



B4X Booklets

B4A B4i B4J B4R

B4X Help tools

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To search for a given word or sentence use the Search function in the Edit menu.

All the source code and files needed (layouts, images etc.) of the example projects in this booklet are included in the SourceCode folder.

For each program there are three folders.

SourceCode

MyFirstProgram

B4A

MyFirstProgram.b4a

B4i

MyFirstProgram.b4i

B4J

MyFirstProgram.b4j

Both programs MyFirstProgram and SecondProgram are almost the same for B4A, B4i and B4J.

Updated for following versions:

B4A version 11.0

B4i version 7.50

B4J version 9.10

B4R version 3.71

[B4X Booklets:](#)

B4X Getting Started

B4X Basic Language

B4X IDE Integrated Development Environment

B4X Visual Designer

B4X Help tools

B4XPages Cros-platform projects

B4X CustomViews

B4X Graphics

B4X XUI B4X User Interface

B4X SQLite Database

B4X JavaObject NativeObject

B4R ExamplePrograms

You can consult these booklets online in this link [\[B4X\] Documentation Booklets](#).

Be aware that external links don't work in the online display.

1 B4X platforms

B4X is a suite of BASIC programming languages for different platforms.

B4X suite supports more platforms than any other tool

ANDROID | IOS | WINDOWS | MAC | LINUX | ARDUINO | RASPBERRY PI | ESP8266 | AND MORE...

- **B4A**  **Android**

B4A is a **100% free** development tool for Android applications, it includes all the features needed to quickly develop any type of Android app.

- **B4i**  **iOS**

B4i is a development tool for native iOS applications.

B4i follows the same concepts as B4A, allowing you to reuse most of the code and build apps for both Android and iOS.

- **B4J**  **Java / Windows / Mac / Linux / Raspberry PI**

B4J is a **100% free** development tool for desktop, server and IoT solutions.

With B4J you can easily create desktop applications (UI), console programs (non-UI) and server solutions.

The compiled apps can run on Windows, Mac, Linux and ARM boards (such as Raspberry Pi).

- **B4R**  **ARDUINO** **Arduino / ESP8266**

B4R is a **100% free** development tool for native Arduino and ESP8266 programs.

B4R follows the same concepts of the other B4X tools, providing a simple and powerful development tool.

B4R, B4A, B4J and B4i together make the best development solution for the Internet of Things (IoT).

- **B4XPages**

B4XPages is an internal library for B4A, B4i and B4J allowing to develop easily cross-platform programs.

B4XPages is explained in detail in the B4XPages Cross-platform projects booklet.

Even, if you want to develop only in one platform it is interesting to use the B4XPages library it makes the program flow simpler especially for B4A.

2 Help tools

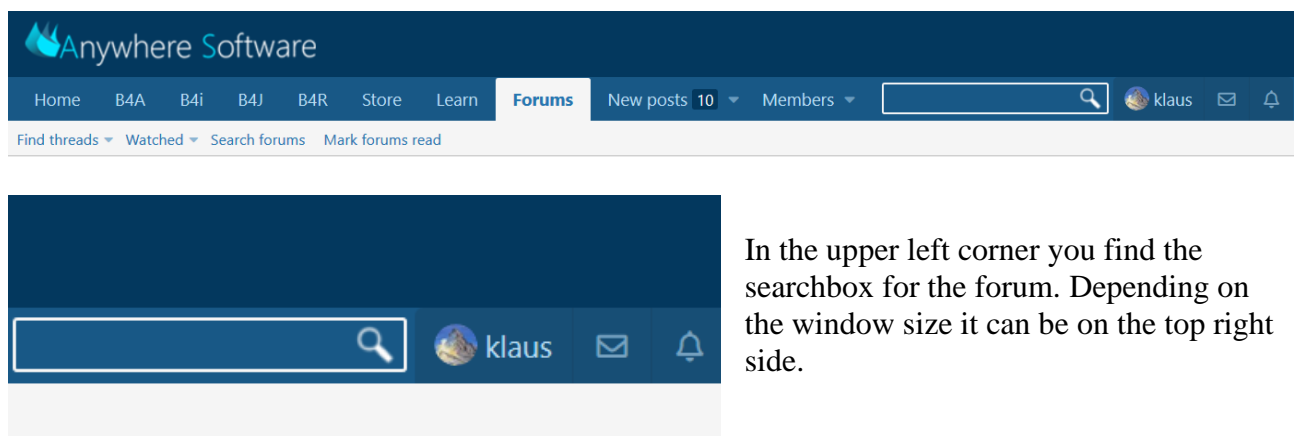
To find answers to many questions about B4X the following tools are very useful.

2.1 Erel is Teaching Programming

Erel has made video tutorials for different subjects

These tutorials can be found in the forum at this link: <https://www.b4x.com/etp.html>

2.2 Search function in the forum

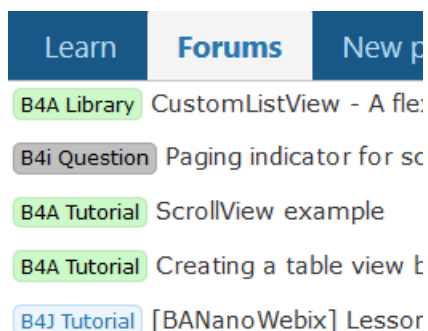


Enter a question or any keywords and press 'Return'.

The function shows you the posts that match your request.



Example: Enter the keyword ScrollView.



A list of the result is displayed below the menu.

Click on an item to show the thread.

And the result:

Search Results

All products ▾

Any time ▾

Any prefix ▾

Author

Object documentation: [ScrollView](#)

B4A Library

[CustomListView - A flexible list based on ScrollView - Erel](#)

Jul 15, 2012

Edit: latest version of CustomList**View** is available here: <https://www.b4x.com/android/#content> The native List**View** is optimized for very large lists. Instead of creating optimization makes it very difficult to customize the items. CustomList**View** is an improvement up to 1000 or...

B4A Tutorial

[ScrollView example - Erel](#)

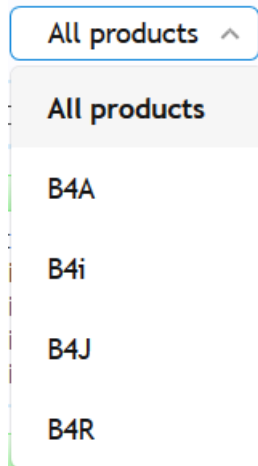
Nov 16, 2010 (4 reactions)

The **ScrollView** is a very useful container which allows you to show many other **views** contains the other **views**. The user... add those to a **ScrollView**. <http://www.basic4android.com> done by calling: **ScrollView.Panel.AddView(...)** In order to avoid "out of memory" panel height 200dp...

Click on the title to show the selected post.

On the left you have a list of forums which you can filter by products.

Example with B4i:



Search Results

B4i ▾

Any time ▾

Any prefix ▾

Author

Bookmark Tag

Object documentation: [ScrollView](#)

B4i Question

[Paging indicator for scrollview - Keith Yong](#)

Apr 21, 2016

Understand that there is a option to set the scrollview with paging function, but how do i show the...

[link](#): Change this line in Page1_Resize: PageControl.SetLayoutAnimated(500, 0.5, 0, 80%y, 100%x, 40dip) O...

[link](#): Change this line in Page1_Resize: PageControl.SetLayoutAnimated(500, 0.5, 0, 80%y, 100%x, 40dip) ...

[link](#): How can I move (and remove) the paging indicator in another position?...

2.3 Search the forum with Google

Sometimes it is interesting to search in the forum with the Google search engine.

