**Before cloning Project 3 into IntelliJ you will need to make sure the Android and Android Design Tools plugins are installed (under File 🡪 Settings/Preferences 🡪 Plugins).**

**After cloning your GitHub Project 3 into IntelliJ there may be errors when you try to do a Build – here’s how to fix those:**

* first, make sure you are using the latest IntelliJ – **download IntelliJ from** [**https://www.jetbrains.com/idea/download/**](https://www.jetbrains.com/idea/download/) **and install it even over an existing version to make sure everything will work properly**.
* now go to **File 🡪 New 🡪 Project 🡪 Android. If IntelliJ says you must download an Android SDK, click the button to do that. Note: If IntelliJ does not require you to download an Android SDK (because you already have one), you can Cancel immediately and just move on to the next major bullet.**
  + After you click the button to download an Android SDK, on the next window click both check boxes to download Android and the latest SDK, then click **OK**. Once those have downloaded you can **Cancel** creating a new project.
  + After you have done that, click on **File 🡪 Invalidate Caches** and check the first checkbox, then click **Invalidate and Restart.**
* go to **Tools 🡪 Android 🡪 SDK Manager**, then click **Edit** beside the **Android SDK Location**

o   click **Next** and **Next** to download and install **Android SDK** and **Android   
 emulator** support

o   when this completes click **Finish**, click the box beside **Android 12** and click   
 **OK** twice

§  now **Accept** the license for that SDK, then click **Next** and eventually **Finish**

o   click **SDK Tools** just under the **SDK Location** and make sure that these all   
 show as installed (if not, install these as well):

§  **Android SDK Build-Tools**

§  **Android SDK Platform Tools**

§  **Android SDK Tools**

* also, be sure that the project’s **settings.gradle** file contains this line: **include ':app'**
* finally, click **Build** 🡪 **Build Project** or **Rebuild Project** and the project should hopefully build successfully – **let me know if that doesn't work so I can help!**

**Note that this project does not run on an Android device or emulator (yet), but you will also want to create an emulator for it to run on once you fix everything in the project:**

* click **Tools 🡪 Android 🡪 AVD Manager** and click **Create Virtual Device**

o  all the IntelliJ defaults are fine, just accept them and click **Finish**

§  you have now set up an Android emulator (Android Virtual Device = **AVD**)

* at the top of the IntelliJ window you can click the right-facing triangle after **app**

o   this starts the AVD, which takes a little while

o   the app launch will succeed, but nothing will be drawn because the app doesn't   
 work yet – once you fix everything the app will draw a picture