

Lab 5: Pig Game

Using Different Layouts for Different Device Orientations

CS235AM, Intermediate Mobile Application Development: Android

Overview

This tutorial gives you practice working with:

- Linear UI layouts
- Relative UI layouts
- Loading either a layout with widgets arranged for landscape orientation or one with an arrangement for portrait depending on which way the device is rotated.

Part 1: Rotation Tutorial

The tutorial for this lab doesn't guide you through building a project, but source-code for the app described in the tutorial is available. Download the code from GitHub, build it, and run it. Put in break-points so you can see what is happening at various points in the code when you start the app or rotate it. Take at least two screen-shots showing the app with different orientations.

Tutorial:

https://developer.xamarin.com/guides/android/application_fundamentals/handling_rotation/

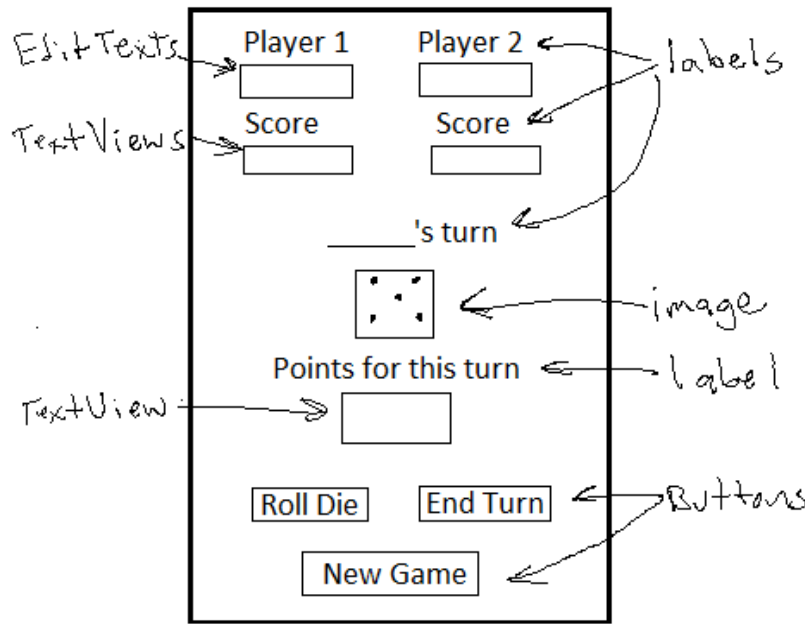
Tutorial source code:

<https://github.com/xamarin/monodroid-samples/tree/master/ApplicationFundamentals/RotationDemo/RotationDemo>

Part 2, Group B: Little Pig – A 6-sided die, linear layouts for portrait and relative for landscape

Create an app for playing a modified version of the dice game "Pig". Here is an example of a similar version of the game: <http://nrich.maths.org/1260>

The UI for your game should be similar to the one shown below:



In the "Little Pig" version, two players will take turns rolling one die as many times as they wish or until they roll a 1. When they roll a 1, the "Roll Die" button should be disabled, re-enable it when the next player starts their turn. Their score for the turn is the sum of their rolls unless they get a 1, then it's zero. Players keep taking turns rolling until someone gets to 100. If the player rolling first reaches 100, the second player may still take their turn. The player with the highest score wins.

- Portrait orientation: Arrange the widgets using nested Linear Layouts. (Try to use as few levels of nesting as possible).
- Landscape orientation: Arrange the widgets using a Relative Layout.

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.