Example:

site:b4x.com -"Search Results" "[B4X] B4XPages" "Android Tutorial" -questions

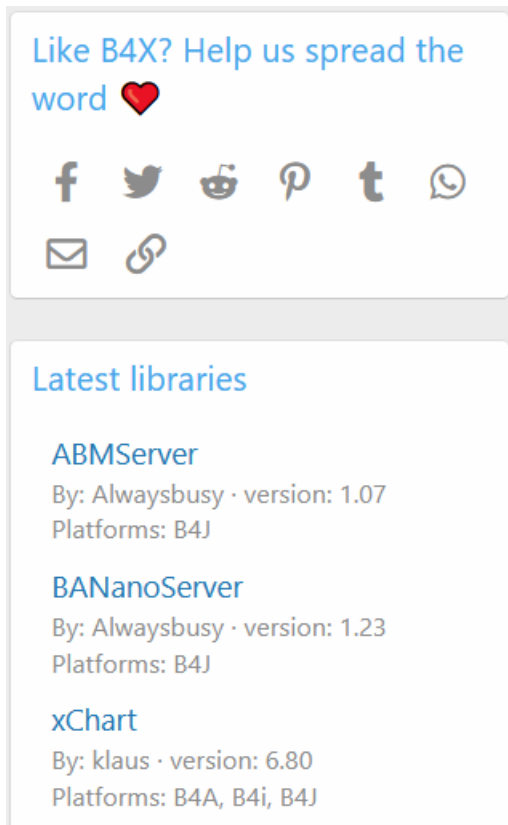
- -"Search Results" searches for results
- "[B4X] B4XPages" search text filter
- "Android Tutorial" sub forum

Possible sub forums:

- "Android Question"
- "Android Tutorial"
- "Android Example"
- "Android Library"
- "iOS Question"
- "iOS Tutorial"
- "iOS Example"
- "iOS Library"
- "B4J Question"
- "B4J Tutorial"
- "B4J Example"
- "B4J Library"
- Etc


2.4 Latest libraries widget in the forum

In the top right corner you find the Latest libraries widget which lists the latest updated library versions.



2.5 Libraries Google sheet

This site shows all the libraries available in the forum.

 B4X Libraries ☆ 📁 ☁			
Fichier Édition Affichage Insertion Format Données Outils Modules compléme			
↶ ↷ 🖨 🔍 100% \$ % .0 .00 123 Par défaut ... 11 B I 🔗			
A157	fx	iHUD	
	A	B	
1	Library Name	Short Description	
2			
327	xCustomListView	Cross platform full customized list. No app is complete without it.	
328	xFFT	b4xlib Class to calculate Fast Fourier Transform	
329	xGauges	b4xlib CustomView to draw gauges	

C	D	E	F
Files Names (without extension)			
B4A	B4i	B4J	B4R
xCustomListView	xCustomListView	xCustomListView	
xFFT	xFFT	xFFT	
xGauges	xGauges	xGauges	

G	H	I	J
Last Update		Author	IDE Comment
Version	Date		
1.73	25-Mar-2020	Erel	
1.2	14-Aug-2020	klaus	
1.7	25-Jun-2020	klaus	

Columns:

- Library name.
- Short description.
- Files Names (without extension) for each platform.
- Last update.
- Author.
- IDE Comment, shown in the IDE in the Libraries Manager Tab.
- Forum linl, not shown in the images.

2.6 Ask a question in the forum

If you have looked for an answer to your problem with the search function in the forum and didn't find a solution, you can ask a question in the forum.

Below you find a list with several points to take into account when you ask a question.

This is the best way to get rapidly a concrete solution.

The list is a summary of this thread in the forum:

[For new\(er\) members: How to post a question / issue.](#)

The numbering is a bit different from the post in the forum.

2.6.1 Before asking a question in the forum


Assume you're not the first person having that question.

1. Have you already looked in the forum for a solution?
2. Have you installed B4x as described?
3. Have you read relevant tutorials and / or the documentation?
[\[B4X\] Erel Teaches Programming - video tutorials.](#)
[B4X Booklets.](#)

2.6.2 How to ask a question in the forum

Before asking the question select the right sub-forum for the right platform and type of question.

Click on the Forums tab  to show all forums.
Select the right one.

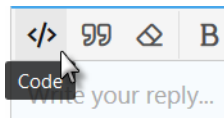
Click on the  button to start.

And then:

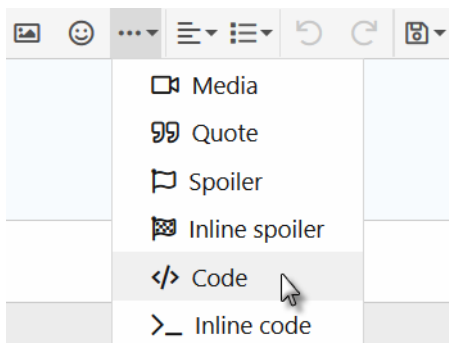
1. Always start a new thread for your question.
2. Give the title a meaningful sentence.
3. Describe what the problem is (full sentences, not 3 words, not "my car doesn't work - guess what it is")

4. Please post the code within **CODE TAGS** and the error message from the Logs as **TEXT**. Give the helpers a starting point , a code sample, a stripped out project that we can look at, analyse and **POINT YOU IN THE RIGHT DIRECTION...**
Helpers may even provide a fully working solution based on **YOUR WORK IN PROGRESS!**

To add code samples use the function `</>` :



Either directly in the ToolBox



or in the Insert function

This window is shown, you can copy code from the IDE directly in it.

Insert code

Code block title:

Optional. If specified, the default code language name will be replaced with title text at code block header. For example, can be used for specifying filename.

Highlight lines:

Optional. Line numbers you want to highlight. For example, "2, 4-6" will highlight lines 2, 4, 5 and 6.

Language:

B4X

```
1 Sub AppStart (Form1 As Form, Args() As String)
2   MainForm = Form1
3   MainForm.RootPane.LoadLayout("Main") 'Load the layout file.
4   MainForm.Show
5
6   InitLineChart
7   InitYXChart1
8 End Sub
```

Continue

Add some code, the result is below.

And the result.

Preview

B4X:

```
1 Sub AppStart (Form1 As Form, Args() As String)
2   MainForm = Form1
3   MainForm.RootPane.LoadLayout("Main") 'Load the layout file.
4   MainForm.Show
5
6   InitLineChart
7   InitYXChart1
8 End Sub
```

You can also add another title than B4X and highlight lines.

Insert code



Code block title:

Optional. If specified, the default code language name will be replaced with title text at code block header. For example, can be used for specifying filename.

Highlight lines:

Optional. Line numbers you want to highlight. For example, "2, 4-6" will highlight lines 2, 4, 5 and 6.

