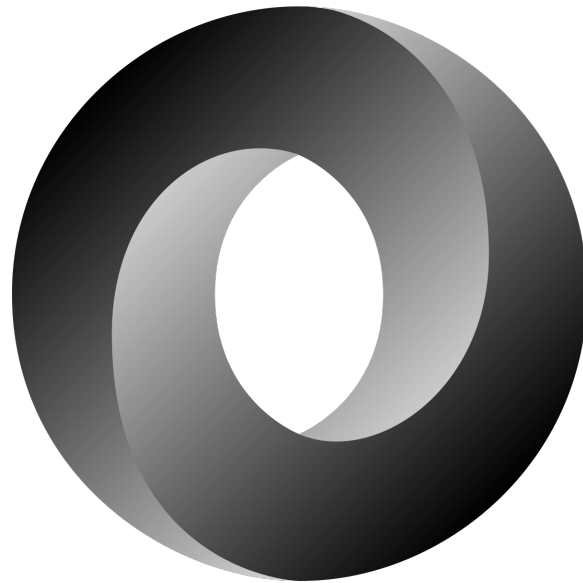# Android
Week Six

Yehyun Ryu
UMN App Developers

Last "Week"

- Finished implementing Networking methods
  - readFromStream(InputStream inputStream)
  - extractFromJSON(String jsonResponse)
  - fetchWeather(String cityName)
- Learned JSON format

Let's Run It!

Debugging

- Add breakpoints

```
52          connection.connect();
```
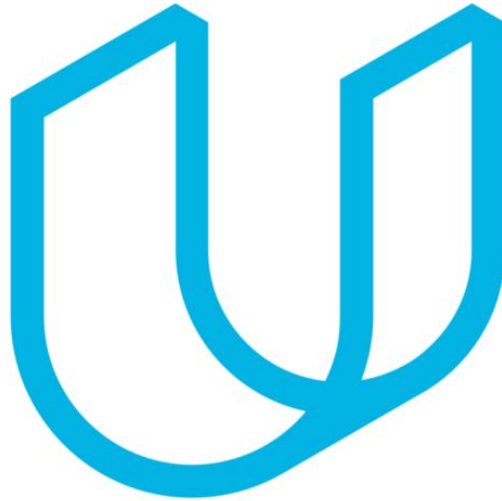
- Run the app in Debug mode

- Use Debug console

NetworkOnMainThreadException

```
android.os.NetworkOnMainThreadException
    at android.os.StrictMode$AndroidBlockGuardPolicy.onNetwork(StrictMode.java:1448)
    at java.net.Inet6AddressImpl.lookupHostByName(Inet6AddressImpl.java:102)
    at java.net.Inet6AddressImpl.lookupAllHostAddr(Inet6AddressImpl.java:90)
    at java.net.InetAddress.getAllByName(InetAddress.java:787)
    at com.android.okhttp.Dns$1.lookup(Dns.java:39)
    at com.android.okhttp.internal.http.RouteSelector.resetNextInetSocketAddress(RouteSelector.java:175)
    at com.android.okhttp.internal.http.RouteSelector.nextProxy(RouteSelector.java:141)
    at com.android.okhttp.internal.http.RouteSelector.next(RouteSelector.java:83)
    at com.android.okhttp.internal.http.StreamAllocation.findConnection(StreamAllocation.java:174)
    at com.android.okhttp.internal.http.StreamAllocation.findHealthyConnection(StreamAllocation.java:126)
    at com.android.okhttp.internal.http.StreamAllocation.newStream(StreamAllocation.java:95)
    at com.android.okhttp.internal.http.HttpEngine.connect(HttpEngine.java:281)
    at com.android.okhttp.internal.http.HttpEngine.sendRequest(HttpEngine.java:224)
    at com.android.okhttp.internal.huc.HttpURLConnectionImpl.execute(HttpURLConnectionImpl.java:461)
    at com.android.okhttp.internal.huc.HttpURLConnectionImpl.connect(HttpURLConnectionImpl.java:127)
    at com.yehyunryu.android.myweathersixfinal.NetworkUtils.makeHTTPConnection(NetworkUtils.java:52)
    at com.yehyunryu.android.myweathersixfinal.NetworkUtils.fetchWeather(NetworkUtils.java:118)
    at com.yehyunryu.android.myweathersixfinal.MainActivity.onCreate(MainActivity.java:18)
```
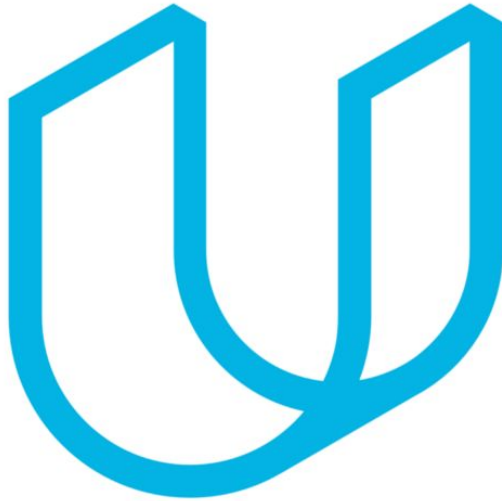
Threading

https://www.youtube.com/watch?v=fos0rP73LFc

Threading

https://www.youtube.com/watch?v=qk5F6Bxqhr4

AsyncTask

https://www.youtube.com/watch?v=8CO0UmLZH80

Implement AsyncTask

Add Loading Indicator

Next Week

- Problems with AsyncTask
- Memory Leak
- Activity Lifecycle
- Loader