

## Create a Hybrid App

Demo 2<sup>nd</sup> day of class- just walk through creating an application  
Use plain activity, put the following in layout/activity\_main.xml;

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/but1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="change site"
        android:onClick="doClick"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.944" />
    <WebView
        android:id="@+id/wv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

---

In MainActivity add the following (replacing onCreate())

```
WebView wv;
String [] URLs={"https://www.washingtonpost.com","https://www.nytimes.com","https://www.reddit.com"};
int url_number = 0; //start with frst string
private void load_next_page() {
    wv.loadUrl(URLs[url_number]);
    url_number=(url_number+1)%URLs.length;
}
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Toolbar toolbar = findViewById(R.id.toolbar);
    setSupportActionBar(toolbar);
    //get a handle to the widget in the UI
    wv=(WebView)findViewById(R.id.wv1);
```

```

        //go to the first page
        load_next_page();
    }

    public void doClick(View view) {
        load_next_page();
    }

```

In manifest- add permissions to access things (make sure you use correct package)

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.myapplication">
    <uses-permission android:name="android.permission.INTERNET" />

    <uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE" />

```

That's it you now have a working Hybrid app. Or a web browser thats wrapped with a native application that controls the browser. Put most logic in the web page you are accessing so you get ease of updating your app. Also since the native portion of the app is simple (all logic is in web page), it's easy to create a iOS version. You can also host your app on app stores (both Apple's and Google Playstore)