Language:



```
1 Sub AppStart (Form1 As Form, Args() As String)
2   MainForm = Form1
3   MainForm.RootPane.LoadLayout("Main") 'Load the layout file.
4   MainForm.Show
5
6   InitLineChart
7   InitYXChart1
8 End Sub
```

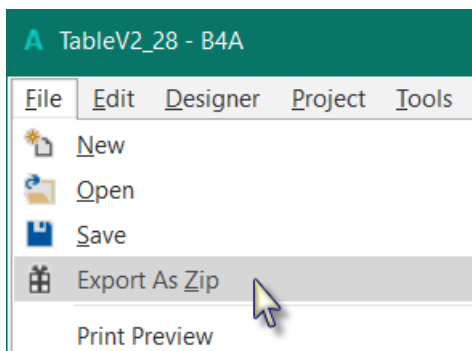
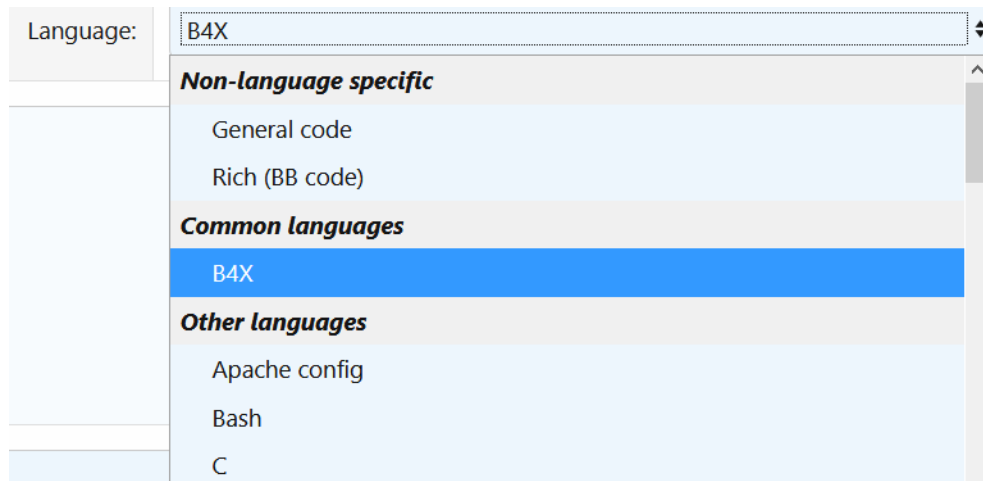
Continue

And the result.

AppStart:

```
1 Sub AppStart (Form1 As Form, Args() As String)
2   MainForm = Form1
3   MainForm.RootPane.LoadLayout("Main") 'Load the layout file.
4   MainForm.Show
5
6   InitLineChart
7   InitYXChart1
8 End Sub
```

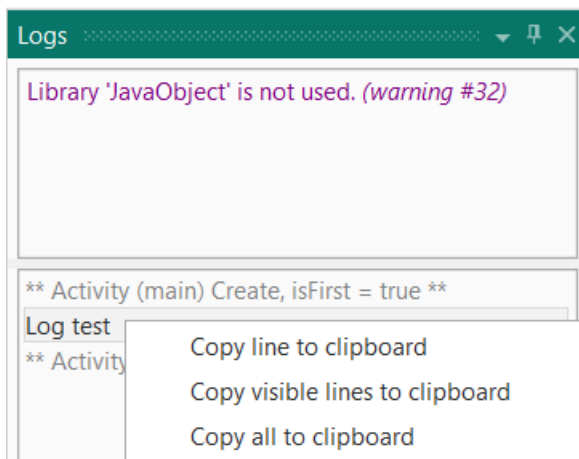
You can also select another language:



When you post a project, attach it as a zip file.
Generate it from the IDE:

And upload the file  [Attach files](#) .

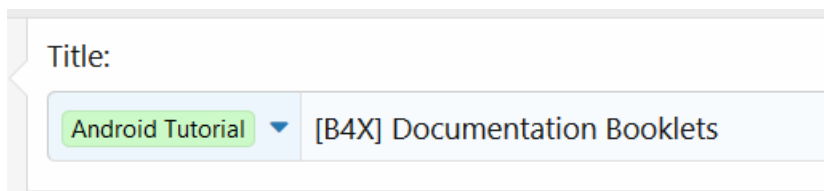
5. Don't post images of screen captures of Logs or error messages.
Post them as text (see point 3)!
Post only images illustrating the problem.



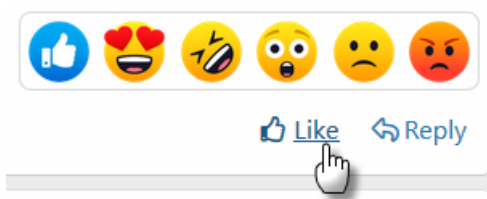
How to copy Logs, in the Logs Tab, right
click on the corresponding line:

You get a submenu with three options.

6. Assume that there are many experienced users having huge and complex apps. B4x is working 100%. So if you have an issue it's mostly a programming mistake. Don't start complex projects without any experience.
7. Many users in the forum love to help, but you need to help them to understand the issue (see esp. 1 - 3).
8. When someone is trying to help you and asks questions for clarification, don't ignore these questions because helpers need to understand what exactly your problem is.
9. Please, don't post the same questions in multiple different threads.
After resolving the error or problem, post the solution to share it with other users.
10. When a problem has been solved, and the solution added in the thread, please add [Solved] to the title.
You can edit the thread title on top of the editing window.



11. When you got help and it was useful, click on Like in the lower right corner of the post.



This shows the helper that you have read the post and his help was useful.
No need to answer anything else.

12. And of course, have fun!

2.7 Answer a question in the forum

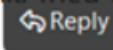
Several function are available:

1. CODE Tags [explained here](#).
2. QUOTE Tags, exptact from an answer in the forum.

You have different possibilities:

1. Select the text and click on Reply

I can't get the Quote feature to work - when
come from with a clickable link. Tried various

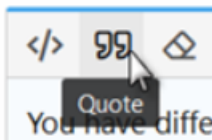


The result is this:

davemorris said: ↑

I can't get the Quote feature to work

2. Click on:



You get [QUOTE]/[/QUOTE]

And [QUOTE]Add the text in between the two QUOTE texts.[/QUOTE]

And the result:

Add the text in between the two QUOTE texts.

3. Add a link to another post.

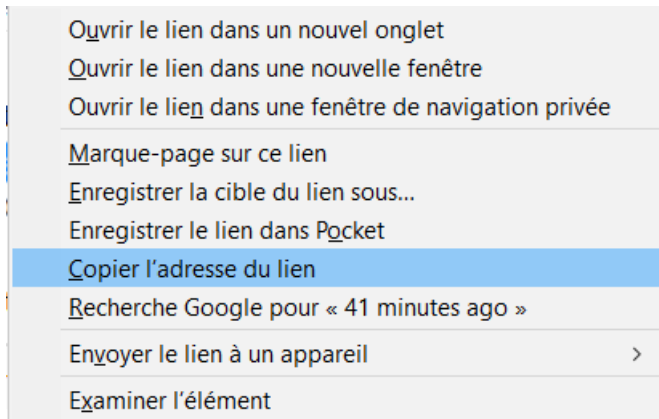
To get the link to any post right click either:

53 minutes ago

on the date / time in the post title



or on the post number in the top right corner .:



You get this window.

Sorry, the texts are in French.

Copy the link address to the clipboard.



