 1= 45 Points]**
- **README** file explaining how to compile and run your program & a **Report** (.docx or .pdf) describing your solution approach and **screenshots** of every required output. **[5 points]**.
