

Chapter 2: Android Studio

Section 2.1: Setup Android Studio

System Requirements

- Microsoft® Windows® 8/7/Vista/2003 (32 or 64-bit).
- Mac® OS X® 10.8.5 or higher, up to 10.9 (Mavericks)
- GNOME or KDE desktop

Installation

Window

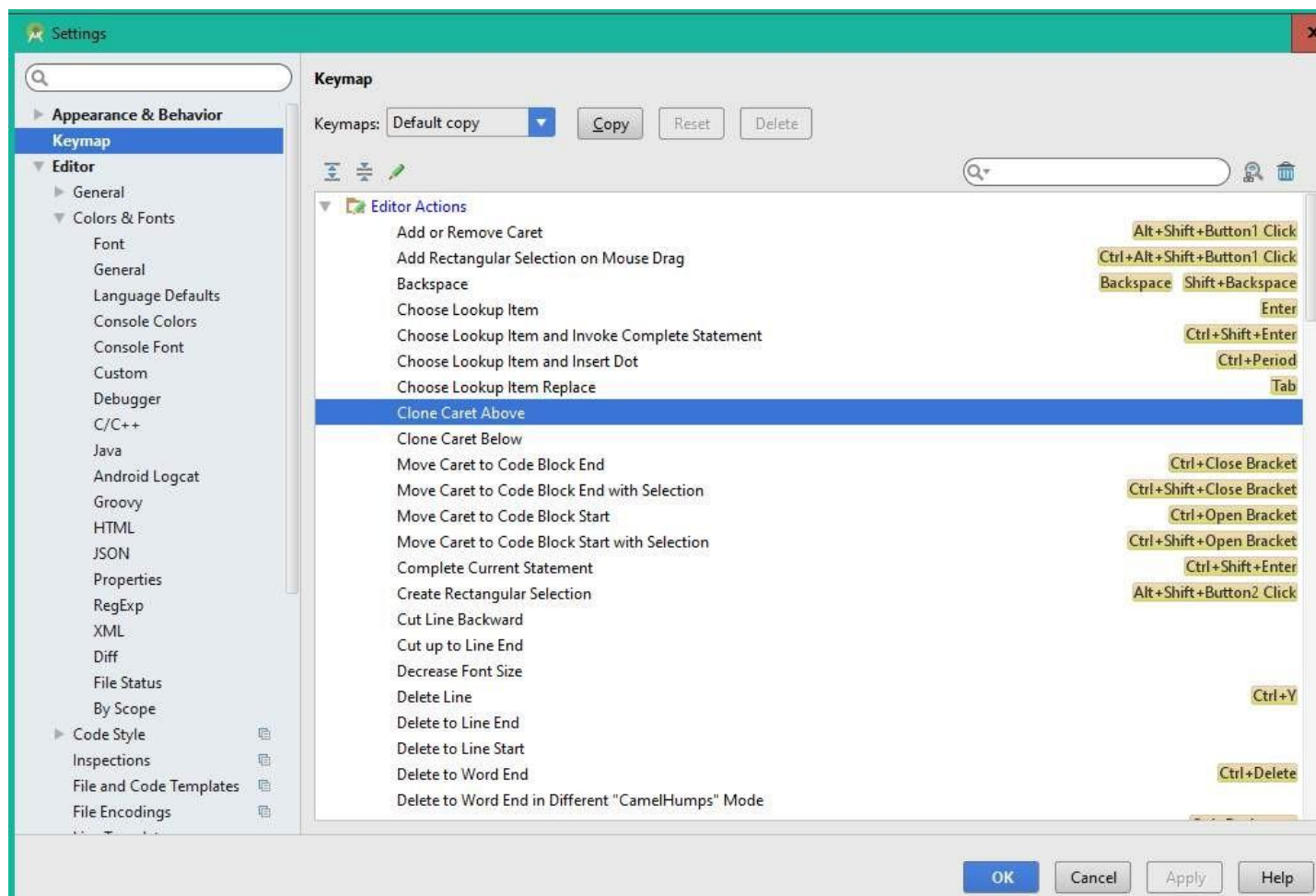
1. Download and install [JDK \(Java Development Kit\)](#) version 8
2. Download [Android Studio](#)
3. Launch `Android Studio.exe` then mention JDK path and download the latest SDK

Linux

1. Download and install [JDK \(Java Development Kit\)](#) version 8
2. Download [Android Studio](#)
3. Extract the zip file
4. Open terminal, cd to the extracted folder, cd to bin (example `cd android-studio/bin`)
5. Run `./studio.sh`

Section 2.2: View And Add Shortcuts in Android Studio

By going to Settings >> Keymap A window will popup showing All the `Editor Actions` with the their name and shortcuts. Some of the `Editor Actions` do not have shortcuts. So right click on that and add a new shortcut to that. Check the image below



Section 2.3: Android Studio useful shortcuts

The following are some of the more common/useful shortcuts.