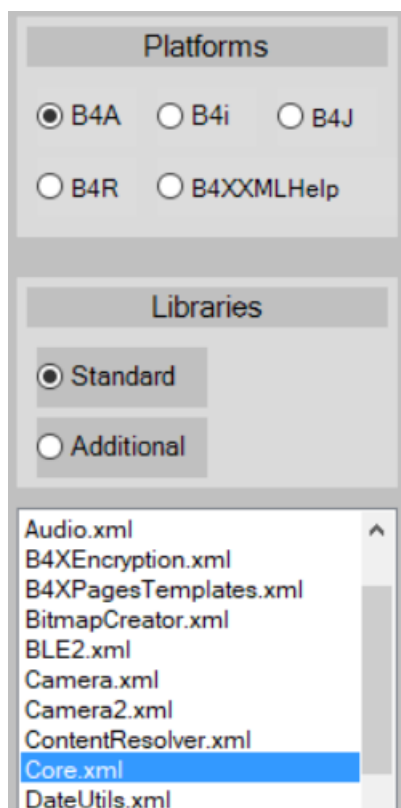
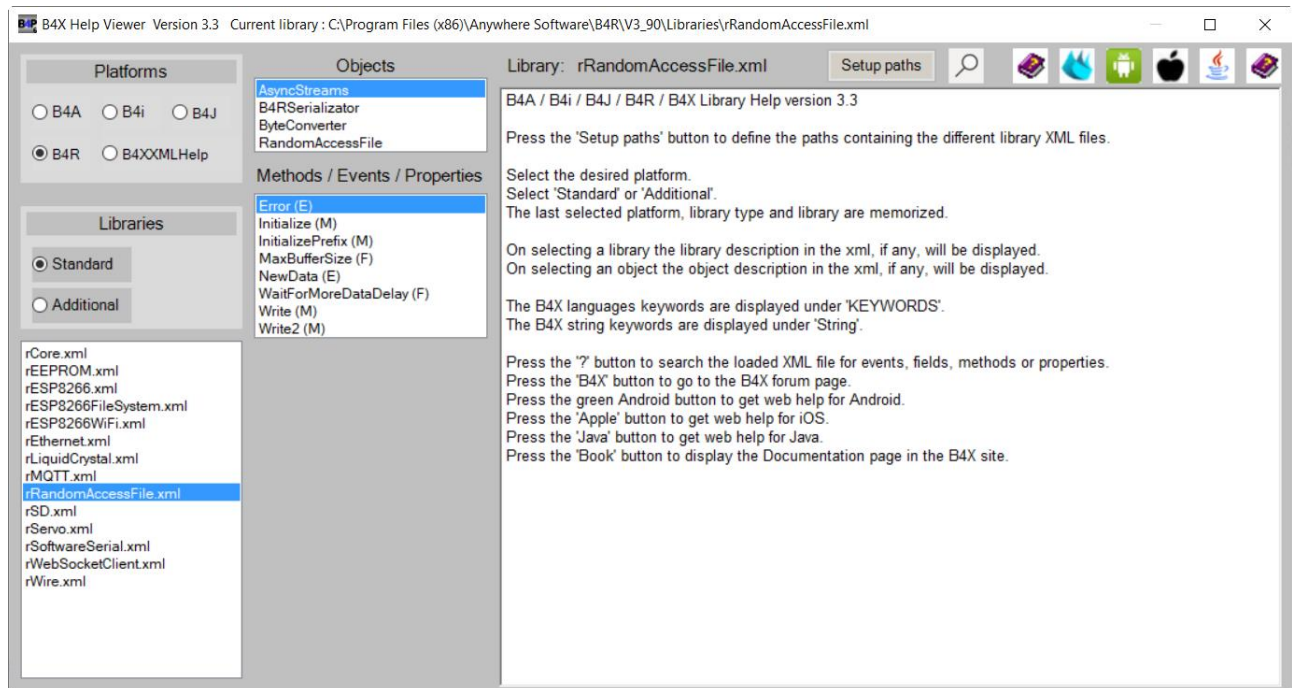
Insert a link

and paste the address into the URL field.

2.8 B4X Help Viewer

This program shows xml help files. It was originally written by Andrew Graham (agraham) for B4A. I modified it, with Andrews' agreement, to show B4A, B4J, B4i, B4R and b4xlib xml help files.

The program can be [downloaded](#) from the forum.

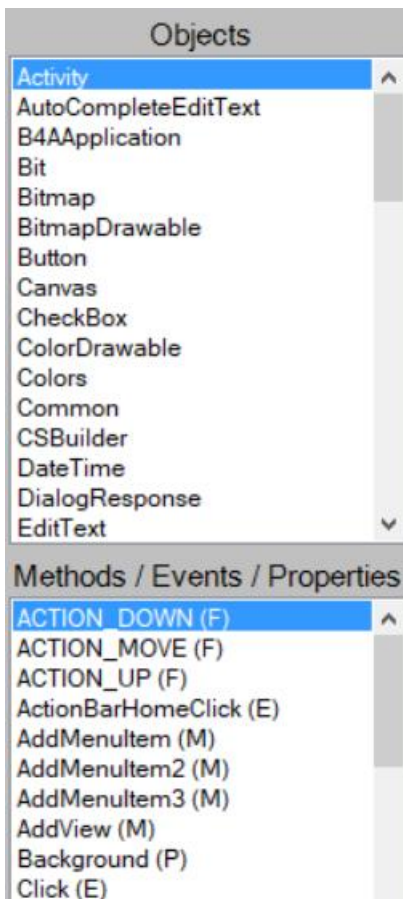


In the top left corner you can select the platform.

[B4XXMLhelp](#) are xml files for b4xlib libraries.

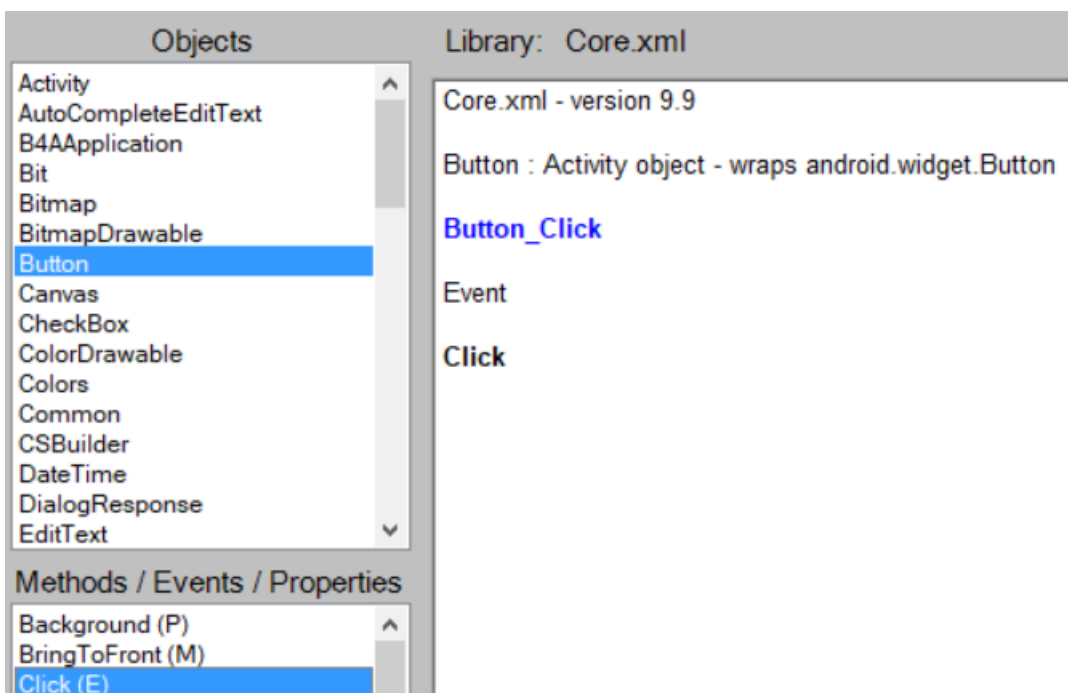
Here you can select 'Standard' or 'Additional' libraries.

And here, you find the list of the available libraries for the selected platform and library type.



Then you find the list of objects for the selected library.

And below the objects list you find the list of all fields (F), methods (M), events (E), and properties (P).



On the right side you find the details of the selected item.

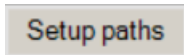
The title on the top left contains the program name, its version and the full path of the current selected library.

