Java / Android

Debugging / Logging

```java
private final String TAG = this.getClass().getName();
...
Log.d(TAG, "button clicked");
Log.e(TAG, "error");
...
```

Exit from the App

```java
finish();
```

Toast / Popup

```java
Toast.makeText(getApplicationContext(), "any Message",
      Toast.LENGTH_SHORT).show();
```

Layout

Align **Content** of Element

```xml
android:gravity="center"
```

Align the Element itself

```xml
android:layout_gravity="right"
```

Table Layout

make rows bigger (higher) than others

```
<TableRow
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_weight="1">
```

all columns the same width

```
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    ...
    android:stretchColumns="*"
    ... >
```

All elements (eg Buttons) **same width** (in a row)

```
<Button
    android:layout_height="match_parent"
    android:layout_width="0dp"
    android:layout_weight="0.5"/>
```

Radio Buttons

```
<RadioGroup
    android:id="@+id/rgFont"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_toEndOf="@id/tvFont"
    android:layout_below="@id/tvSizeLabel">

    <RadioButton
        android:id="@+id/rbUbuntu"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/rbUbuntuText"
        />

    <RadioButton
        .../>
```

```
    <RadioButton
        ... />
</RadioGroup>
```

→ Events

Seek-Bar

```xml
<SeekBar
    …
    android:layout_centerVertical="true"
    android:max="36"
    android:min="12"
    android:progress="24"/>
```

→ Event-Handling

Rounded Buttons

res/drawable → new → Drawable resource File
rounded_button.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="rectangle">
    <solid android:color="#4CAF50" />
    <corners android:bottomRightRadius="20dp"
        android:bottomLeftRadius="20dp"
        android:topRightRadius="20dp"
        android:topLeftRadius="20dp"/>
</shape>
```

main_acitvity.xml

```xml
<Button
    …
    android:background="@drawable/rounded_button"
    android:backgroundTint="@color/dark_grey" />
```

Set Background of rounded Buttons

```java
btAnswers.get(clickedIndex).setBackgroundTintList(ContextCompat.getColorStateList(this, R.color.red));
```

Get Additional Values from .xml

```java
int val = getResources().getInteger(R.integer.testInt1);
```

misc.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <integer name="testInt1">100</integer>
</resources>
```

Fonts

```java
Typeface font;
font = Typeface.defaultFromStyle(Typeface.ITALIC);
font = ResourcesCompat.getFont(getApplicationContext(),R.font.ubuntu);
```

Create font in: **/res/font**

Events

TextChangeListener

```java
etInputYouWantToListenTo.addTextChangedListener(new TextWatcher() {
    @Override
    public void beforeTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
        // ...
    }

    @Override
    public void onTextChanged(CharSequence charSequence, int i, int i1,
int i2) {
        // ...
    }

    @Override
    public void afterTextChanged(Editable editable) {
        // ...
    }
});
```

OnClickListener

Inner Anonymous Class

```java
btClear.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        onClear(view);
    }
});
```

Inner Class

```java
public class MainActivity extends AppCompatActivity {

    // instance vars

    @Override
    protected void onCreate(Bundle savedInstanceState){
        // ...
        MyOperatorClickListener mocl = new
                        MyOperatorClickListener();
        btPlus.setOnClickListener(mocl);
        btMinus.setOnClickListener(mocl);

    }
    // ...

    public class MyOperatorClickListener implements
    View.OnClickListener{

        @Override
        public void onClick(View view) {

        }
    }
}
```

Over .xml

```
android:onClick="onEnter"
```

```
public void onEnter(View view){...}
```

OnCheckedChangeListener // Radio Buttons

```java
rgFont.setOnCheckedChangeListener(new
                        RadioGroup.OnCheckedChangeListener() {
    @Override
    public void onCheckedChanged(RadioGroup radioGroup, int i) {
        ...
    }
});
```

OnProgressChanged // Seekbar

```java
private void onProgressChanged(SeekBar seekBar, int progressValue,
boolean b){
    // ...
}
```

Reading from a file

Creating a File:
Res → new Android Resource Directory → raw
Raw → new File

```java
InputStream inputStream =
getApplicationContext().getResources().openRawResource(R.raw.questions);
BufferedReader reader = new BufferedReader(new
InputStreamReader(inputStream));
```