**CSC 309 Sample Questions for Test 1**

List of topics:

1. Application design basics
2. Debugging
3. Layouts
4. Widgets (TextViews, Buttons, etc.)
5. Saving and Restoring state
6. Activities
7. Fragments
8. Menus

These questions represent the type of questions that will be on the test.

1. Describe two design principles that can make my app more appealing and easier to use

* Don’t use internal or unsupported APIs
* Don’t directly manipulate settings without asking
* Future versions may constrain settings
* Limit # of layouts
* Don’t assume given hardware is necessarily supported

1. Describe two steps we can take to make our application more robust

* Ensure device orientation don’t disrupt the application
* Use Android libraries instead of Java libraries
* Take care of memory allocation
* Try to reuse objects instead of reallocating

1. How do I start an activity *SecondActivity* from my initial activity?

Intent secondIntent = **new** Intent(  
 getApplicationContext(), SecondActivity.**class** );  
startActivity( secondIntent );

1. How do we get the value typed into a textbox with id “addr”?

String value = Addr.getText().toString;

1. Number these lifecycle events in the correct order: onStop(), onDestroy(), onPause(), onResume(), onCreate(), onStart(),

onCreate(), onStart(), onResume(), onPause(), onStop(), onDestroy()

1. What is the difference between drawables that are xhdpi, hdpi, and mdpi?

Different sizes of images based on the screen size

• xhdpi: 2.0x (Example: 200x200)

• hdpi: 1.5x (Example: 150x150)

• mdpi: 1.0x (Example: 100x100)

1. What is the difference between an options menu and a context menu?

Options Menu - the menu you see when pressing the 'Menu' button, usually the main menu options available in the action bar

Context Menu - the menu shown when you press and hold an item, this menu changes depending on the context of the current activity.

1. What is the difference between an explicit Intent and an implicit Intent?

Explicit intents use a specific name when starting a component. This name will be the full Java class name of the activity or service. The most common use of an explicit intent is the launching of a target component with a known name within the currently running application.

Implicit intents do not name a specific component and instead declares a general action to perform, which allows a component from another app to handle it. When an implicit intent is created, the system located the appropriate target component by comparing the contents of the intent to an intent filter. Intent filters are declared in the manifest file of other apps located on a given device. When the intent has found a match with the intent filter, the system starts that component and delivers it to the intent object.

1. Write the code necessary to save an integer *xyz* before an orientation change and restore it after the change is over.

Static final String VALUE = “xyz”;

@Override

Public void onSaveInstanceState(Bundle savedInstanceState){

Super.onSaveInstanceState(savedInstanceState );

savedInstanceState.putInt(xyz, VALUE);

}

@Override

Public void onRestoreInstanceState(Bundle savedInstanceState){

Super.onSaveInstanceState(savedInstanceState );

Xyz = savedInstaceState.getInt(VALUE);

}

1. In an Android app, how can we pass a number to a new activity as we start it?

Intent.putExtra(“number”, number)

1. How do I add a fragment to an existing layer?
   1. You could edit the XML file to apply a fragment to an existing layer
   2. You can use the getSupportFragmentManager() to add or replace a fragment from the existing layer