2.8.1 Toolbar

On the top right you have a toolbar:



With following buttons:



[Setup paths](#) displays the path setup form, where you can define the paths for the different libraries and select the platforms you want to use.



[Search engine](#) for the selected library.



Link to the online Help in the forum. Link to this booklet.



Link to the B4X forum.



Link to the Android developpers site.



Link to the iOS developpers site.

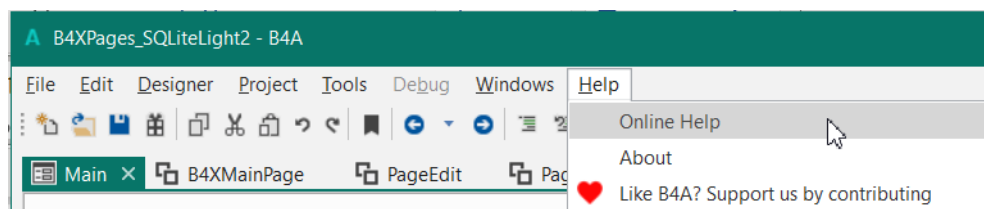


Link to the Java developpers site.



Link to the B4X Documentation page.

It's the same as if you click on Online Help in a B4X IDE.



When you click on one of the square buttons you will see a tooltip.



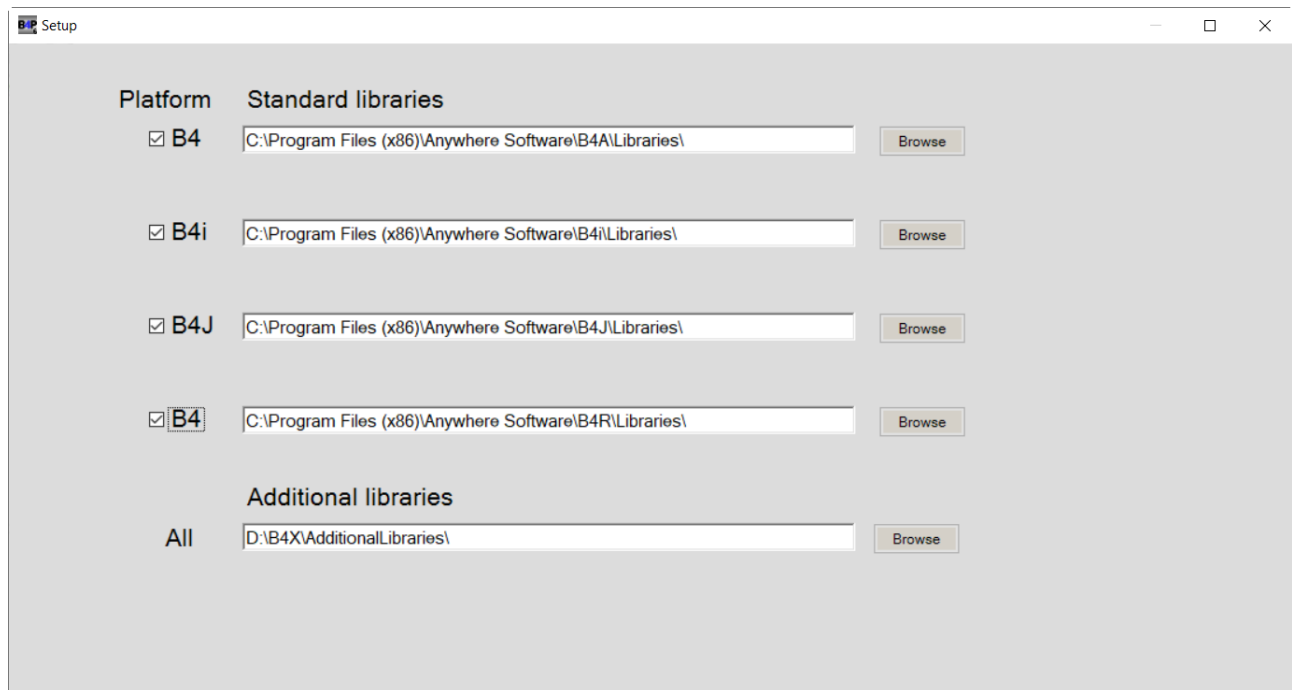
If you release the button outside its surface nothing happens.

2.8.2 Setup paths

When you first run the application, or when you click on **Setup paths**, you will be shown the form below.

It contains default paths already preset.

You can uncheck unused platforms, these can be activated later when needed.

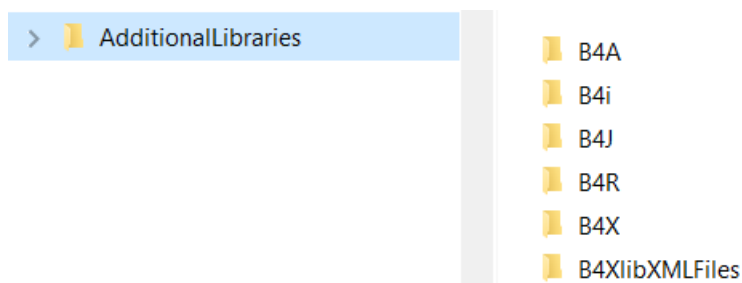


If your paths are different, enter them or use the **Browse** button to select the directory.

The directory will probably be like this for B4A and similar for the other platforms:

C:\Program Files (x86)\Anywhere Software\B4A\Libraries\	64 bytes
C:\Program Files\Anywhere Software\B4A\Libraries\	32 bytes

The Additional Libraries folder must have following structure:



- B4A, B4i, B4J and B4R, one folder for each platform.
- B4X, one folder for the b4xlib libraries.
- [B4XlibXMLFiles](#), one folder for b4xlib XML help files.

2.8.3 b4xlib XML help files

Standard and additional libraries are composed of two files, a library file and a help file which has the xml extension.

b4xlibs don't have an xml file by default.

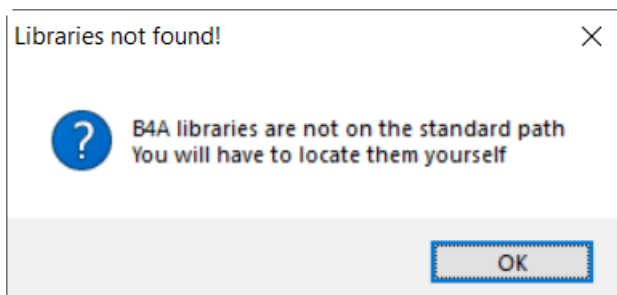
To be able to display help for these libraries, Erel has written the b4xlib2XML program to generate xml files for b4xlibs.

The b4xlib2XML program can be downloaded from:

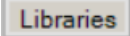
<https://www.b4x.com/android/forum/threads/tool-b4xlib-xml-generation.101450/#content>

b4xlib libraries are explained in detail in the [B4X XUI Booklet](#).