These are based on the default IntelliJ shortcut map. You can switch to other common IDE shortcut maps via **File** -> **Settings** -> **Keymap** -> <Choose Eclipse/Visual Studio/etc from Keymaps dropdown>

Action	Shortcut
Format code	CTRL + ALT + L
Add unimplemented methods	CTRL + I
Show logcat	ALT + 6
Build	CTRL + F9
Build and Run	CTRL + F10
Find	CTRL + F
Find in project	CTRL + SHIFT + F
Find and replace	CTRL + R
Find and replace in project	CTRL + SHIFT + R
Override methods	CTRL + O
Show project	ALT + 1
Hide project - logcat	SHIFT + ESC
Collapse all	CTRL + SHIFT + NumPad +
View Debug Points	CTRL + SHIFT + F8
Expand all	CTRL + SHIFT + NumPad -
Open Settings	ALT + s

Select Target (open current file in Project view)	<code>ALT</code> + <code>F1</code> → <code>ENTER</code>
Search Everywhere	<code>SHIFT</code> → <code>SHIFT</code> (Double shift)
Code Surround With	<code>CTRL</code> → <code>ALT</code> + <code>T</code>
Create method form selected code	<code>ALT</code> + <code>CTRL</code>

Refactor:

Action	Shortcut
Refactor This (menu/picker for all applicable refactor actions of the current element)	Mac <code>CTRL</code> + <code>T</code> - Win/Linux <code>CTRL</code> + <code>ALT</code> + <code>T</code>
Rename	<code>SHIFT</code> + <code>F6</code>
Extract Method	Mac <code>CMD</code> + <code>ALT</code> + <code>M</code> - Win/Linux <code>CTRL</code> + <code>ALT</code> + <code>M</code>
Extract Parameter	Mac <code>CMD</code> + <code>ALT</code> + <code>P</code> - Win/Linux <code>CTRL</code> + <code>ALT</code> + <code>P</code>
Extract Variable	Mac <code>CMD</code> + <code>ALT</code> + <code>V</code> - Win/Linux <code>CTRL</code> + <code>ALT</code> + <code>V</code>

Section 2.4: Android Studio Improve performance tip

Enable Offline Work:

1. Click File -> Settings. Search for "gradle" and click in `Offline work` box.
2. Go to Compiler (in same settings dialog just below `Gradle`) and add `--offline` to `Command-line Options` text box.

Improve Gradle Performance

Add following two line of code in your `gradle.properties` file.

```
org.gradle.daemon=true
org.gradle.parallel=true
```

Increasing the value of `-Xmx` and `-Xms` in `studio.vmoptions` file

```
-Xms1024m
-Xmx4096m
-XX:MaxPermSize=1024m
-XX:ReservedCodeCacheSize=256m
-XX:+UseCompressedOops
```

Window

```
%USERPROFILE%.{FOLDER_NAME}\studio.exe.vmoptions and/or
%USERPROFILE%.{FOLDER_NAME}\studio64.exe.vmoptions
```

