

Lab 3 – Saving Activity State, Group A

CS235AM, Intermediate Mobile Application Development: Android

Introduction

This lab will help you understand Android activity life-cycle and give you practice saving activity state. The main concepts you will apply will be:

- Using the `OnSaveInstanceState` callback to store state using a `Bundle` object
- Retrieving activity state in an activity's `OnCreate` method.
- Serializing and deserializing objects using the `.NET XmlSerializer` class
- Using an Android `Edit Text` widget

Requirements

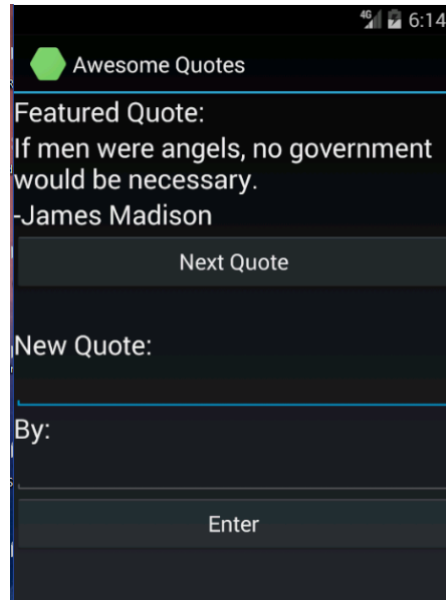
Part 1 – Tutorial: Activity Lifecycle

Complete the Xamarin walkthrough, [Saving Activity State](#), which is part of the [Activity Lifecycle](#) tutorial, which was also the required reading this week.

Part 2 for Assignment Group A – The “Awesome Quote” App

- Use the starter file posted on Moodle. The starter contains:
 - A quote bank class, preloaded with a collection of quotes.
 - A `MainActivity` and layout that show a quote.
 - Add a “Next Quote” button that causes the next quote to be displayed when it is tapped.
- Add to, or modify the app so that:
 - The quote and who said it are shown in two separate `TextView` widgets.
 - Users will be able to add quotes of their own that will be added to the collection of quotes.
 - Add two `EditText` widgets and a button for entering quotes.
 - When a new quote is entered, show it in the `TextViews` at the top.
 - Clear the `EditText` widgets after the edit button is tapped to enter the new quote.
- Implementation requirements:
 - Use the `XmlSerializer` class to save the object of the above class.
 - A file containing a class that is preloaded with hard-coded quotes and that can have more quotes added will be provided.
- See screen-shots of the UI below:

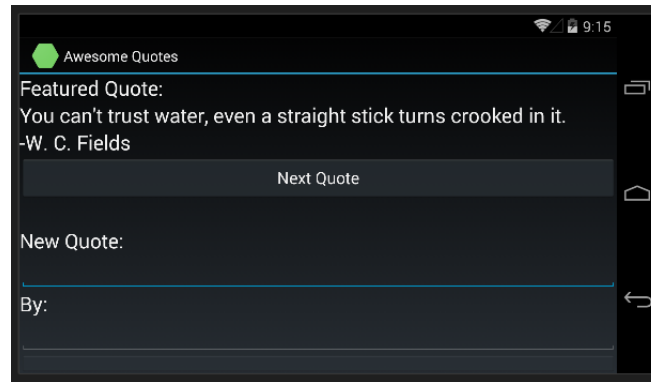
- When the app is first started, it will display the first quote in the list.



- Clicking the “Next Quote” button will show the next quote in the list.



- Rotating the device should not cause the first quote to be shown again; it should keep showing the current one, even if it's a new one that was entered by the user.



Submission to Moodle

Beta Version

Post the following to the Beta + Code Review Forum:

- 1) For part 1: A document containing screen-shots of the 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 report on your exercise from part 1.
- 3) A copy of your lab instructions (so the lab partner who reviews your work will know what your requirements were).

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.