

Stevel05 OutputViews Operation.

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Updates

Template: V1.01: Updated with better support for TabHost, ScrollView and HorizontalScrollView.

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Overview

This is a suite of programs aimed at providing some documentation for the layout files. There are three apps, one written in B4j which parses a template file into which a layout has been loaded and creates a map for variable names that can be read by the second app.

The second app is the template, which has a code module and an options activity that then collects all of the information it can from the views in the running app and layout and creates a csv file that can be 'shared' via email or to google docs and imported into a spreadsheet or your favourite report writer.

The third app is a Basic viewer app that reads the csv file into a database then provides a series of linked views to enable you to walk through the data.

How to start

SLReadInputTypes

Unzip and copy the jar and xml files to you addl libs folder

Basic Viewer

Because there are three apps, it could get a little confusing, so the first thing to do is to compile and install the Basic viewer app on your device, you can then forget about that and it will be called when necessary.

B4j Jar

Download the OutputViews jar from the link on the forum post, then copy it to a place on your computer hard disk that you'll remember, or create a link to it.

Prepare the OutputViews Template

Now unzip and copy the output views app folder to a convenient place, but don't try to run it yet, it will fail.

In you computers file manager, make a copy of the Template.b4a file and name it with something suitable, like the name of the layout you want to document. Then open the file in b4a, open the designer and open an existing layout file from one of your projects. You can back it up first, but opening it in a new project will copy the layout file to the new project folder, so none of your working apps can get damaged.

While in the designer, select Generate members, click on Select All Views and click Generate members. That should Dim all the views in the Globals subroutine of the b4a file.

Change the Activity.Loadlayout line to load your layout file.

Save that and close the project. Don't worry about any reported errors at this stage.

Run the B4j Jar File

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Now run the OutputViews.jar on your computer, click on choose a file and select the file you have just created. The file you select will be checked to make sure it is a valid template file. Then click process.

Once that completes, you can choose to show the file, which will open a TextView form and display the program as it will be saved or click on the save button. You will be offered a new filename to save as, or you can change it as you feel appropriate.

Run the b4a template app

Now open the file you have just saved in the b4a IDE and compile and run it on your device.

Once that complete's, you can save the output file to the device, or share it with any of the resources you have installed. i.e. gmail or google drive. Or open it in the basic viewer to have a look through the data.

How it works

Outputviews B4j jar

Once you have created and updated the template file with the layout and generated all the members, the B4j Outputviews app parses the template file and builds a map of all of the view variables within the template file so that the main B4a OutputViews app can get the names from each object.

OutputViews B4a app

The B4a runs through all the views it can find starting with the Activity and drills down through each view, if that view can host other views, it drills down through that level too.

If your layout contains custom views, you can add the source files and they too will be parsed and variables added to the maps. If the custom views are in libraries, then the variable names won't be found, but the views will be recorded as custom views with the appropriate type.

It collects all the data it can on each view and adds it to a csv file.

Basic Viewer B4a app

The Basic Viewer app converts the csv file internally into a sqlite database file, and then builds a navigable structure in html to allow traversal through the views.

Runtime options

When creating the template there is an option to try to get the design sizes for x,y,width and height for each view, this is dependent on the original design scale being 1. The the layout was designed on a different scale, you can change the DesignScale global initialization as appropriate. Or you can switch this off altogether by changing RemoveScale to False.

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Limitations

If you have custom views the change the layout when running. You will get the current sizes de-scaled by the DesignScale ration. If the customviews are in code, you could add the modules, and comment out the code that sizes the views. If they are compiled libraries, there's not a lot you can do about it.

TabHosts Scrollview and HorizontalScrollView

If your layout contains TabHosts, ScrollView or HorizontalScrollView, you can add the relevant panels to the View within the template and the program will find the panels and report the correct parent for each view. If you don't add them, but have created the panels within the layout, they will be reported as children of the activity.

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Set-up Checklist

	Action	Check	Comments
1	Compile and install Basic Viewer on your device.		
2	Copy B4j OutputViews Jar to a suitable location on your computer.		

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Operation Checklist

	Action	Check	Comments
1	Copy and rename Template file.		
2	Open the file in B4a.		
3	Open Designer, Load an existing layout and Generate Members.		
4	Edit Activity.Loadlayout to load your file.		
5	Save your template file.		
6	Run B4j Jar.		
7	Choose your template file saved in 5.		
8	Save the output file.		
9	Open the output file from 8 in B4a.		
10	Compile and run it on your device.		
11	Save the output file to the device.		
12	Share the file or View with Basic Viewer.		