If you get this message:



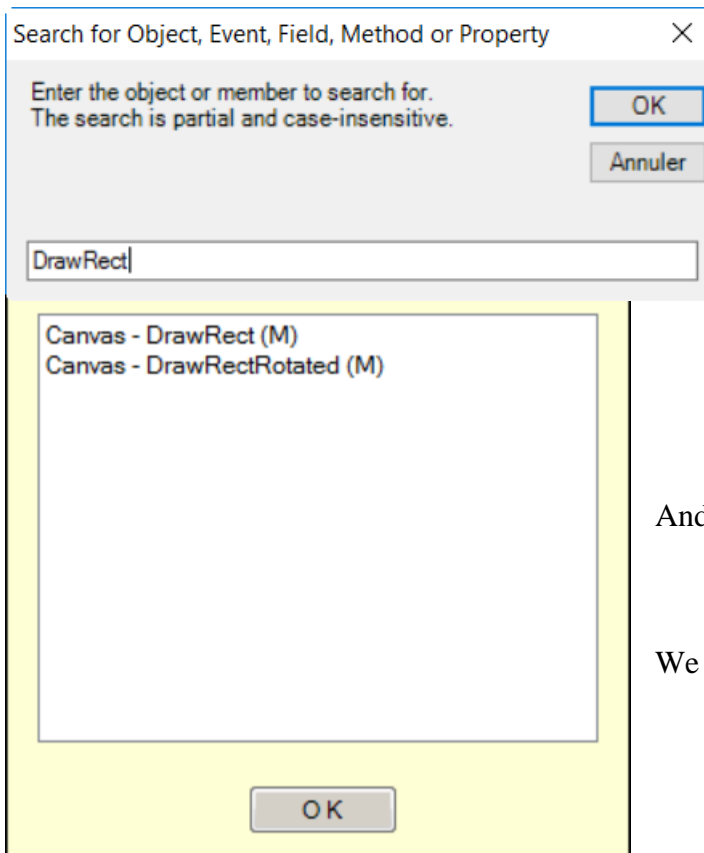
That means that B4A was not installed in the default folder.

[Click on](#)  and select the folder where you saved the B4A program, open the Libraies folder and select Core.xml.

2.8.4 Search engine



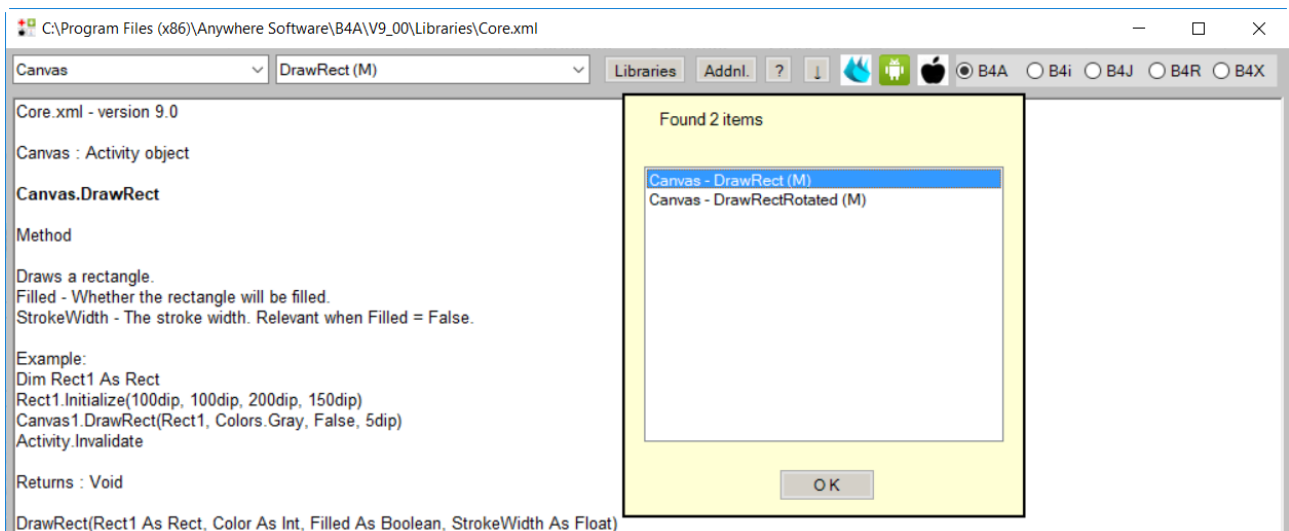
Search engine for the selected library.



Example:
Selected library: Core
Enter *DrawRect*

And the result.

We get the object Canvas and two methods.



Click on an item in the list to show its help.

Click on  to leave the search result list.

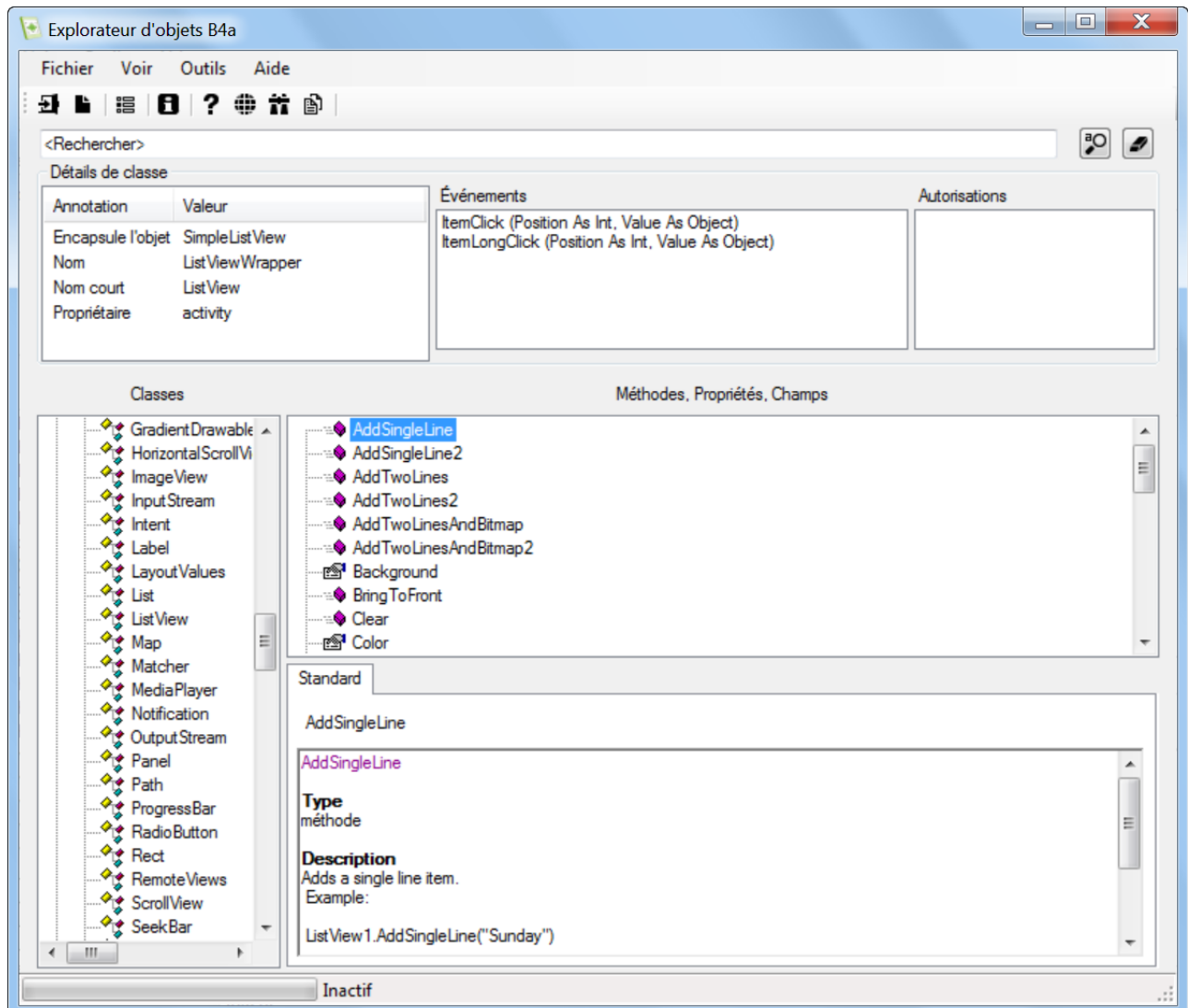
2.9 Help documentation - B4A Object Browser

This is also a standalone Windows program showing the help files of libraries.