Mac

```
~/Library/Preferences/{FOLDER_NAME}/studio.vmoptions
```

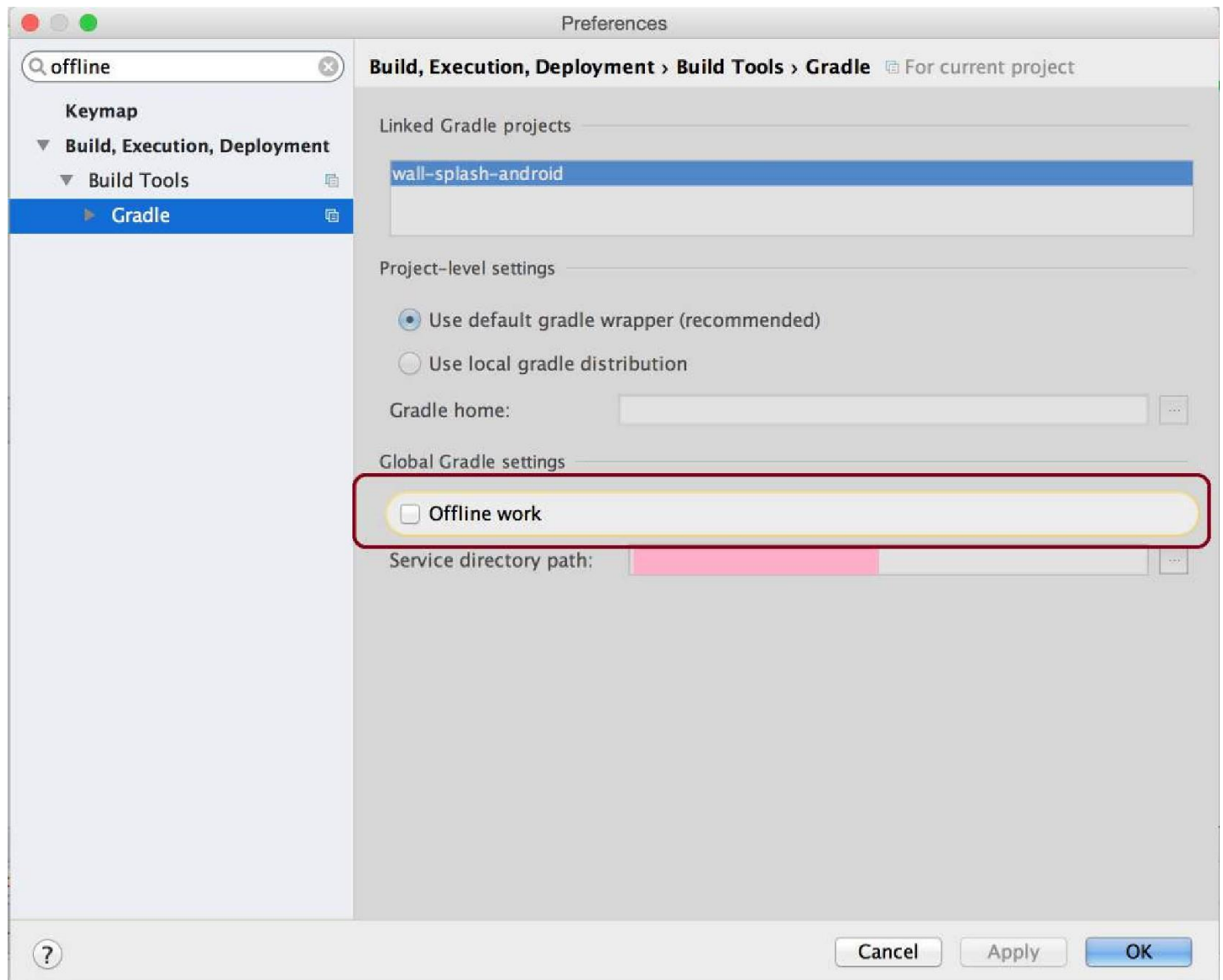
Linux

```
~/.{FOLDER_NAME}/studio.vmoptions and/or ~/.{FOLDER_NAME}/studio64.vmoptions
```

Section 2.5: Gradle build project takes forever

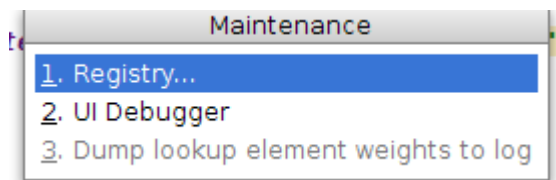
Android Studio -> Preferences -> Gradle -> Tick **Offline work** and then restart your Android studio.

