

# QuakeReport Part 3

Shared Preferences

# 14 - Add settings activity

- Create Setting Activity.java

```
public class SettingsActivity extends AppCompatActivity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.settings_activity);  
    }  
  
    public static class EarthquakePreferenceFragment extends PreferenceFragment {  
  
    }  
}
```

# modify strings.xml

```
<!-- Settings Menu Item [CHAR LIMIT=NONE] -->  
<string name="settings_menu_item">Settings</string>  
<!-- Settings Activity Title [CHAR LIMIT=NONE] -->  
<string name="settings_title">Earthquake Settings</string>
```

# Create setting\_activity.xml

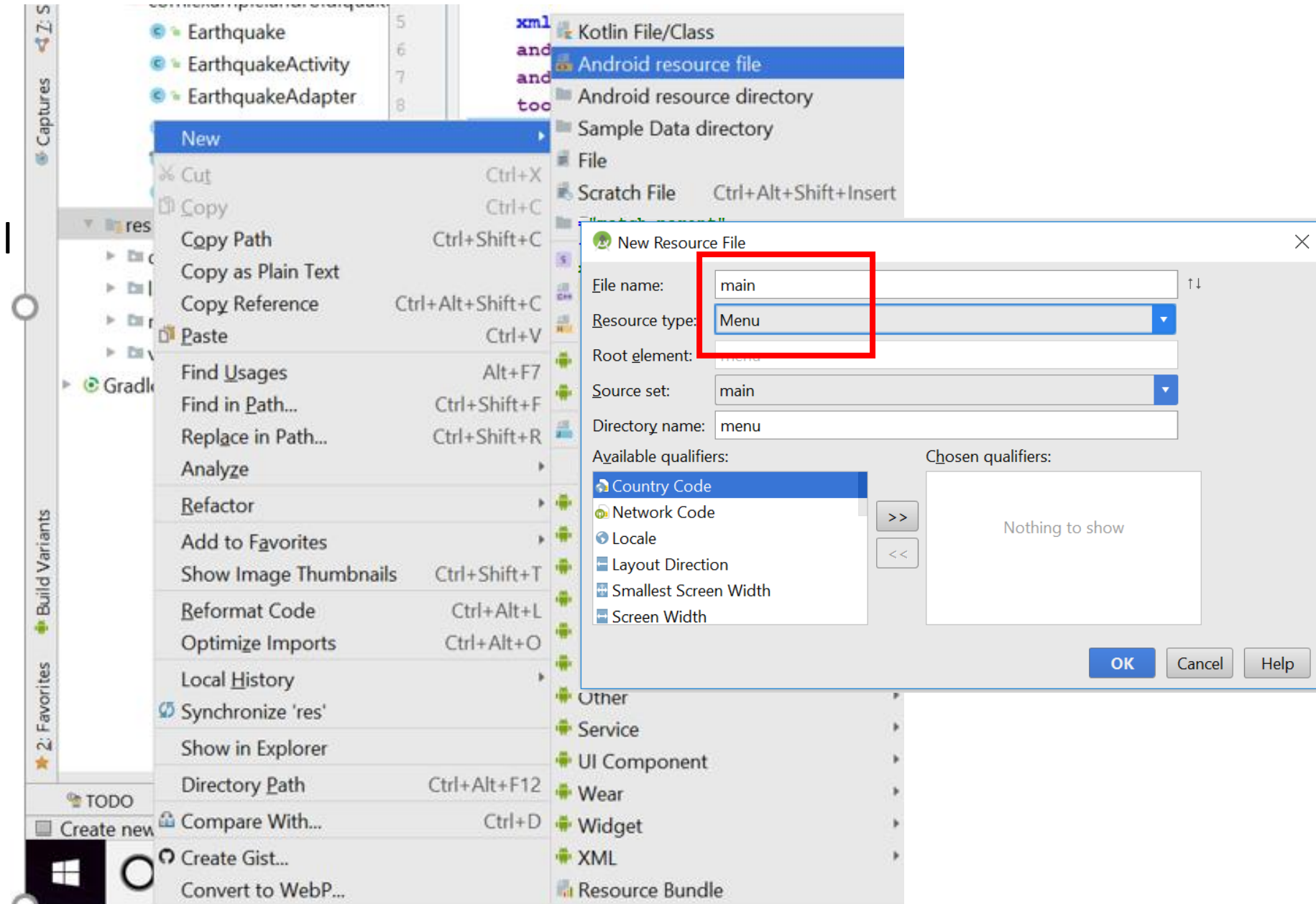
```
<?xml version="1.0" encoding="utf-8"?>
<fragment
    android:name="com.example.android.quakereport.SettingsActivity$EarthquakePreferenceFragment"
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.example.android.quakereport.SettingsActivity">
</fragment>
```

# Declare new activity in AndroidManifest.xml

```
<activity android:name=".EarthquakeActivity">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
<activity
    android:name=".SettingsActivity"
    android:label="@string/settings_title">
    <meta-data
        android:name="android.support.PARENT_ACTIVITY"
        android:value="com.example.android.quakereport.EarthquakeActivity"/>
</activity>
</application>
</manifest>
```

