

## Lab 3 – Saving Activity State

CS235AM, Intermediate Mobile Application Development: Android

This lab will allow you to practice what you learned in the Xamarin Activity Lifecycle tutorial and in class. The main concepts you will apply will be:

- Serializing and deserializing object state using the XmlSerializer class
- Using the OnSavedInstanceState callback to store state in a Bundle object
- Retrieving activity state in OnCreate
- Using an EditText widget

### Assignment for Group A – The “Awesome Quote” App

- This app will show a random quote and who said it when it is run.
  - Rotating the device should not cause a new quote to be shown; it should keep showing the same one.
  - Preload the app with a collection of quotes (at least 4).
  - Show the quote and who said it in two separate TextView widgets.
  - There will be a “Next Quote” button that causes another quote to be displayed when it is tapped.
- Users will be able to add quotes of their own that will be added to the collection of quotes.
  - Use two EditText widgets and a button.
  - When the new quote is entered, show it in the TextViews described above.
  - Clear the EditText widgets when the new quote is entered.

### Assignment for Group B – The “Who Said It” Quiz App

- This app will show a quote when it is run and ask the user who said it.
  - The user will be able to type the name of the person and then click enter. The app will show whether they are right or wrong.
  - After answering a questions, a new one will be shown
  - All the questions can be hard-coded.
  - Rotating the device should not cause a new quote question to be shown; it should keep showing the same one.
- The app will display a count of right and wrong answers.
  - There will be a button to reset the count and start the quiz over.
  - The count of right and wrong answers will not be lost when the device is rotated.

### Notes for Both Groups

- The code that manages the quotes and that contains the pre-written quotes should be in it’s own class (or classes).
- Save activity state using the XmlSerializer class to save the state of your activity’s logic object in a Bundle object in the onSaveInstanceState call-back method.
- Zip the solution (after removing the bin and obj folders) and e-mail it to your code-review partner.