Reference screenshot:

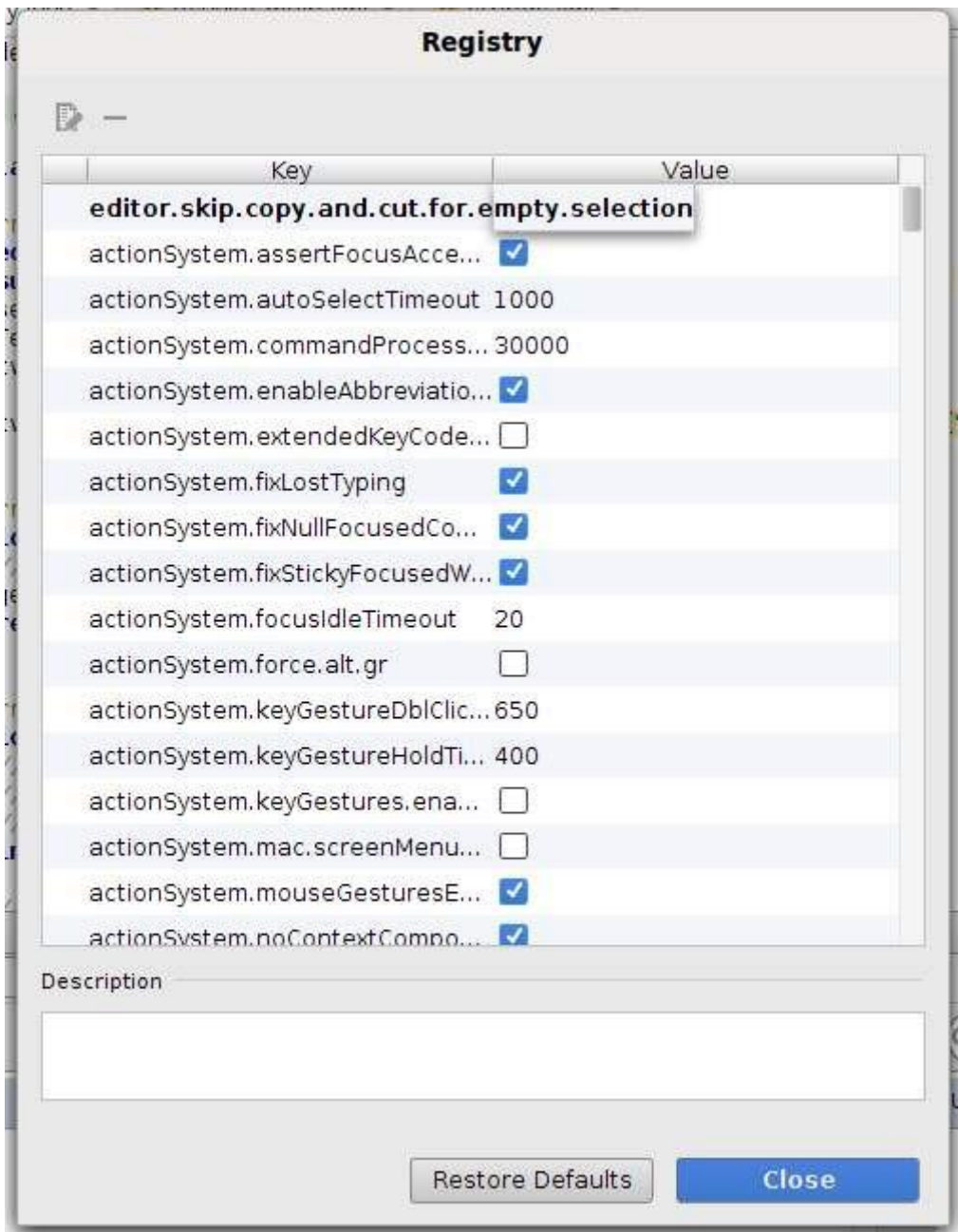


Section 2.6: Enable/Disable blank line copy

ctrl + alt + shift + / (cmd + alt + shift + / on MacOS) should show you the following dialog:



