

## Lab 5: Pig Game with Fragments

CS235AM, Intermediate Mobile Application Development: Android

### Overview

This lab will give you practice using fragments to adapt your app to different screen sizes and/or orientations.

### Part 1: Xamarin Guide: Fragments

Either write the app described in the code walk-through, or download the code (there is a zip file on this week's Moodle page) and experiment with it as you read the walk-through. Take screen shots showing how fragments are arranged differently in response to different screen orientations or size.

Note: the original walk-through used different screen sizes to load different fragments. My version (the one posted on Moodle) uses different orientations to load different fragments.

Xamarin Guide: Fragments, code walk-through:

[https://developer.xamarin.com/guides/android/platform\\_features/fragments/fragments\\_walkthrough](https://developer.xamarin.com/guides/android/platform_features/fragments/fragments_walkthrough)

## Part 2, Group A: Big Pig – An 8-sided die, portrait orientation only

Refactor your Pig game to use fragments. Fragment 1 will be an opening screen that displays instructions and asks the players for their names. It will have a “Start Game” button that launches the Activity containing Fragment 2.

Fragment 2 will contain the UI for game-play. The actual player’s names will be displayed above each score. The “New Game” button on this fragment will launch the Activity containing Fragment 1 (taking the user back to opening screen).

Fragment behavior and implementation:

- On a small screen only one fragment will be displayed at a time.
- On a large screen, both fragments will be displayed one above the other.
  - Only allow portrait orientation for large screens
- For the layouts that hold your fragments, use relative layouts.
- Load the fragments statically by specifying them in AXML.

Fragment 1

Fragment 1 is an opening screen with a light blue background. At the top, it says "this is how you play the game ...". Below this, there are two labels: "player 1 Name" and "player 2 Name", each followed by a text input field. At the bottom center, there is a "Start Game" button.

Fragment 2

Fragment 2 is the game-play screen with a light blue background. At the top, it displays "Player 1 Score" and "Player 2 Score", each followed by a text input field. Below these is a label "Turn" with a text input field. In the center, there is a die icon showing a 3. Below the die, it says "Points for this turn" followed by a text input field. At the bottom, there are three buttons: "Roll Die", "End Turn", and "New Game".

## Submission

### *Beta Version*

Post the following to the Beta + Code Review Forum:

- 1) For part 1: A document containing screen-shots of the tutorial app with each screen-shot labeled. (Please use .docx or .pdf format.)
- 2) For part 2: A zip file containing your app's Visual Studio solution folder. (Make your solution smaller by deleting the *obj* and *bin* folders.)  
Or, optionally, a link to a repository containing your solution source code. (You can put the link on the same document with the screen-shots for part 1.)
- 3) A copy of your lab instructions (so the lab partner who reviews your work will know what the requirements were for your app).

### *Production Version*

1. Items 1 and 2 above, but revised as needed.
2. The code review of your work (the one done by your lab partner) with the second column ("Release") completed by you.