It has been written by Vader and can be downloaded [here](#).

A pdf documentation on how to use the program is part of the download.

It seems that this program is no more supported.

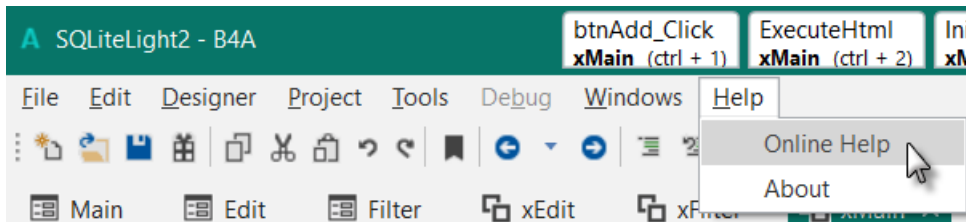


2.10 B4X Booklets on line

The B4X Documentation Booklets are available online!

2.10.1 From the IDE

In IDE Help menu / Online Help, you can directly show the main page of the B4X Documentation page.



The links below allow you to display directly the selected booklet in the Internet browser. The only drawback in these displays is that external links don't work, this is a limitation of the tool converting the pdf files.

B4A Documentation

Guides

B4X Getting Started - This booklet explains how to start with each B4X product (B4A, B4i, B4J and B4R).

B4X Basic Language - This booklet explains the Basic Language for B4A, B4i, B4J and B4R.

B4X IDE - This booklet explains the Integrated Development Environment for B4A, B4i, B4J and B4R.

B4X Visual Designer - This booklet explains the Visual Designer for B4a, B4i and B4J.

B4X Custom Views - This booklet explains the CustomView subject for B4A, B4i and B4J.

B4X Cross Platform - This booklet explains the steps needed to build cross platform projects.

B4X Graphics - This booklet explains Graphics for B4A, B4i, B4J, XUI And BitmapCreator.

B4X XUI - This booklet explains the XUI library which makes it easier to share code between B4A, B4J and B4i projects.

B4R Example Projects - This booklet explains some B4R example projects.

B4X Help Tools - This booklet lists the various help related resources and tools.

B4X SQLite Database - This booklet explains the use of the SQLite library.

B4X JavaObject-NativeObject This booklet explains the use of JavaObjects (B4A and B4J) and NativeObjects (B4i).

2.10.2 From an Internet browser

In this link, you get the [B4X Documentation Booklets](#) page in the forum.
Scrolling a bit downwards you will see this:

General booklets:

B4X Getting started

This booklet explains how to start with each B4x product (B4A, B4i, B4J and B4R).

B4X Basic Language

This booklet explains the Basic Language for B4A, B4i, B4J and B4R.

B4X IDE

This booklet explains the Integrated **D**evelopment **E**nvironment for B4A, B4i, B4J and B4R.

B4X Visual Designer

This booklet explains the Visual Designer for B4a, B4i and B4J.

The blue booklet names are links to display the selected booklet directly in the Internet browser.
The only drawback in these displays is that external links don't work, this is a limitation of the tool converting the pdf files.

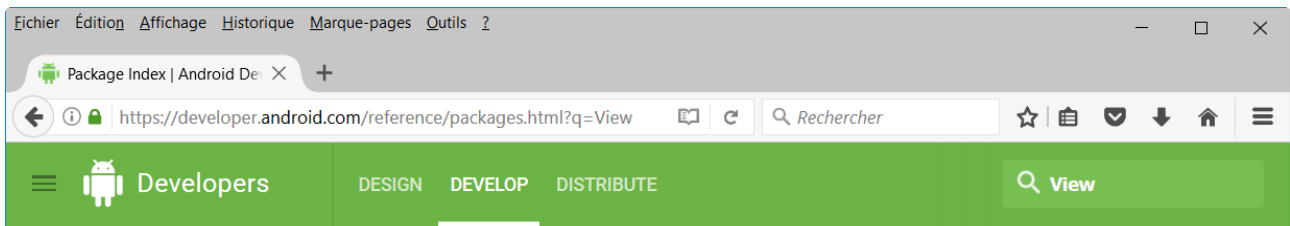
2.11 Useful links

2.11.1 B4A

A useful link for layout graphics. [Android cheat sheet for graphic designers](#)

Android Developers. [Design](#) [Develop](#) [Distribute](#)

Android Developers searching for any request.



In the upper right corner you find the search field.

Enter *View* in the field:

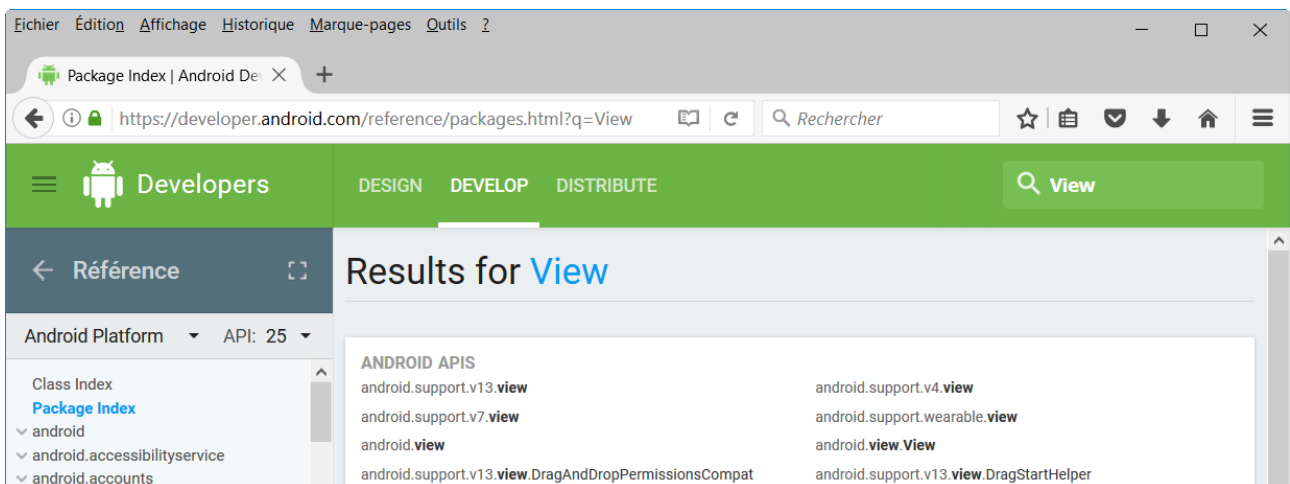


Results for View

All	View Android Developers
Design	The view group is the base class for layouts and views containers. ViewStub, A ViewStub is an invisible, zero-sized View that can be used to lazily inflate layout ...
Training	developer.android.com/reference/android/view/View.html
Guides	Avec libellé Reference

Click on the link View | Android Developers.

And you get all the information about Views.

