

Cosc 5/4730  
Due: Nov 8

Program #5  
50 points

Write the following program. How you design the user interface is up to you, using everything that has been taught in class, but you must use the drawing methods, as explained in the drawing lectures. You can't use widgets for the tic-tac-toe board. Code will be graded on correctness, comments, and coding style.

### **Tic-tac-toe program:**

Write a Tic-tac-toe game. You will need to leave your code "flexible", because we will use this code next semester where you will add the network/Bluetooth/sms code to this program. Player X always goes first.

For 4730 students: Your program will be a two-player game, alternating between each player, assuming they "pass" the phone back and forth. Your code will need to determine the winner, loser, and tie. You will also be able to play again (play another game) without having to restart the program.

**For 5730 students:** Complete the requirements for 4730 program and your program will have an option for the other player to be an AI player. The user will determine if they want to be X or O. The AI doesn't need to be very smart, but it must be "smarter" than just picking a random location and it should play to win.

### **TURN IN and GRADING:**

Hard copy:

1. A cover page with Name, program #5, cosc 4730 or 5730 depending on which class you enrolled in, a repo name (see github and below for your repo name).

Soft copy:

1. Use this link to create your repo <https://classroom.github.com/a/ROLkoonZ>
2. Upload the project to your repo
3. Create/Edit the readme.md file, add the following:
  - Course number 4730 or 5730
  - Name
  - how to run the program (this is likely very simple for program 1),
  - which phone/emulator to run on include special information like android version (ie android11) and screen size.
    - Or if you are using the borrowed phone, Pixel 4a.
4. Lastly ensure everything has been uploaded to the github website and not just the local repo.

Code will be graded on correctness, comments, and coding style.