IT2010 – Mobile Application Development

Lab Sheet 09

Generate APK file

What is APK?

Android Package Kit using to build your app and make executable file (*.apk) to run it in android device. You can share your application in Google Play by using this generated APK file.

What it contains?

Android packages contain all the necessary files for a single Android program such as;
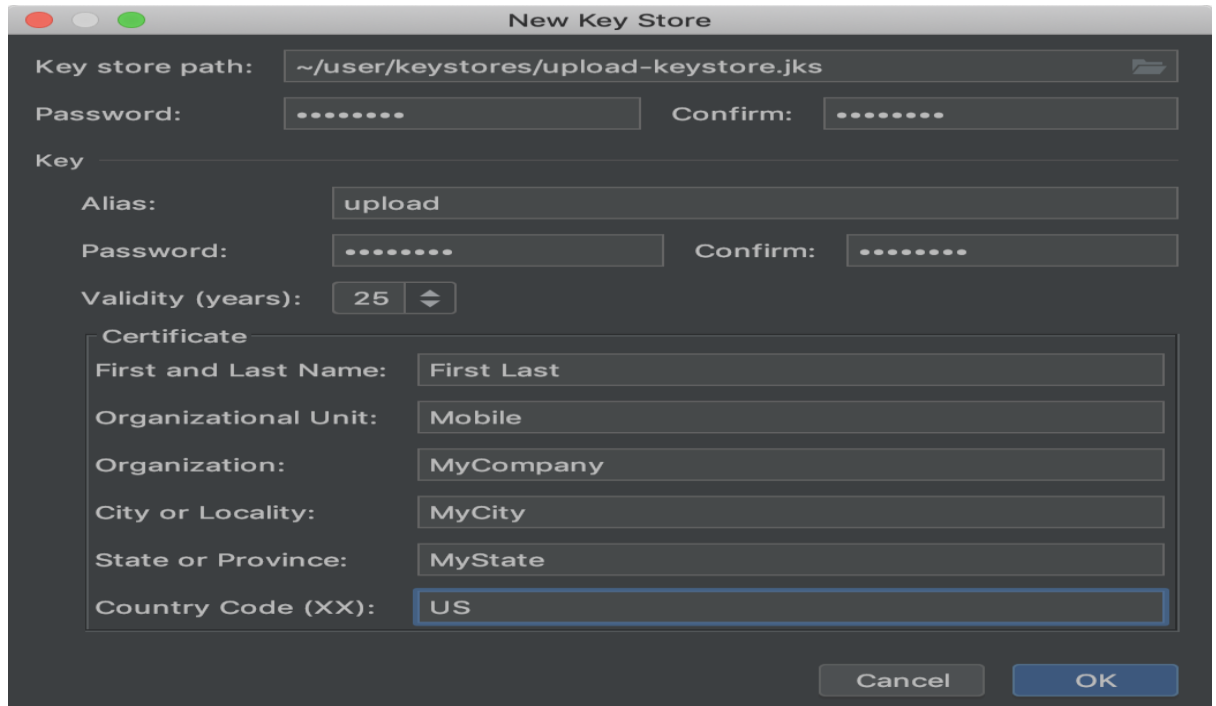
- META-INF/: Contains the manifest file, signature, and a list of resources in the archive
- lib/: Native libraries that run on specific device architectures (armeabi-v7a, x86, etc.)
- res/: Resources, such as images, that were not compiled into resources.arsc
- assets/: Raw resource files that developers bundle with the app
- AndroidManifest.xml: Describes the name, version, and contents of the APK file
- classes.dex: The compiled Java classes to be run on the device (.DEX file)
- resources.arsc: The compiled resources, such as strings, used by the app (.ARSC file)

How to Generate an APK file?

- Go to **manu bar**, click **Build > Build > Generate Signed Bundle/APK**.
- Then select **Android App Bundle or APK** and click **Next** in "Generate Signed Bundle or APK" dialog box.
- In order to get n new key store, click on **Create new**.
- Then opens the **New Key Store window** dialog box. Provide your information for your keystore and key, as shown in figure 1.