Clicking on [Registry](#) you will get



The key you want to enable/disable is

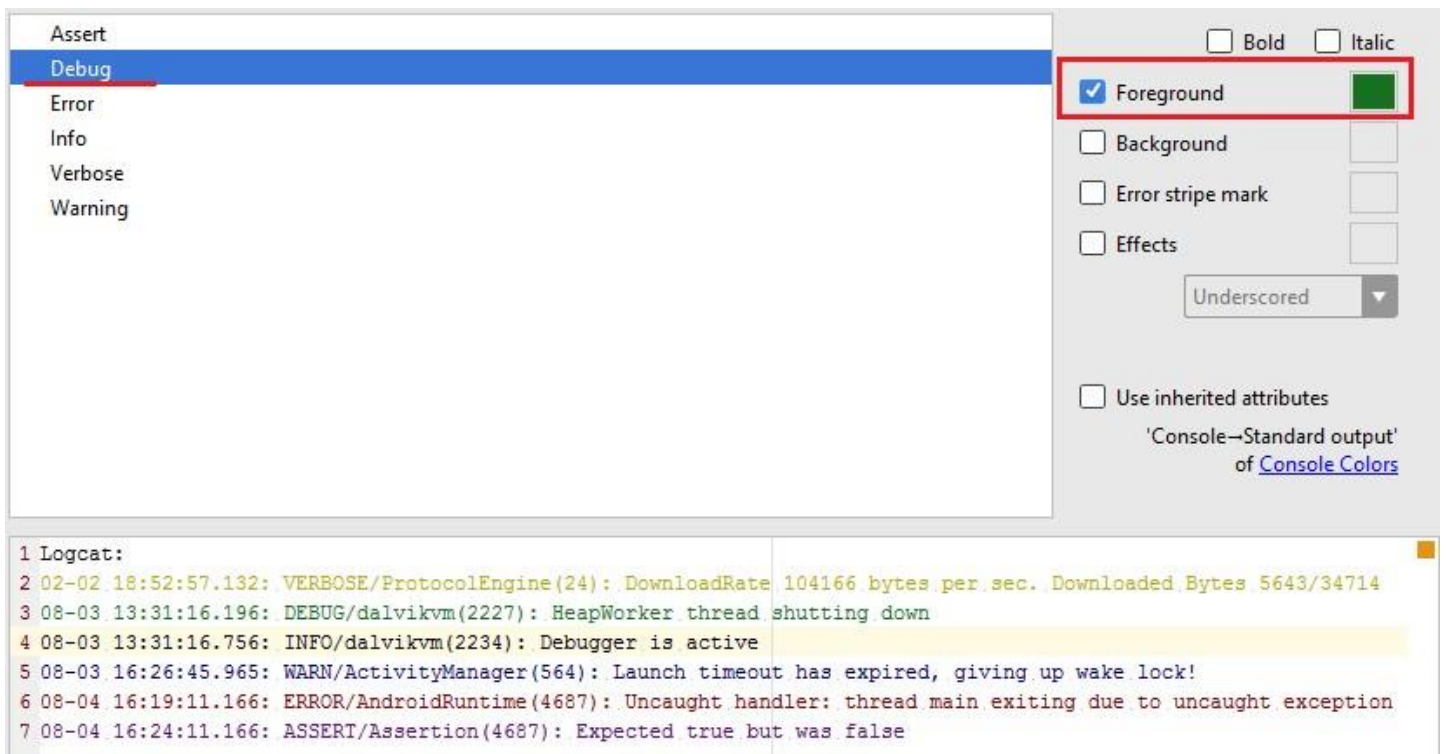
`editor.skip.copy.and.cut.for.empty.selection`

Tested on Linux Ubuntu and MacOS.