# Add MENU

- Create main xml inside folder:
  - res/menu/main.xml



# Add this to main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu 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"
      tools:context="com.example.android.quakereport.EarthquakeActivity">
    <item
        android:id="@+id/action_settings"
        android:title="@string/settings_menu_item"
        android:icon="@drawable/ic_filter"
        android:orderInCategory="1"
        app:showAsAction="ifRoom" />
</menu>
```

# Import ic\_filter from the link

- <https://drive.google.com/drive/folders/0Byh9wn052jKYd2I1ZWWRKcINsZEE>
- Download All
- Extract the file
- Copy all folder to drawable (incase of unopied, you can just copy one ic\_filter file)



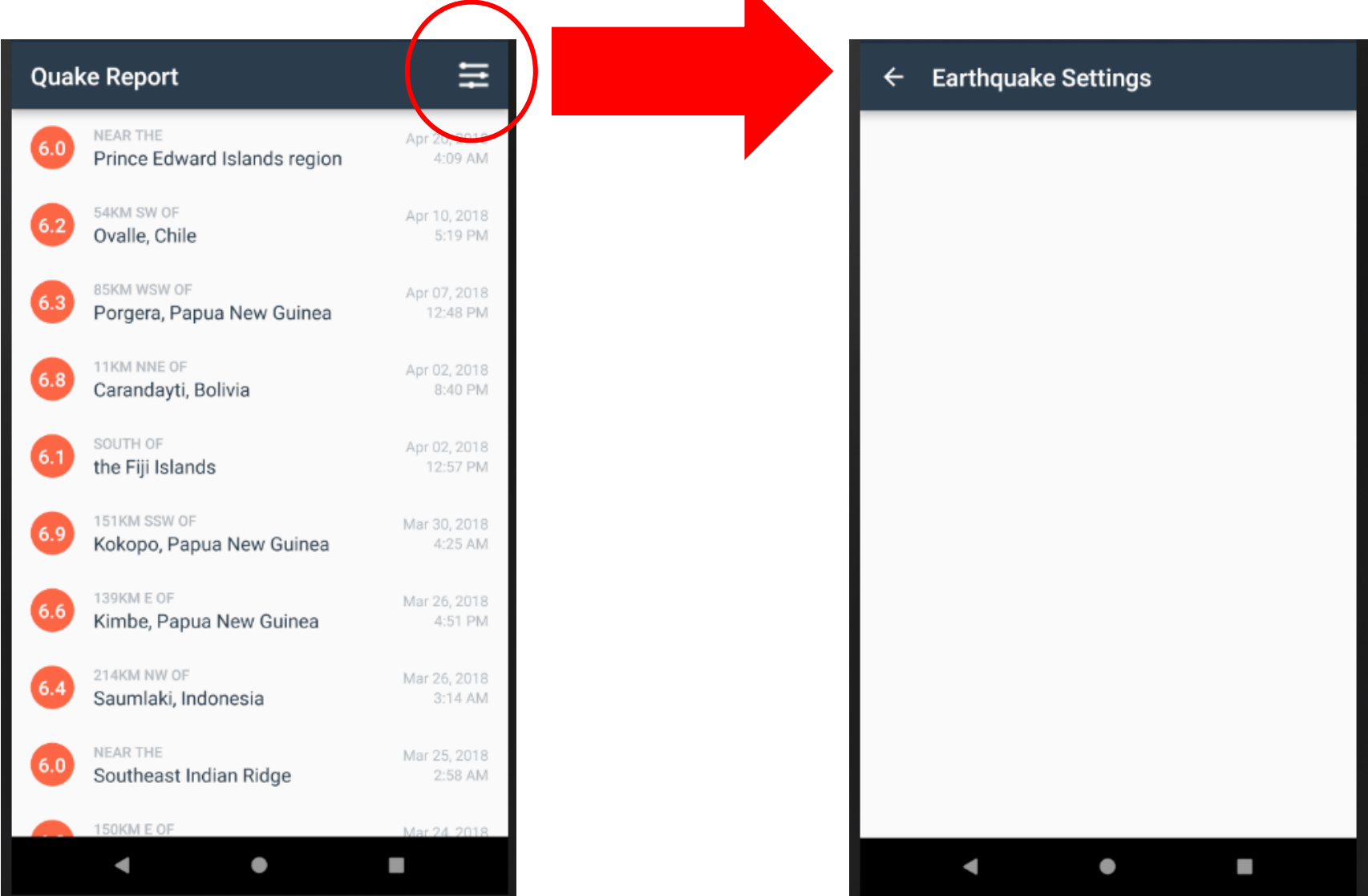
# EarthquakeActivity.java (put at the end of class– after onLoaderReset())

```
@Override
public void onLoaderReset(Loader<List<Earthquake>> loader) { mAdapter.clear(); }