IT2010 – Mobile Application Development

Lab Sheet 09

Figure 1: Create a new upload key and keystore in Android Studio

Keystore	
Key store path	Select the location where your keystore should be created.
Password	Create and confirm a secure password for your keystore.
Key	
Alias	Enter an identifying name for your key
Password	Create and confirm a secure password for your key. This should be different from the password you chose for your keystore.
Validity (years)	Set the length of time in years that your key will be valid. Your key should be valid for at least 25 years, so you can sign app updates with the same key through the lifespan of your app.
Certificate	Enter some information about yourself for your certificate. This information is not displayed in your app, but is included in your certificate as part of the APK.

- Once you complete the form, click **OK**.

IT2010 – Mobile Application Development

Lab Sheet 09

- If you would like to build and sign your app with your upload key, continue the steps with your entered information and click **Next**. If you only want to generate the key and keystore, just click Cancel.
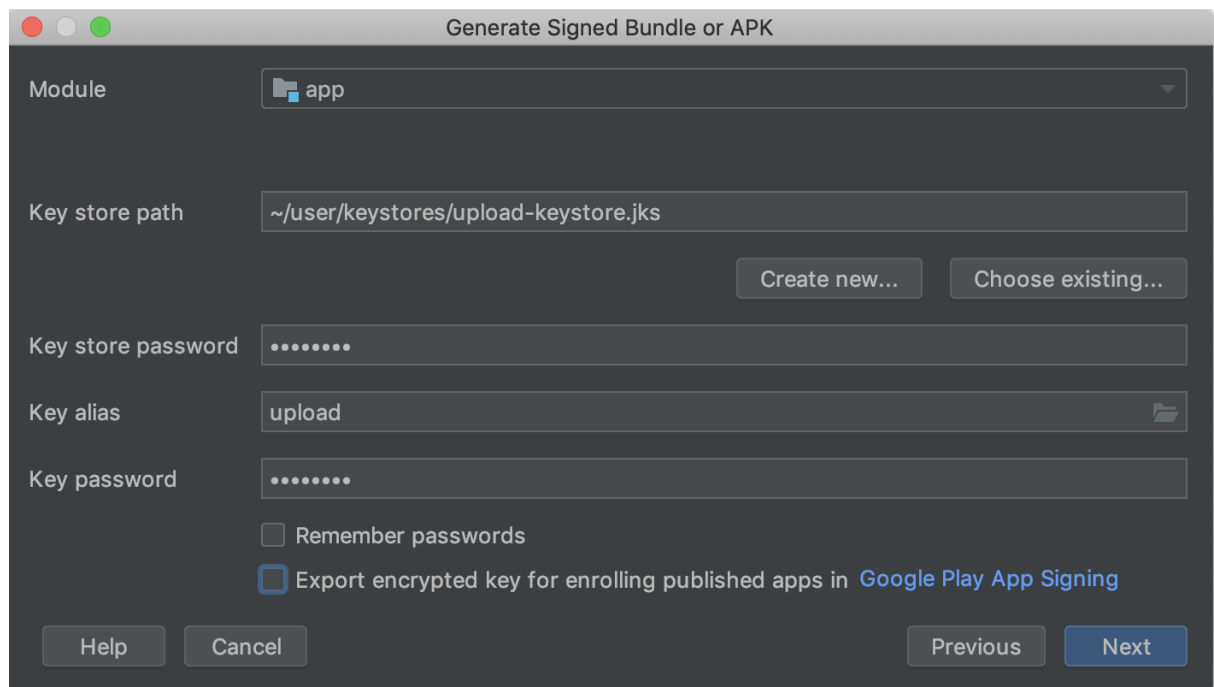

Figure 2:Sign your app with your upload key.

Note : If you selected the option to export your signing key, it creates a navigate in pop-up notification on next step and you can access from that.

- Then select a destination folder for your signed app by exploring **Destination Folder** field, select the build type, choose the product flavor(s) if applicable.