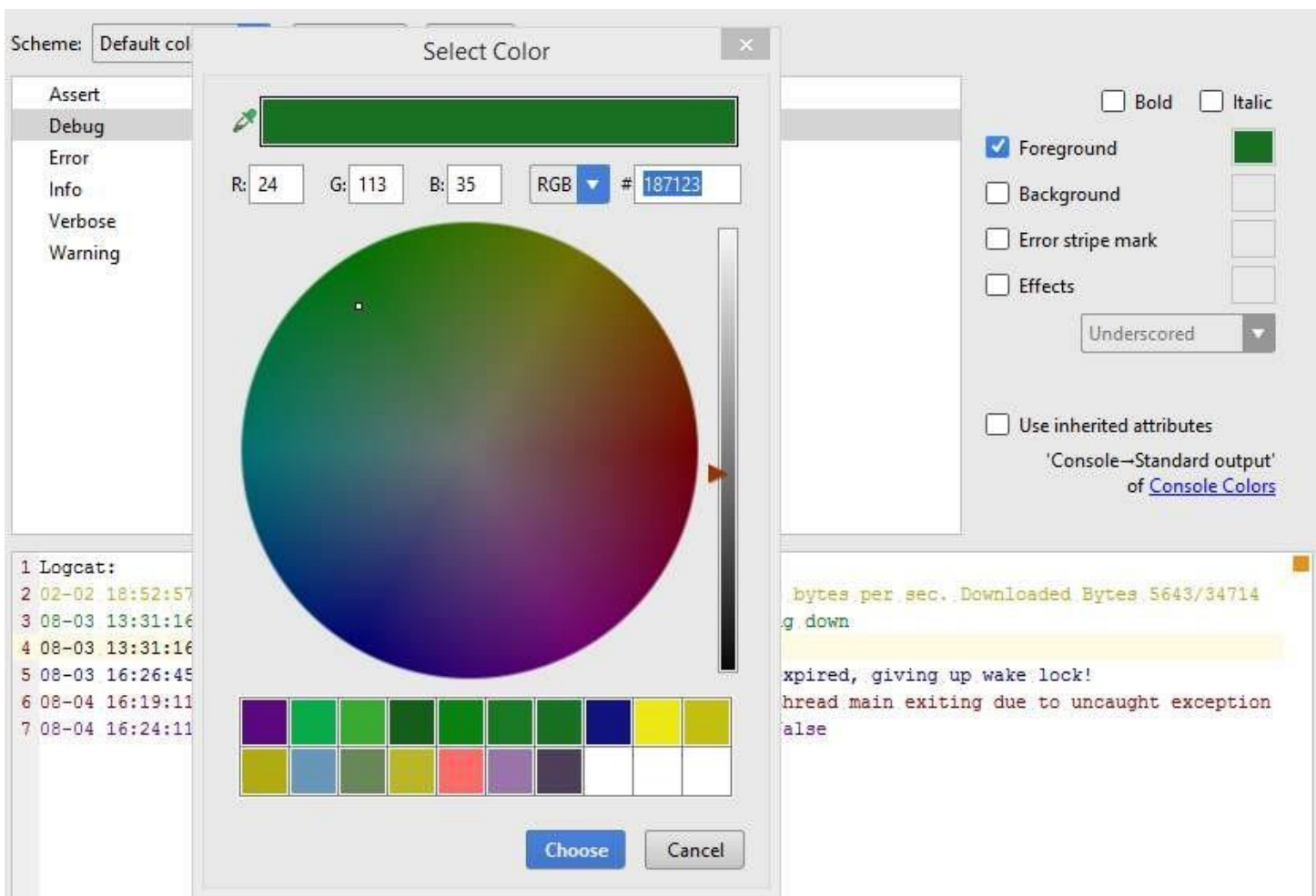
Section 2.7: Custom colors of logcat message based on message importance

Go to File -> Settings -> Editor -> Colors & Fonts -> Android Logcat

Change the colors as you need:



Choose the appropriate color:



Section 2.8: Filter logs from UI

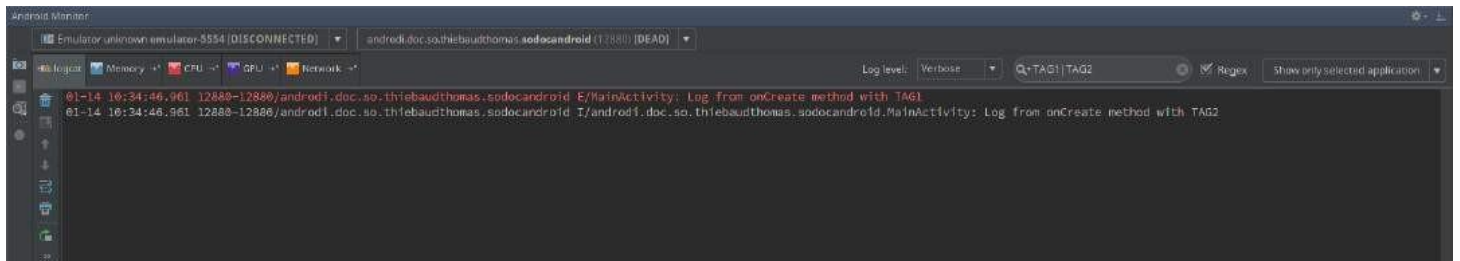
Android logs can be filtered directly from the UI. Using this code


```
public class MainActivity extends AppCompatActivity {
    private final static String TAG1 = MainActivity.class.getSimpleName();
    private final static String TAG2 = MainActivity.class.getCanonicalName();

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.e(TAG1, "Log from onCreate method with TAG1");
        Log.i(TAG2, "Log from onCreate method with TAG2");
    }
}
```