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.main, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    int id = item.getItemId();
    if (id == R.id.action_settings) {
        Intent settingsIntent = new Intent(packageContext: this, SettingsActivity.class);
        startActivity(settingsIntent);
        return true;
    }
    return super.onOptionsItemSelected(item);
}
```

# Run APP

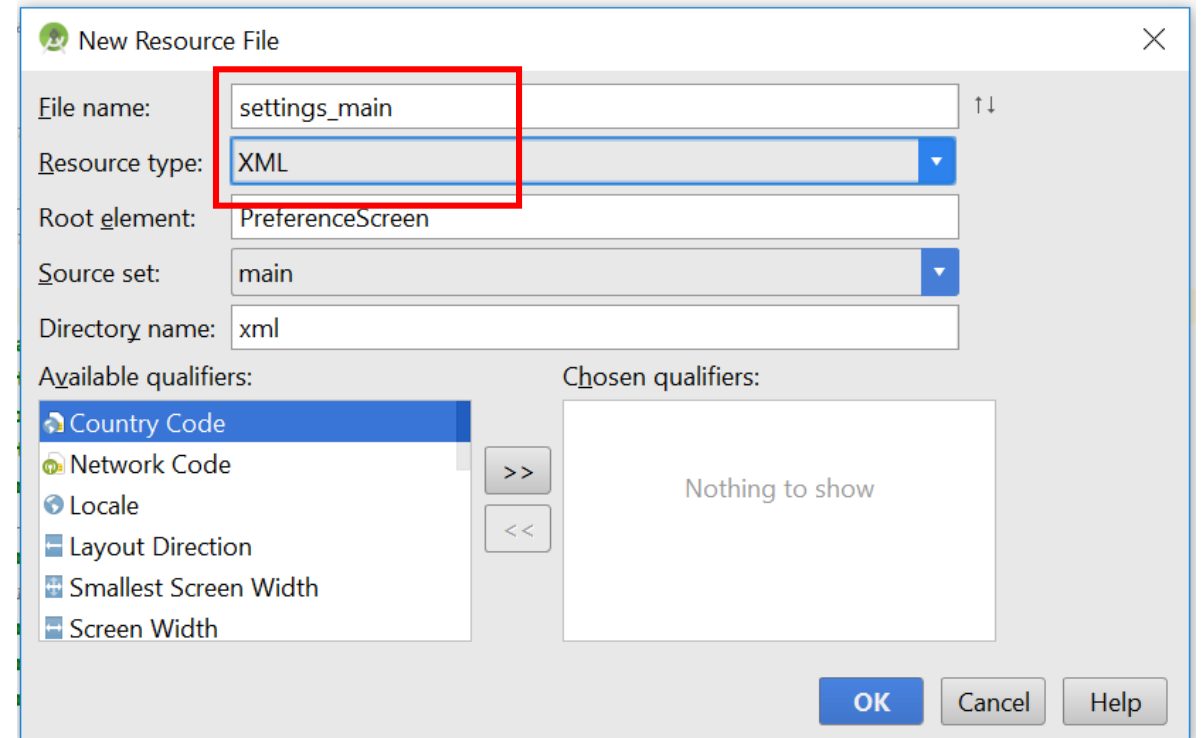
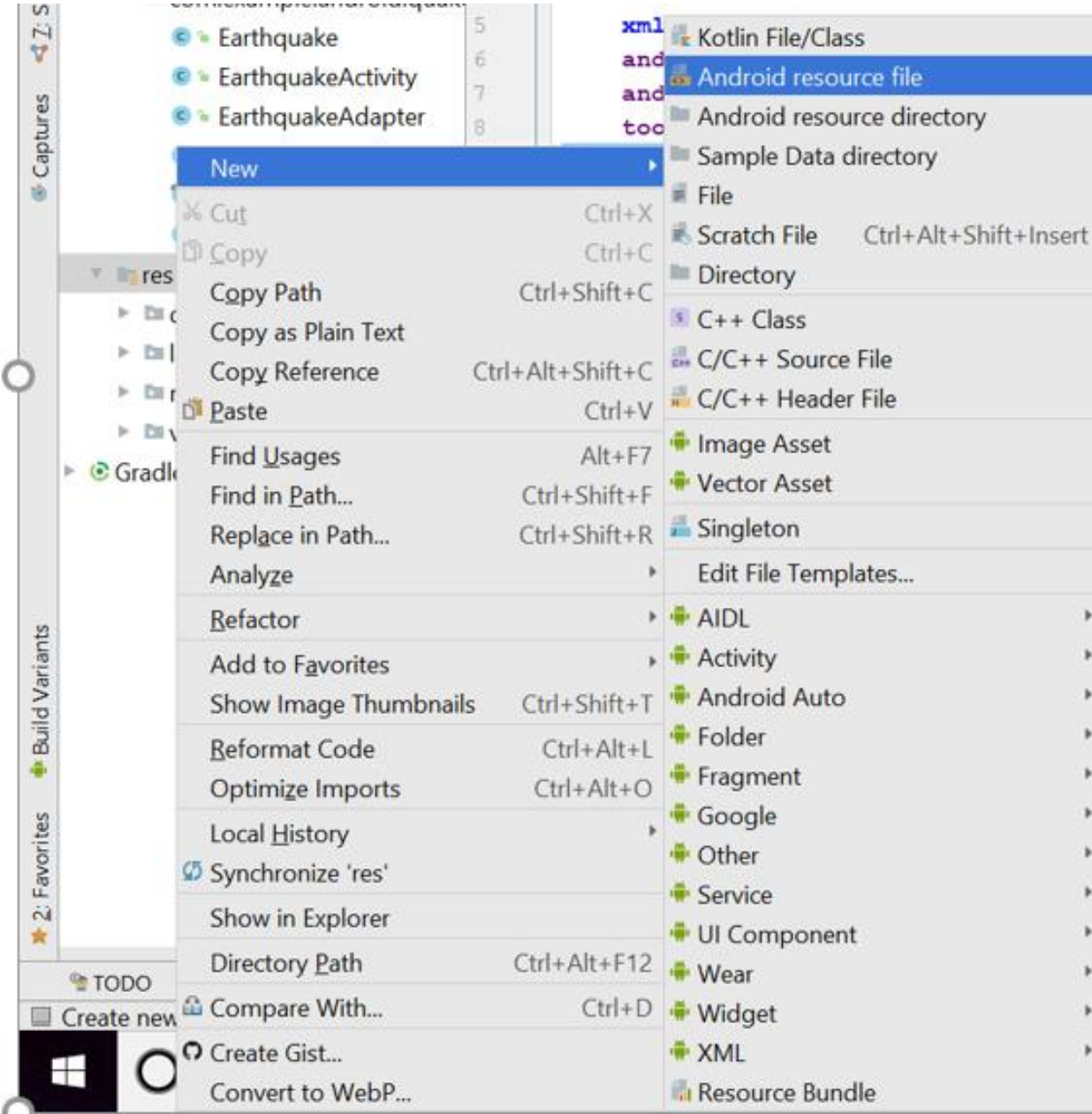


# 15 - Add min magnitude preference

- In strings.xml

