TOOLS GUIDE FOR TESTING SAMSUNG APPS

Step-1:-

1. Install Android develop studio, testing tools like "JD GUI TOOL , JADX TOOL, Dex2Jar TOOL" (preferably **JADX tool** is bit more useful since we have search option.

   We can extract the source code using below steps.

   a) We need to change the .apk to .zip
   b) Then we need to extract the ZIP file
   c) In zip file we will have classes.dex file which contains the resource code of that apk
   d) Then we can use Dex2Jar tool to convert it into jar file.
   e) To check on the jar file we can use JD GUI TOOL and JADX TOOL.

   To proceed with these steps, you need to install the Testing Tools that are listed

i) JADX TOOL

JADX is a Command line and GUI tools for produce Java source code from Android Dex and Apk files.

Main features: - decompile Dalvik bytecode to java classes from APK, dex, aar and zip files - decode AndroidManifest.xml and other resources from resources.arsc - deobfuscator included

Link to go through JADX Tool and download:- https://github.com/skylot/jadx/releases

ii) JD GUI TOOL (Java Decompiler GUI Tool): -

JD-GUI is a standalone graphical utility that displays Java source codes of ".class" files. It can also be used as a plug-in for the Eclipse platform.

Here is the link for the JD: - http://java-decompiler.github.io/ (Download the GUI Version)

iii) Dex2Jar TOOL: -

The core feature of Dex2Jar is to **convert the classes. dex file of an APK to classes. jar or vice versa**. So, it is possible to view the source code of an Android application using any Java decompiler, and it is completely readable

The link to download it https://github.com/pxb1988/dex2jar

Here's a video explaining the above process: - https://youtu.be/kLJskdY8Ov8

STEP-2: -

After going through the source code of multiple Samsung apps,

We came across **GZIPInputStream** and **GZIPOutputStream** in several of the source code's which is used for compression and decompression in android.

The documentation for it:- https://developer.android.com/reference/java/util/zip/GZIPInputStream

Here's the link to understand how GZIPInputStream and GZIPOutputStream work in java.

https://www.geeksforgeeks.org/gzipoutputstream-class-in-java/