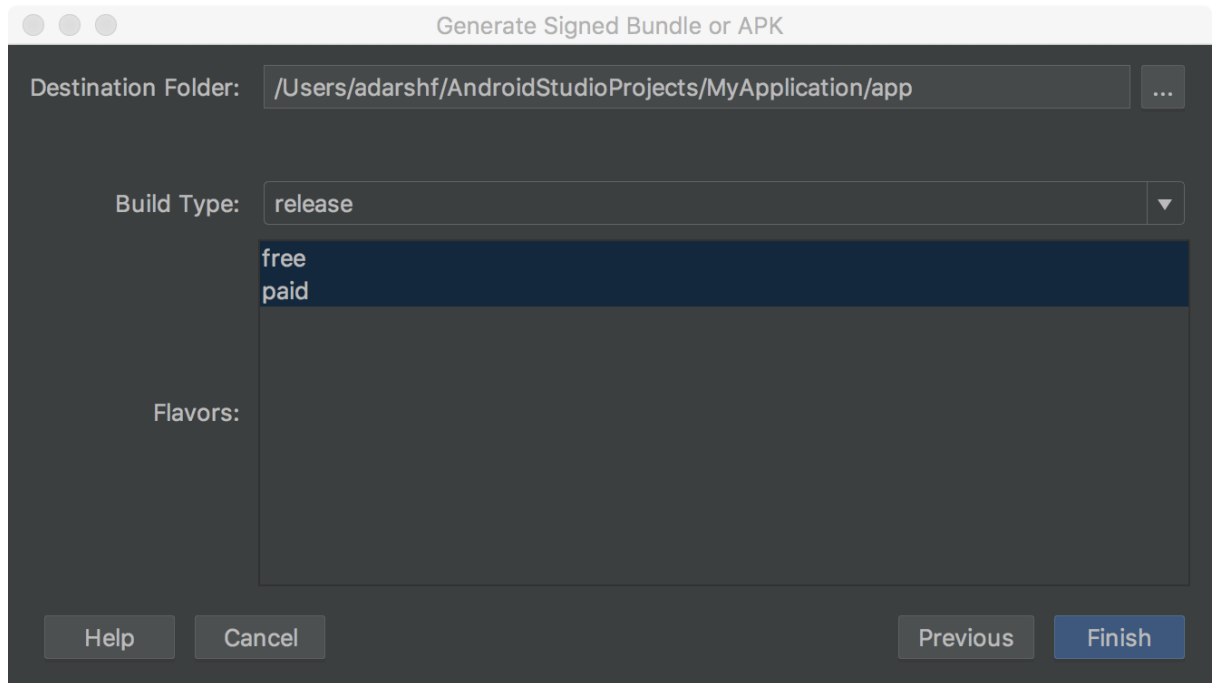## IT2010 – Mobile Application Development

Lab Sheet 09

Figure 3:Generate a signed version of your app for the selected product flavors.

- Click Finish. Then your APK file will generate and notify. You can either **locate** or **analyze** your app by clicking on the appropriate option in the pop-up notification.
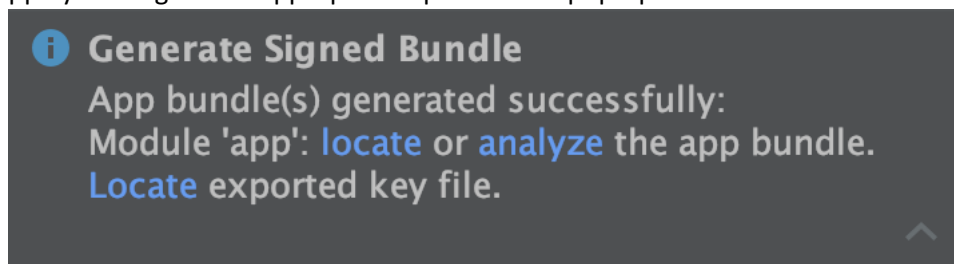

Figure 4: Click the link in the popup to analyze or locate your app bundle, or locate your exported signing key

- Now you are ready to operate your app in to app signing by Google Play and upload your app for release.