```
<!-- Strings For Minimum Magnitude Preference [CHAR LIMIT=30] -->  
<string name="settings_min_magnitude_label">Minimum Magnitude</string>  
<string name="settings_min_magnitude_key" translatable="false">min_magnitude</string>  
<string name="settings_min_magnitude_default" translatable="false">6</string>
```

# Create res/xml/settings\_main.xml



# settings\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<PreferenceScreen
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:title="@string/settings_title">

    <EditTextPreference
        android:defaultValue="@string/settings_min_magnitude_default"
        android:inputType="numberDecimal"
        android:key="@string/settings_min_magnitude_key"
        android:selectAllOnFocus="true"
        android:title="@string/settings_min_magnitude_label" />

</PreferenceScreen>
```

# SettingsActivity.java

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.settings_activity);
}

public static class EarthquakePreferenceFragment extends PreferenceFragment {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        addPreferencesFromResource(R.xml.settings_main);
    }
}
```

# Run APP



# 16 - Add URL building

- In EarthquakeActivity.java : modify USGS\_REQUEST\_URL with:

```
private static final String USGS_REQUEST_URL =  
    "https://earthquake.usgs.gov/fdsnws/event/1/query";
```



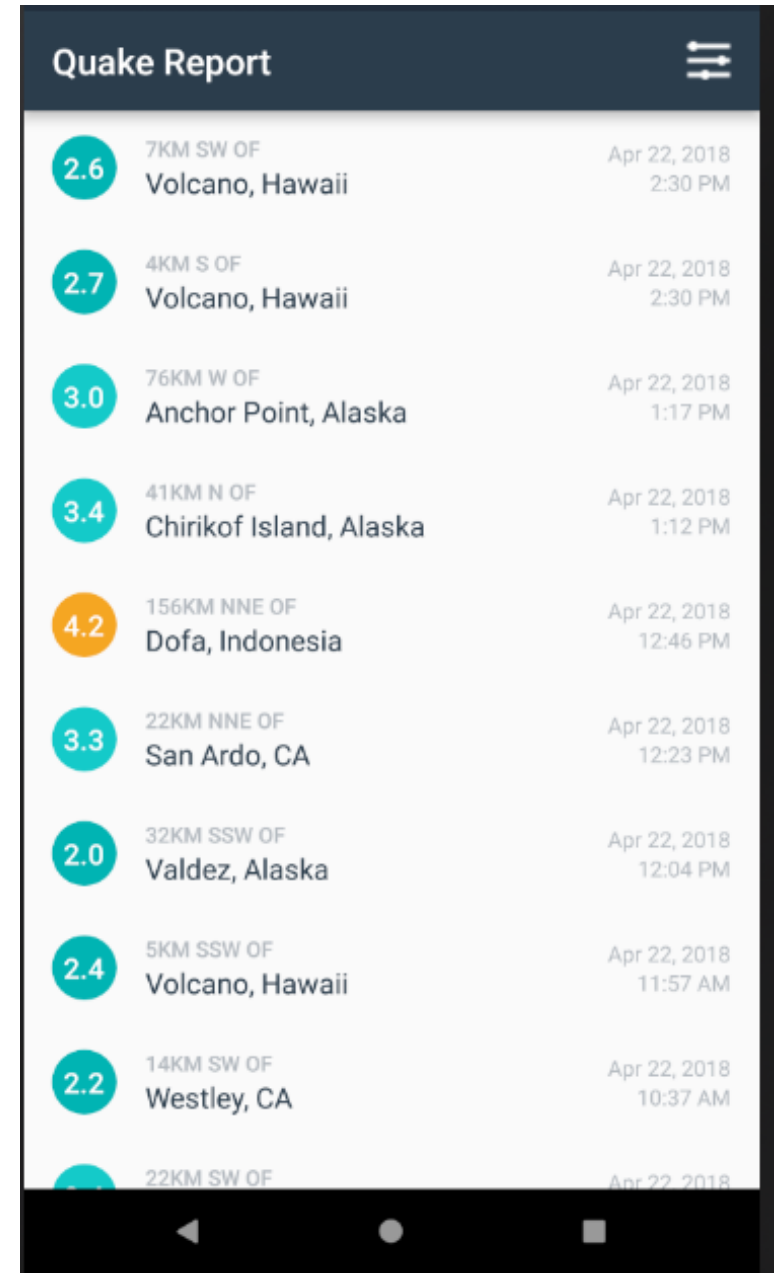
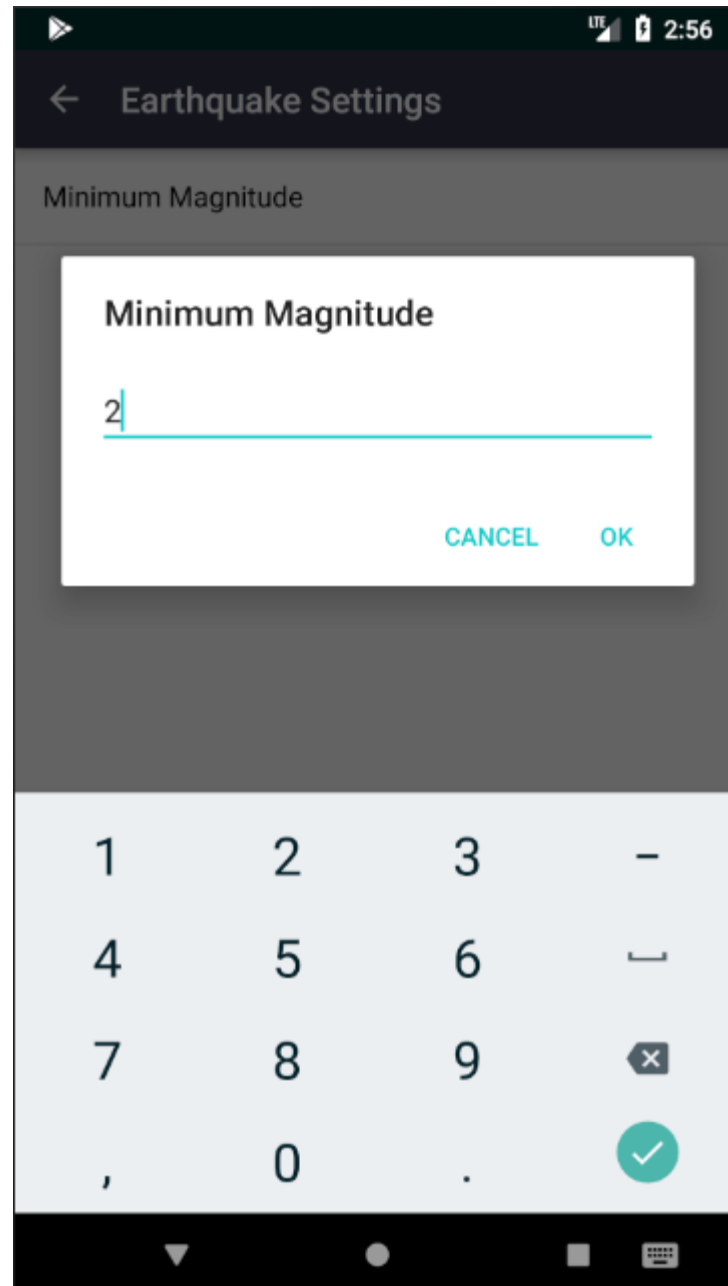
# EarthquakeActivity.java – onCreateLoader()

```
@Override
public Loader<List<Earthquake>> onCreateLoader(int i, Bundle bundle) {
    SharedPreferences sharedPrefs = PreferenceManager.getDefaultSharedPreferences(context: this);
    String minMagnitude = sharedPrefs.getString(
        getString(R.string.settings_min_magnitude_key),
        getString(R.string.settings_min_magnitude_default));
    Uri baseUrl = Uri.parse(USGS_REQUEST_URL);
    Uri.Builder uriBuilder = baseUrl.buildUpon();

    uriBuilder.appendQueryParameter("format", "geojson");
    uriBuilder.appendQueryParameter("limit", "10");
    uriBuilder.appendQueryParameter("minmag", minMagnitude);
    uriBuilder.appendQueryParameter("orderby", "time");

    return new EarthquakeLoader(context: this, uriBuilder.toString());
}
```

# Run APP



# 17 - Display preference summaries

- In SettingsActivity, in EarthquakePreferenceFragment class:

```
public static class EarthquakePreferenceFragment extends PreferenceFragment implements
    Preference.OnPreferenceChangeListener {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        addPreferencesFromResource(R.xml.settings_main);
        Preference minMagnitude = findPreference(getString(R.string.settings_min_magnitude_key));
        bindPreferenceSummaryToValue(minMagnitude);
    }

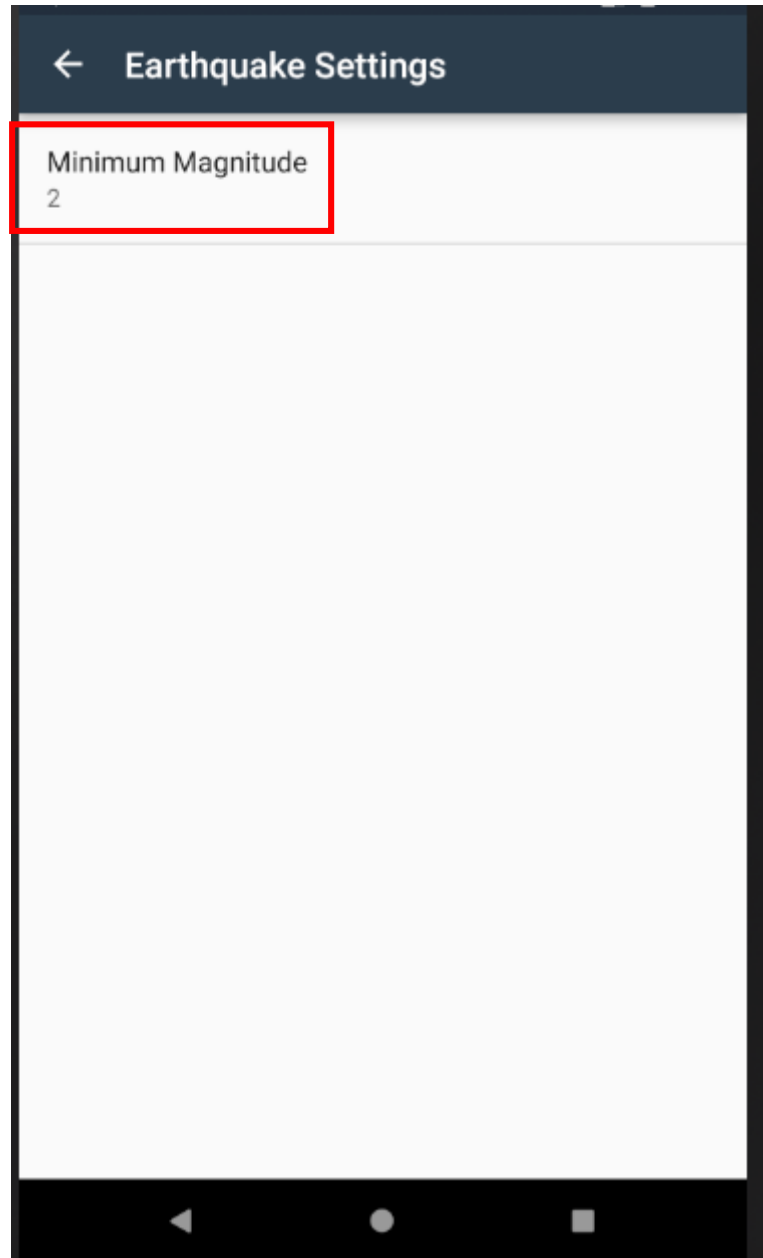
    @Override
    public boolean onPreferenceChange(Preference preference, Object value) {
        String stringValue = value.toString();
        preference.setSummary(stringValue);
        return true;
    }
}
```

# Implement bindPreferenceSummaryToValue()

- Put it after onPreferenceChange()

