# CIS472/594: Android Programming

# Homework 4 – BroadcastReceiver and SMS

**Due Date**:     March 9, Thursday, at 11:59pm

**SUBMISSION INSTRUCTIONS**
1. Please submit your whole project as a .zip file on BlackBoard.
2. Demo to me after class or in office hours.

**Note**: **I will give you a rubric which specifies the spec that works and not. It also needs to tell me what extra credits you implemented. Please submit the rubric.doc file along with your .zip file.**

For this homework you will build an application that catches SMS intents and searches them for several keywords.

**REQUIREMENTS**
- Version – your app should work for Android 4.0.3 or above (Minimum API 15)
- You will need
  - 1 Activity
    - **MainActivity**
      - A list view and a web view
  - The List View
    - **UrlList**
      - It will show a list of URLs
      - it should have at least 3 default entries in the list, e.g.
        - https://www.fontbonne.edu
        - https://www.google.com
        - https://my-favoriate-website.com
      - clicking on an item in the List should open up the website in the **Web View**
  - 1 BroadcastReceiver
    - **SmsReceiver**
    - use an intent filter to listen for **SMS_RECEIVED**, register the receiver inside of the Android Manifest file, **not dynamically**
    - when an SMS is received, your code should get the message from the SMS
      - **We will assume that you will only receive messages containing URLs**