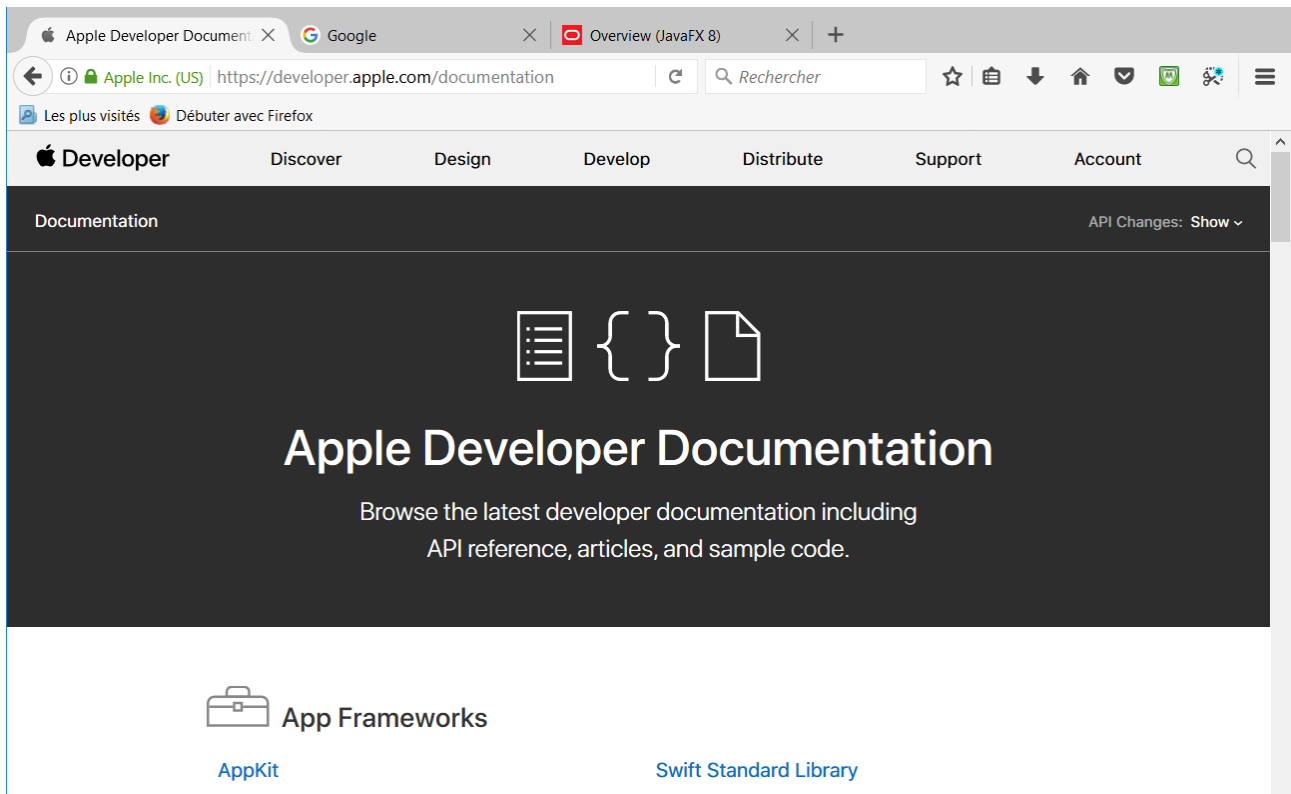


2.11.2 B4i

iOS developers:

<https://developer.apple.com/ios/human-interface-guidelines/overview/themes/>

It's the Apple site with all information about iOS.



2.11.3 B4J

Oracle Overview FavaFX API:

<http://docs.oracle.com/javase/8/javafx/api/toc.htm>

The screenshot shows a web browser window displaying the Oracle JavaFX 8 API Overview page. The browser's address bar shows the URL `docs.oracle.com/javase/8/javafx/api/toc.htm`. The page has a dark blue header with the title "Overview (JavaFX 8)" and navigation tabs: "OVERVIEW", "PACKAGE", "CLASS", "USE", "TREE", "DEPRECATED", "INDEX", and "HELP". Below the header, there are links for "PREV", "NEXT", "FRAMES", and "NO FRAMES". The main content area is titled "Packages" and contains a table with two columns: "Package" and "Description". The table lists the following packages:

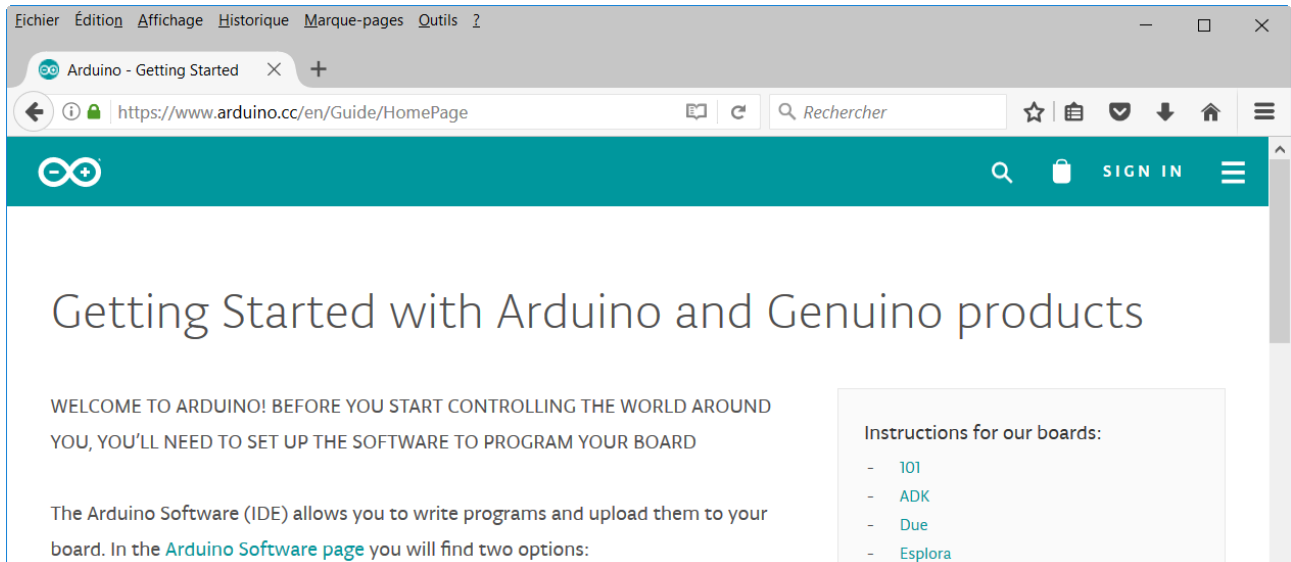
Package	Description
<code>javafx.animation</code>	Provides the set of classes for ease of use transition based animations.
<code>javafx.application</code>	Provides the application life-cycle classes.
<code>javafx.beans</code>	The package <code>javafx.beans</code> contains the interfaces that define the most generic form of observability.
<code>javafx.beans.binding</code>	Characteristics of Bindings
<code>javafx.beans.property</code>	The package <code>javafx.beans.property</code> defines read-only properties and writable properties, plus a number of implementations.
<code>javafx.beans.property.adapter</code>	

On the left side of the page, there is a sidebar with the "JavaFX 8" logo and a list of "All Classes" and "Packages". The "All Classes" list includes: `AccessibleAction`, `AccessibleAttribute`, `AccessibleRole`, `Accordion`, `ActionEvent`, `Affine`, `Alert`, `Alert.AlertType`, and `AmbientLight`.

2.11.4 B4R

Arduino HomePages:

<https://www.arduino.cc/en/Guide/HomePage>



2.12 Books

B4A book

Written by Philip Brown under the pseudo Wyken Seagrave.



<http://pennypress.co.uk/b4a-book/>

MagBook Build your own Android App.

Written by Nigel Whitfield.



<http://www.magbooks.com/product/build-your-own-android-app/>

Elektor Android App development for electronics designers

<https://www.elektormagazine.com/news/book-review-android-apps-development-with-basic-for-android-b4a>