```
private void bindPreferenceSummaryToValue(Preference preference) {  
    preference.setOnPreferenceChangeListener(this);  
    SharedPreferences preferences = PreferenceManager.getDefaultSharedPreferences(preference.getContext()  
());  
    String preferenceString = preferences.getString(preference.getKey(), "");  
    onPreferenceChange(preference, preferenceString);  
}
```

# Run APP



# 18 - Add order-by preference

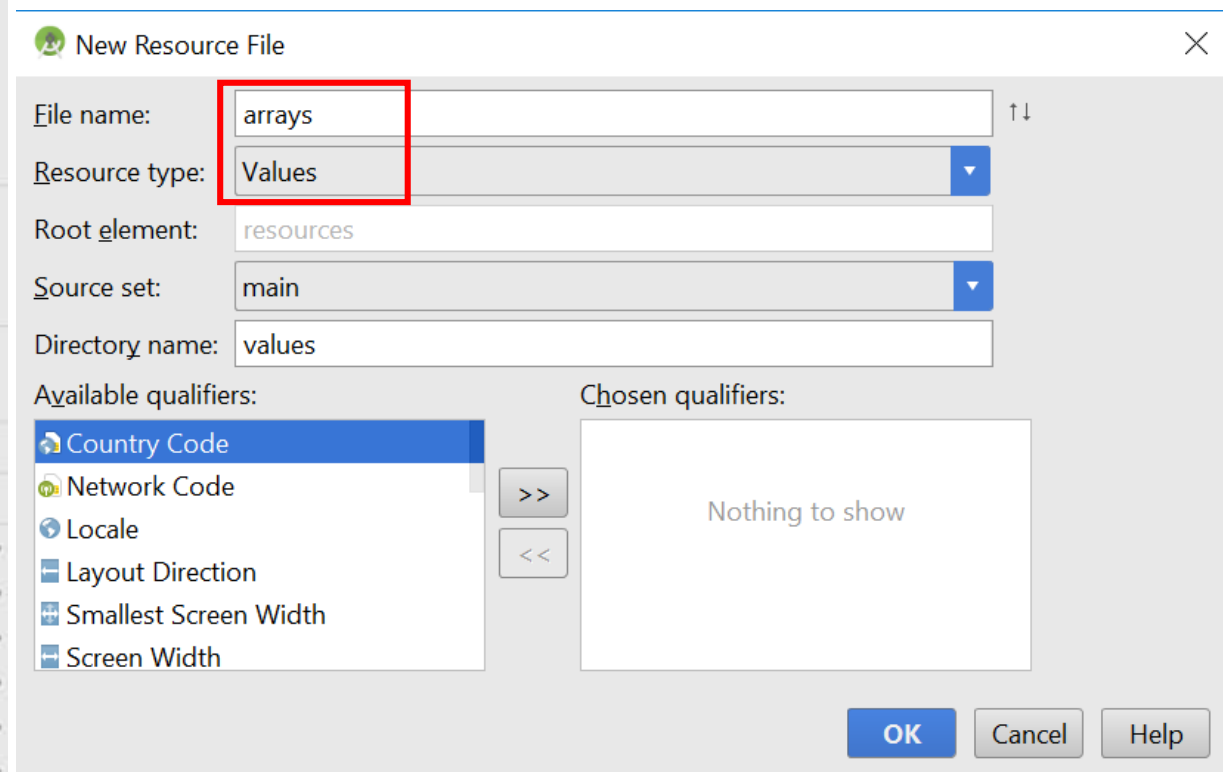
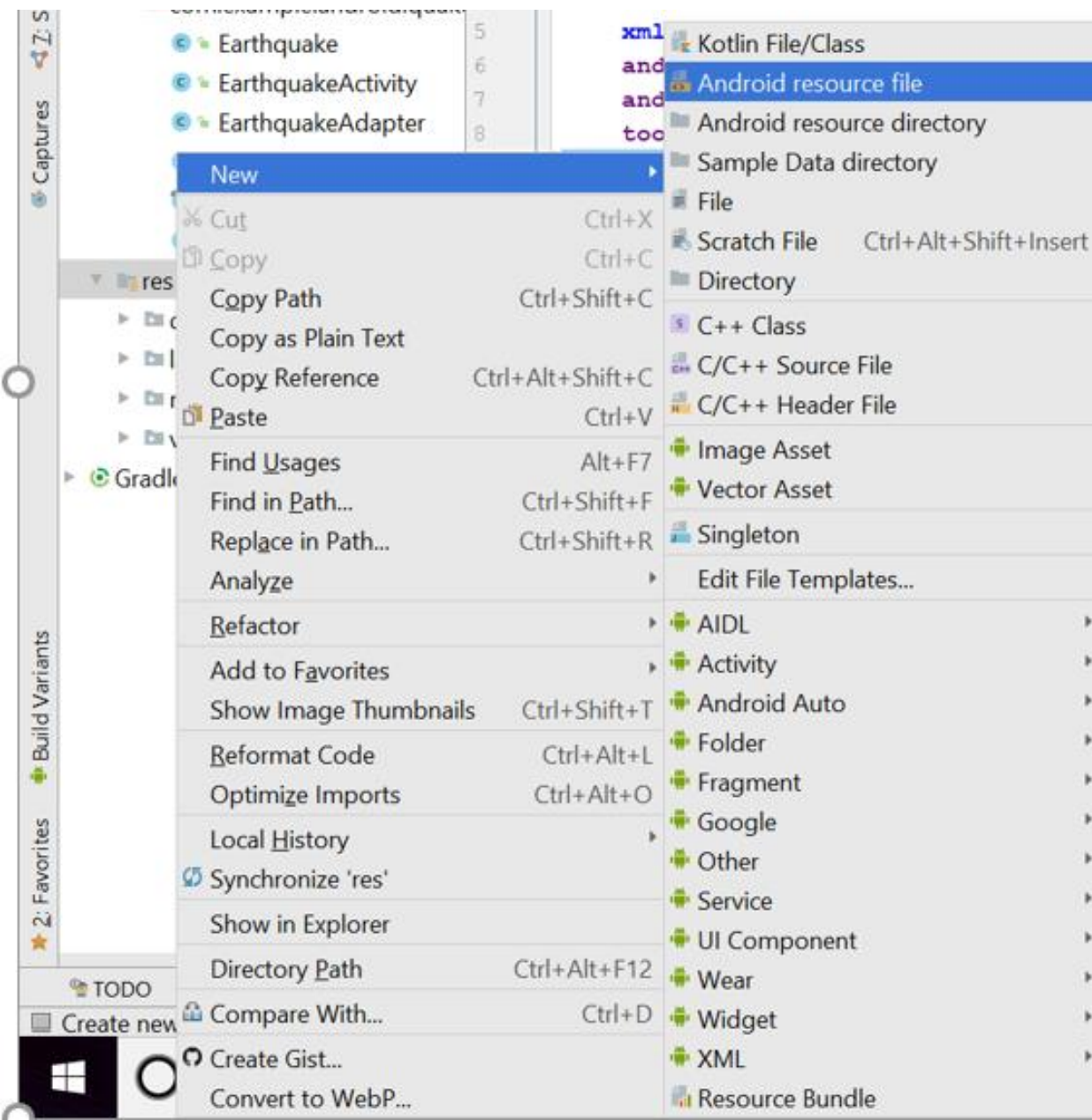
- In strings.xml