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    - ■ your receiver should then launch a new instance of your Activity, which will add the new URL to the default list AND open the website immediately in the WebView
    - ■ all entries (including the new one) should still be clickable
    - ■ Your app should support SMS messages with URLs in any valid format, i.e.
      - ● http://www.example.com (Don't need to modify)
      - ● http://example.com (Don't need to modify)
      - ● www.example.com (Need to prepend http://)
      - ● example.com (Need to prepend only http:// , NOT www)
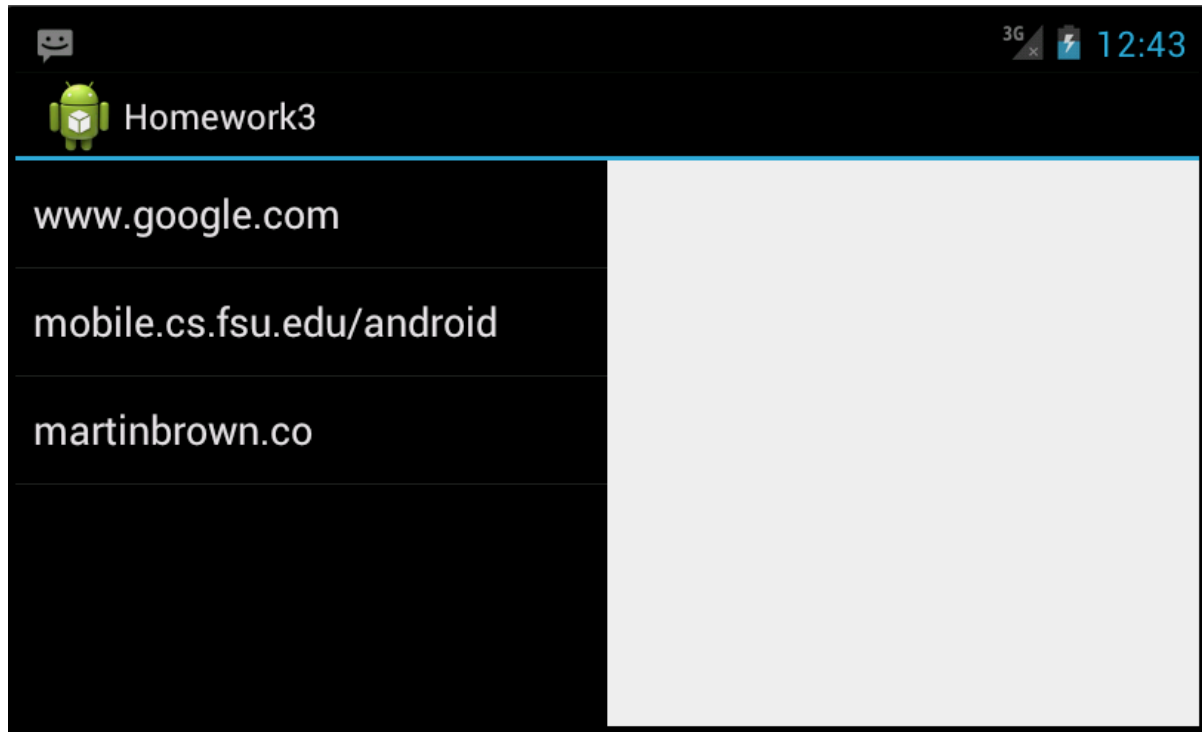
## THINGS TO NOTE
- ● I don't want to take the joy of figuring things out away from you, but if you can't figure out
  - ○ Ask me, the tutor, or your classmates
- ● If anything is unclear, please ask me. I'm very willing to help
- ● Successive SMS messages WILL NOT contain any URLs in the **UrlList** except for the default entries and the new entry (So never more than 4 entries in this example).
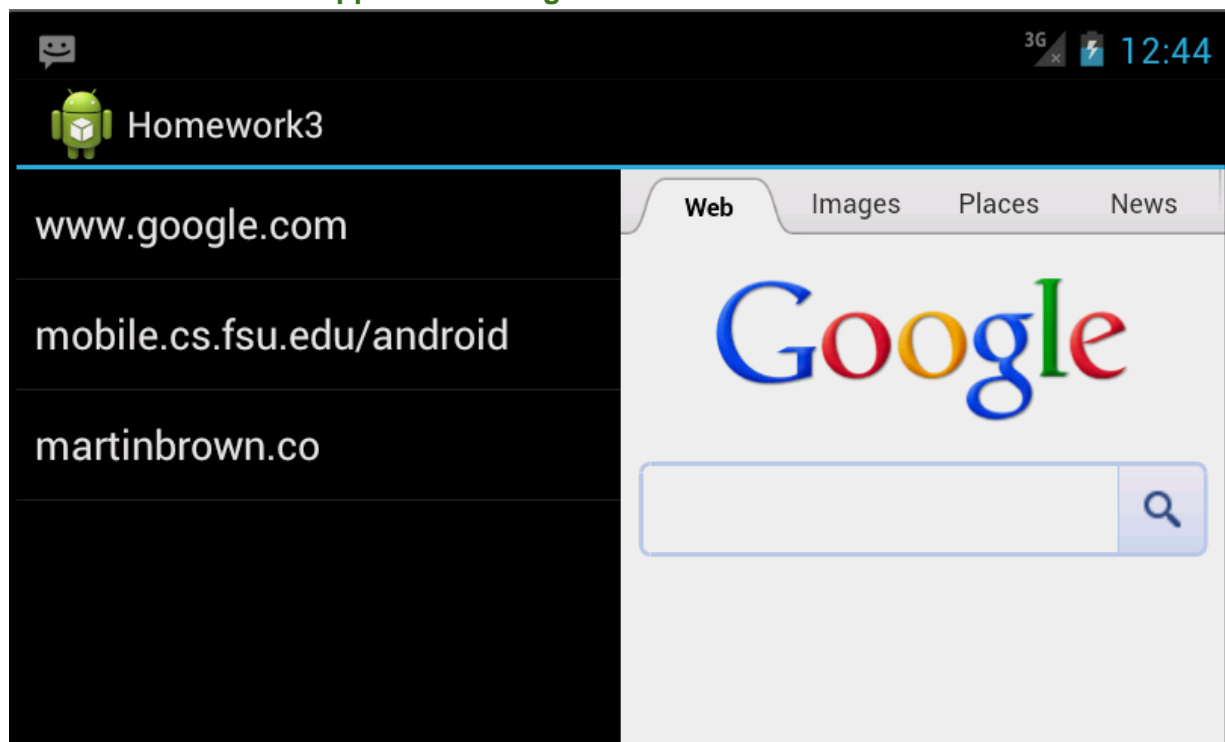  For Example
  - ○ if your default list contains
    - ● www.google.com
    - ● www.apple.com
    - ● www.amazon.com
  - ○ Receiving an SMS message with www.microsoft.com will cause your list to now be
    - ● www.google.com
    - ● www.apple.com
    - ● www.amazon.com
    - ● www.microsoft.com
  - ○ Receiving any additional SMS messages such as www.samsung.com will cause your list to now be
    - ● www.google.com
    - ● www.apple.com
    - ● www.amazon.com
    - ● www.samsung.com
  - ○ It is OK if your app works this way
- ● You can spoof SMS messages to the emulator. (This is part of your assignment)
- ● When you want to "update" your listview, this is part of your assignment.

**EXAMPLE**

**This is the app after receiving an SMS message where the contents of the message was "www.yahoo.com"**