**Technical Background Questions**

**Mobile platforms**: The most common mobile platforms or operating systems are namely iOS (iPhone, iPad, iPod), Android, Blackberry, Windows Mobile, etc.

**Native mobile application** runs on a device's operating system, and is required to be adapted for different devices.

Email address (optional): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Age: Gender:

1. Under 21 a) F
2. 21-30 b) M
3. 31-40 c) Rather not specify
4. 41-50
5. Over 50

Country: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many years of work experience do you have in **native** mobile application development:
   1. Less than 1 year
   2. 1-3 years
   3. 4-6 years
   4. More than 6 years
2. Which platform do you use to develop **native** mobile applications (Check all that apply):
   1. iOS (iPhone/iPad/iPod)
   2. Android
   3. Blackberry
   4. Windows Mobile
   5. Other, please specify:
   6. N/A
3. Have you developed the “**same”** **native** mobile application across different platforms?
   1. No
   2. Yes, I developed for each platform from scratch (Please explain which platforms and how): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Yes, I ported part of the application between platforms (Please explain which platforms and how): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Yes, Other approaches, please explain which platforms and how: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Ideally, a given mobile app should provide the same functionality and behavior regardless of the target platform it is running on. Thus the **Compatibility Across Mobile Platforms (**hereafter **CAMP)** issue is becoming important. I am looking into that if we can automatically check mobile app behaviour across multiple platforms to detect discrepancies.

1. How important is the CAMP issue for you? What are the challenges you have for CAMP issue?
2. How do you check your application's correctness across multiple platforms? What are your strategies for CAMP issue?
3. How do you think one can automatically check mobile app behaviour is preserved across multiple platforms?
4. Between Android vs. iPhone platforms, what can be mapped? GUI? API? Functionality/behavior? Abstract models?

**Cross-validation Questions** (Android vs. iPhone)

[android.widget](http://developer.android.com/reference/android/widget/package-summary.html) contains Standard (mostly visual) UI elements to use on your Application screen.

[UIKit.framework](https://developer.apple.com/library/ios/documentation/uikit/reference/uikit_framework/Introduction/Introduction.html#//apple_ref/doc/uid/TP40006955-CH1-SW1) provides the classes needed to construct and manage an application’s user interface for iOS.

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| **#** | **iPhone ()** | **Android** | **Checked (Y/N)** |
| 1 | UIButton | android.widget.[Button](http://developer.android.com/reference/android/widget/Button.html)  android.widget.[ImageButton](http://developer.android.com/reference/android/widget/ImageButton.html)  android.widget.[CompoundButton](http://developer.android.com/reference/android/widget/CompoundButton.html)  android.widget.[CheckBox](http://developer.android.com/reference/android/widget/CompoundButton.html)  android.widget.[RadioButton](http://developer.android.com/reference/android/widget/RadioButton.html)  android.widget.[ToggleButton](http://developer.android.com/reference/android/widget/ToggleButton.html) | **Y** |
| 2 | UISwitch | android.widget.[Switch](http://developer.android.com/reference/android/widget/Switch.html) | **Y** |
| 3 | UILable | android.widget.[TextView](http://developer.android.com/reference/android/widget/TextView.html) | **Y** |
| 4 | UITextView | android.widget.[TextView](http://developer.android.com/reference/android/widget/TextView.html) | **Y** |
| 5 | UITextField | android.widget.[EditText](http://developer.android.com/reference/android/widget/EditText.html) | **Y** |
| 6 | UITableView | android.widget.[ListView](http://developer.android.com/reference/android/widget/ListView.html) | **Y** |
| 7 | UIPickerView | android.widget.[Spinner](http://developer.android.com/reference/android/widget/Spinner.html) | **Y** |
| 8 | UIDatePicker | android.widget.[TimePicker](http://developer.android.com/reference/android/widget/TimePicker.html)  android.widget.[DatePicker](http://developer.android.com/reference/android/widget/DatePicker.html) | **Y** |
| 9 | UIProgressView | android.widget.[ProgressBar](http://developer.android.com/reference/android/widget/ProgressBar.html) | **Y** |
| 10 | UISlider | android.widget.[SeekBar](http://developer.android.com/reference/android/widget/SeekBar.html)  android.widget.[RatingBar](http://developer.android.com/reference/android/widget/RatingBar.html) | **Y** |
| 11 | UIImageView | android.widget.[ImageView](http://developer.android.com/reference/android/widget/ImageView.html) | **Y** |
| 12 | UICollectionView | android.widget.[GridView](http://developer.android.com/reference/android/widget/GridView.html) | **Y** |
| 13 | UIScrollView | android.widget.[ScrollView](http://developer.android.com/reference/android/widget/ScrollView.html) | **Y** |
| 14 | UIWebView | android.webkit.[Webview](http://developer.android.com/reference/android/webkit/WebView.html) | **Y** |
| 15 | MKMApView | [SupportMapFragment](http://developer.android.com/reference/com/google/android/gms/maps/SupportMapFragment.html) (GoogleMap) | **Y** |
| 16 | UIAlertView | android.app.[AlertDialog](http://developer.android.com/reference/android/app/AlertDialog.html)  android.widget.[Toast](http://developer.android.com/reference/android/widget/Toast.html) | **Y** |
| 17 | UIPageControl | android.support.v4.view.[ViewPager](http://developer.android.com/reference/android/support/v4/view/ViewPager.html) | **Y** |
| 18 | UITabBar | android.widget.[TabHost](http://developer.android.com/reference/android/widget/TabHost.html) | **Y** |
| 19 | UIActionSheet | android.app.[ActionBar](http://developer.android.com/reference/android/app/ActionBar.html) | **-** |
| 20 | UIStepper | android.widget.[NumberPicker](http://developer.android.com/reference/android/widget/NumberPicker.html) | **-** |
| 21 | UISearchBar | android.widget.[SearchView](http://developer.android.com/reference/android/widget/SearchView.html) | **-** |
| Customized | | | |
| 22 | UISegmentedControl | - Customized (buttons) | - |
| 23 | UIToolBar | - Customized (buttons) | **-** |
| 24 | UIActivityIndicatorView | - | - |
| 25 | - | ListFragment | - |
| Others | | | |
| 25 | Hard Home Button | Hard Home Button | Y |
| 26 | Soft Back Button | Hard/Soft Back Button | Y |
| 27 | Status bar | Status bar | Y |
| 28 | UINavigationBar | Navigation buttons | - |
| 29 | UIViewController  .viewDidLoad  .viewWillAppear  .viewDidAppear | android.app.[Activity](http://developer.android.com/reference/android/app/Activity.html) / ListFragment  .onCreate()  onStart()  onResume()  onPause() | Both has lifecycle for managing when the view is shown, hidden, created, destroyed, running out of memory… |
| 30 | ApplicationDelegate | Application | Y |

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| **UINavigationBar** | **Navigation Buttons** |
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| one physical button: Home.  a soft back button in the upper left corner | Four physical buttons: Back, Menu, Home, and Search. |
| **Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:01iphonetaps.png** | Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:01androidmenu.png  Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:screen-shot-2011-01-27-at-11-26-52-am.png |
| menus bars placed at the bottom |  |
| **Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:action_bar_basics1.png** | **Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:action_bar_basics1.png** |

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| the tab bars are on the bottom | the tab bars are on the top |
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| the tool bar | the bottom bar associated with the action bar |
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| the Segment Controller | the Spinner |
| Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:segment_controller_ios_spinner_android.png | Macintosh HD:private:var:folders:d6:_02mcqy533bdk7_b214syrmh0000gn:T:TemporaryItems:segment_controller_ios_spinner_android.png |