```
<string name="settings_order_by_label">Order By</string>
<string name="settings_order_by_key" translatable="false">order_by</string>
<string name="settings_order_by_default" translatable="false">@string/settings_order_by_magnitude_value</string>

<string name="settings_order_by_magnitude_label">Magnitude</string>
<string name="settings_order_by_magnitude_value" translatable="false">magnitude</string>

<string name="settings_order_by_most_recent_label">Most Recent</string>
<string name="settings_order_by_most_recent_value" translatable="false">time</string>
</resources>
```

# Create res/values/arrays.xml



# arrays.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string-array name="settings_order_by_labels">
        <item>@string/settings_order_by_magnitude_label</item>
        <item>@string/settings_order_by_most_recent_label</item>
    </string-array>

    <string-array name="settings_order_by_values">
        <item>@string/settings_order_by_magnitude_value</item>
        <item>@string/settings_order_by_most_recent_value</item>
    </string-array>
</resources>
```



# Settings\_main.xml

```
<PreferenceScreen
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:title="@string/settings_title">

    <ListPreference
        android:defaultValue="@string/settings_order_by_default"
        android:entries="@array/settings_order_by_labels"
        android:entryValues="@array/settings_order_by_values"
        android:key="@string/settings_order_by_key"
        android:title="@string/settings_order_by_label" />

    <EditTextPreference
        android:defaultValue="@string/settings_min_magnitude_default"
        android:inputType="numberDecimal"
        android:key="@string/settings_min_magnitude_key"
        android:selectAllOnFocus="true"
        android:title="@string/settings_min_magnitude_label" />

</PreferenceScreen>
```

# EarthquakeActivity.java – onCreateLoader()

```
public Loader<List<Earthquake>> onCreateLoader(int i, Bundle bundle) {  
    SharedPreferences sharedPrefs = PreferenceManager.getDefaultSharedPreferences(context: this);  
    String minMagnitude = sharedPrefs.getString(  
        getString(R.string.settings_min_magnitude_key),  
        getString(R.string.settings_min_magnitude_default));  
  
    String orderBy = sharedPrefs.getString(  
        getString(R.string.settings_order_by_key),  
        getString(R.string.settings_order_by_default));  
  
    Uri baseUri = Uri.parse(USGS_REQUEST_URL);  
    Uri.Builder uriBuilder = baseUri.buildUpon();  
  
    uriBuilder.appendQueryParameter("format", "geojson");  
    uriBuilder.appendQueryParameter("limit", "10");  
    uriBuilder.appendQueryParameter("minmag", minMagnitude);  
    uriBuilder.appendQueryParameter("orderby", orderBy);  
  
    return new EarthquakeLoader(context: this, uriBuilder.toString());  
}
```

# SettingsActivity.java -- EarthquakePreferenceFragment class

```
public static class EarthquakePreferenceFragment extends PreferenceFragment implements
    Preference.OnPreferenceChangeListener {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        addPreferencesFromResource(R.xml.settings_main);

        Preference minMagnitude = findPreference(getString(R.string.settings_min_magnitude_key));
        bindPreferenceSummaryToValue(minMagnitude);

        Preference orderBy = findPreference(getString(R.string.settings_order_by_key));
        bindPreferenceSummaryToValue(orderBy);
    }
}
```

# SettingsActivity.java – onPreferenceChange()

```
@Override
public boolean onPreferenceChange(Preference preference, Object value) {
    String stringValue = value.toString();

    if (preference instanceof ListPreference) {
        ListPreference listPreference = (ListPreference) preference;
        int prefIndex = listPreference.findIndexOfValue(stringValue);
        if (prefIndex >= 0) {
            CharSequence[] labels = listPreference.getEntries();
            preference.setSummary(labels[prefIndex]);
        }
    } else {
        preference.setSummary(stringValue);
    }
    return true;
}
```

# Run APP