If I use the regex TAG1|TAG2 and the level verbose I get

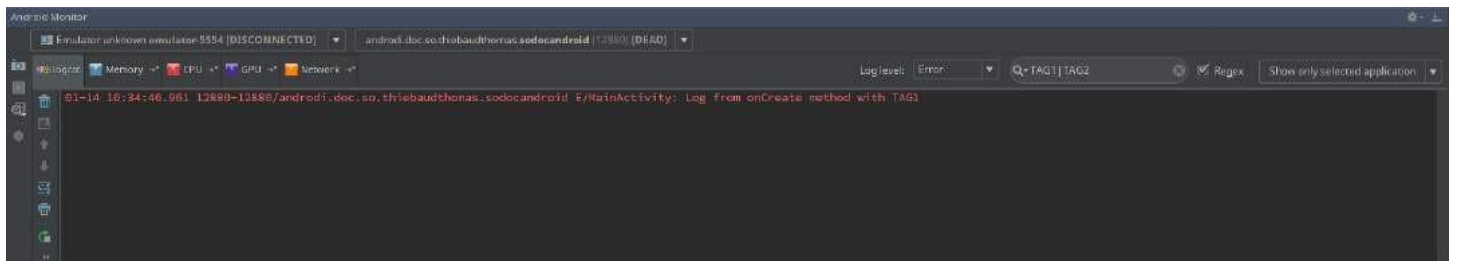
```
01-14 10:34:46.961 12880-12880/android.doc.so.thiebaudthomas.sodocandroid E/MainActivity: Log from
onCreate method with TAG1
01-14 10:34:46.961 12880-12880/android.doc.so.thiebaudthomas.sodocandroid
I/androidi.doc.so.thiebaudthomas.sodocandroid.MainActivity: Log from onCreate method with TAG2
```



The level can be set to get logs with given level and above. For example the verbose level will catch verbose, debug, info, warn, error and assert logs.

Using the same example, if I set the level to error, I only get

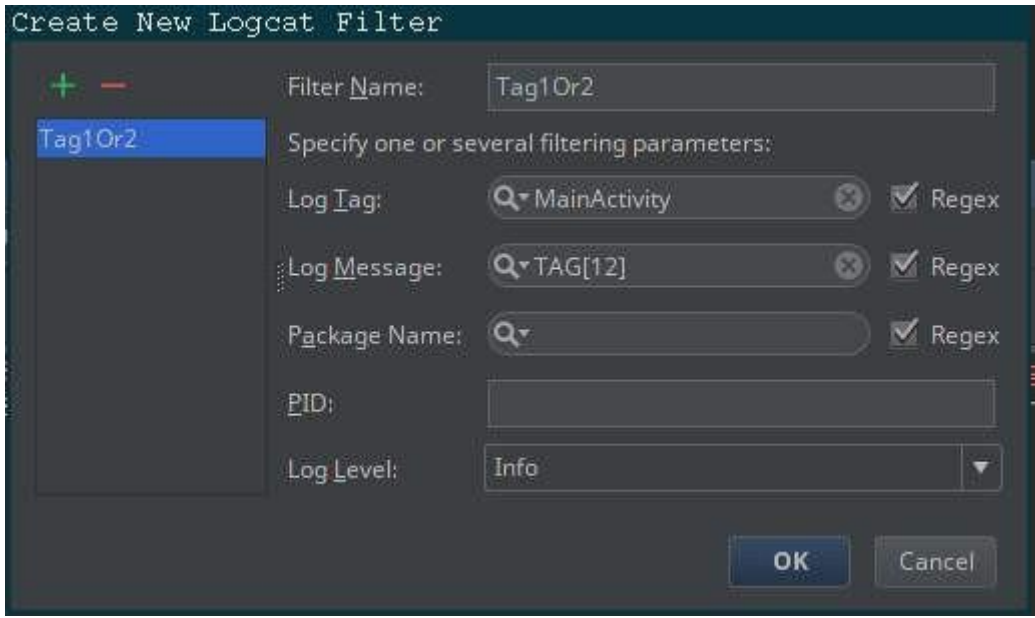
```
01-14 10:34:46.961 12880-12880/androidi.doc.so.thiebaudthomas.sodocandroid E/MainActivity: Log from
onCreate method with TAG1
```



