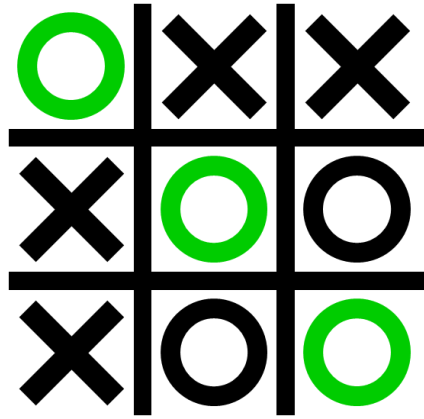


Lab Assignment 5: TicTacToe Game (8%)

This lab assignment is worth 8% of your total grade for this course.

Introduction

In this lab, you will create a simple Tic Tac Toe game designed for a single player. You will create multiple activities and use AsyncTask in order to complete this assignment.



Objectives

After completing Lab Assignment 5, you will be able to:

- Design a multi-activity application
- Use sharedPreferences in Android apps.
- Use AsyncTask to run a task in background thread.
- Use a list view to display data.

App Description:

- The main menu activity (this is the initially launched activity)
 - This activity will show a welcome message and a ListView with three items
 - When selected, each of these list items will launch another activity
 - Enter names
 - Launches EnterNamesActivity and collects the player name when it finishes
 - Play game
 - Launches PlayGameActivity and display the game board
 - Standings

- Launches ShowStandingsActivity
- EnterNamesActivity
 - Shows a simple form:
 - Label and text field for Player's name
 - Button ('Save') for saving the name and finishing the activity.
- PlayGameActivity
 - Shows the game board, a 3x3 grid of labels
 - Each label can show blank (no text), an X, or an O
 - These labels must have sufficiently large font size to make the game easily playable
 - Then a blank label is clicked, an X or O should be placed there, depending on who is playing
 - Player should place an X
 - Android should place an O
 - Player plays first, then they alternate turns
 - The game continues until one player places their symbol (X or O) on three spaces in a row, column, or diagonal
- ShowStandingsActivity
 - Displays the number of wins for Players and Android, as well as their names, for example:
 - Bob: 24 wins
 - Sandra: 27 wins
 - Android: 20 Wins
- Game Data
 - Player names and scores should be stored in a local file.
 - The algorithm for Android game play should be done in an AsyncTask thread.

A full list of the requirements is outlined in the marking rubric table below.

Assignment Submission

Instructions

1. Compress your project folder and rename the file to **lab5_lastname.zip** and upload it to Moodle
2. Rename the app-debug.apk file to **lab5_lastname.apk**
3. Email it to tru.cs.android@gmail.com

Marking Rubric

Your mark will be determined by the level of functionality you achieve for your TicTacToe app, as outlined in the following marking rubric table.

Component	Marks	Description
Presentation/Documentations	10	Code must be clearly commented and documented. Full mark will be given for adequate commenting and professional presentation of deliverables.
Basics functionality	55	All the basic requirements of a <i>Tic Tac Toe</i> game must be satisfied and basic functionality is working perfectly. Two players can play with no errors or exceptions and can navigate through all three activities with no problems.
Usable game	20	A basic and complete <i>Tic Tac Toe</i> game. In addition to above, includes: <ul style="list-style-type: none">• Game history is stored correctly in a local file (player names, scores, last time played (date and time).• Has excellent design, including clear feedback on button pushes, and status of operation. Could include sound, flashing, highlighting, color, etc.• Adapts/scales reasonably to changes in device screen orientation.
User Interface quality	15	Credit will be given for including three or more extra features, such as: <ul style="list-style-type: none">• A flash window that shows your name and a welcome message as it starts.• An option to switch from one-player game (user vs Android) to two-player game.• A "settings" screen of some sort: can set a time-limit for a player move, coloring options, statistics about scores, etc.• Anything else you can think of that is useful and interesting.