# Week 5 Lesson Plan

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| *Title* | ECIE 2207/ ECSE 3108/ ECII 2206/ ECSI 2206 |
| *Subject* | Advanced Visual Programming |
| *Author* | Felix Okoth |
| *Grade level* | 2rd Year |
| *Time duration* | 4 hours |
| *Overview* | Permissions, practical Activity, events, Intents and Intent filters, permissions, http calls. |
| *Objective* | * Create an android project **(25 minutes)**   + Create a typical login UI using Linear layout and the necessary widgets   + Introduction to android events (onClick) * Create a second Activity for sending and receiving SMS **(225 minutes)**   + Introduction to Intent and Intent filters **(20 minutes)**   + Improve on the onClick event to navigate from one activity to the next. **(5 minutes)**   + Use Linear Layout (again) to lay out EditText for phone number and a button to be clicked. **(10 minutes)**   + Introduction to permissions (normal permissions and dangerous permissions). **(20 minutes)**   + Use SMSManager to send SMS.     - Confirm SMS sent. **(20 minutes)**   + Add an SMS Broadcast receiver. **(30 minutes)**   + Introductions to checking for permissions **(20 minutes)**   + Introductions to requesting use permissions. **(20 minutes)**   + Implement SMS Broadcast Receiver to receive all incoming SMS’s. **(30 minutes)** * Back to vert.x microservice   + Create ‘post’ web api for receiving SMS’s. **(10 minutes)**   + Add loggers to ensure the received message is logged. **(10 minutes)** * Back to Android   + Use Volley for making http calls. **(20 minutes)**   + Send the received SMS to the microservice. **(10 minutes)** |
| *Materials* | * Read   + <https://developer.android.com/training/volley/>   + <https://developer.android.com/reference/android/app/DownloadManager>   + <https://developer.android.com/training/volley/request>   + <https://developer.android.com/guide/components/intents-filters>   + <https://developer.android.com/guide/topics/permissions/overview> |
| *Activities and procedures* |  |
| *Conclusions* | Practice, practice, practice! We are marking wireframes. Prepare for CAT 3. |
| *Extra credit* |  |