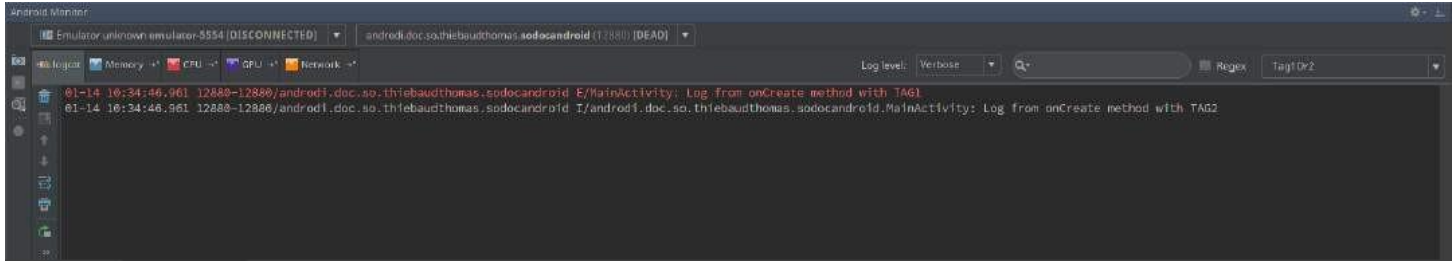
Section 2.9: Create filters configuration

Custom filters can be set and save from the UI. In the AndroidMonitor tab, click on the right dropdown (must contains Show only selected application or No filters) and select Edit filter configuration.

Enter the filter you want

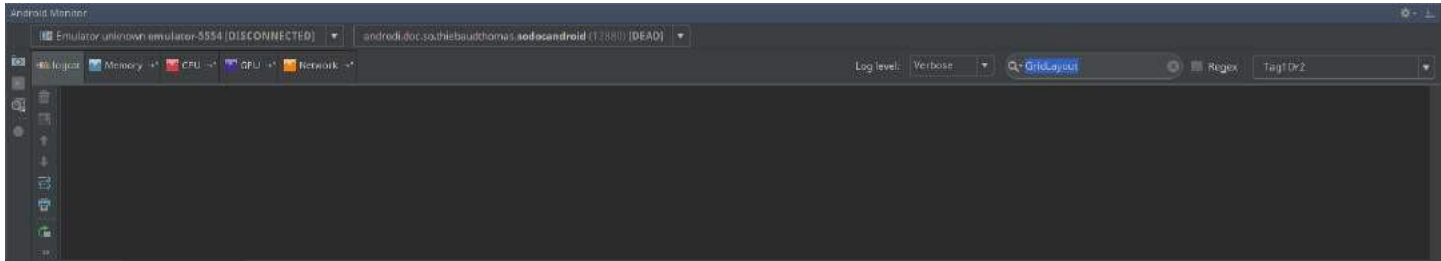


And use it (you can selected it from the same dropdown)

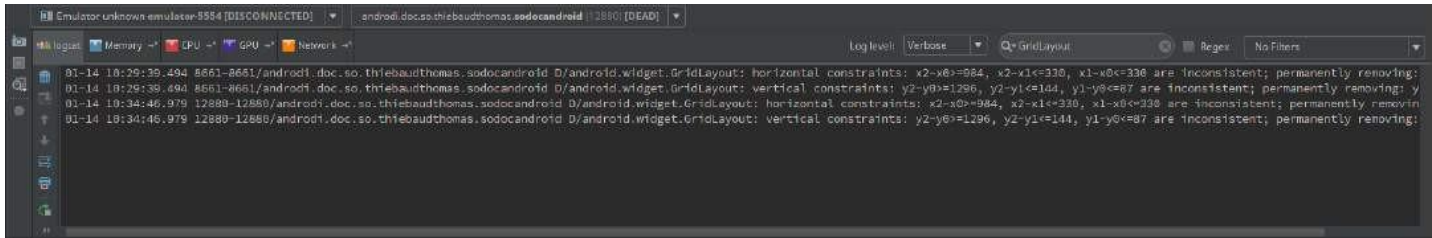


Important If you add an input in the filter bar, android studio will consider both your filter and your input.

With both input and filter there is no output



Without filter, there is some outputs



Section 2.10: Create assets folder

- Right click in MAIN folder > New > Folder > Assets Folder.
- Assets folder will be under MAIN folder with the same symbol as RES folder.
- In this example I put a font file.

