ATHABASCA UNIVERSITY
COMP 486

Quest

Journeys moving forward

ASSIGNMENT 3

ADMINISTRATOR'S MANUAL

Kieona Tait

3418918

Monday, March 2, 2020

Assignment Overview

The Assignment has been submitted using a .rar file. The folder **Tait, Kieona (3418918) – Assignment 3** should contain the following folders/files:

- **Database:** Contains a copy of a fresh game.dat file (which stores the user's game data).
- **Demo:** This folder stores the video clips of the game. The folder contains the following:
  - Downloading and Installation Steps
  - Administration and Management
  - Deploy the Game
  - How to Play
  - Source Video Files
- **Documents:** Contains pdf files of the required documents for submission.
  - **Administration's Manual:** This current document. Provided to give basic information and installation steps (instructions) regarding the assignment submitted.
  - **Developer's Guide:** A document which
  - **Game Design Document:** A copy of the initial game design document submitted for review.
  - **Presentation Slides:** The PowerPoint file that will be used for the scheduled presentation of Assignment 3.
  - **Test Plan:** A complete test plan in a table format with test items, inputs, expected outputs, actual outputs, and results/remarks.
  - **User's Manual:** A document detailing how to play the game.
- **Installation:** Provides the game in three formats for execution.
  - **Android Studio Import:** This folder contains components for opening the game in Android Studio.
    - **Quest (Unity Export):** The Android Studio Project file that can be imported into Android Studio for use.
    - **Gradle:** Unity's version of Gradle, that may be necessary due to a bug.
    - **SDK:** Unity's version of SDK. It shouldn't be necessary, but has been provided just in case.
  - **Unity Project:** Contains all the original unity project files (including the scripts).
  - **APK Files:** This folder contains several APKs for different versions of Android.
- **Software:** This folder stores all the software that can used to deploy and develop the game.
- **Source Code:** Contains a copy of all the project's source codes. Both the Version 1.0 (Assignment 1) and Version 2.0 (Assignment 2) codes are available in this folder.

Table of Contents

1. Installation of Software

1.1.   Android Studio

To install Android Studio on Windows, proceed as follows:

1.   Go to **Tait, Kieona (3418918) - Assignment 3\Software\Android Studio** and double-click on the **android-studio-ide-191.6010548-windows** file to launch it.
2.   Follow the setup wizard in Android Studio and install any SDK packages that it recommends.

That's it. The following video shows each step of the setup procedure when using the recommended .exe download.

As new tools and other APIs become available, Android Studio tells you with a pop-up, or you can check for updates by clicking Help > Check for Update.

1.2.   Visual Studio

Although a Visual Studio installer has been provided (**Tait, Kieona (3418918) - Assignment 3\Software\Visual Studio**). It is not necessary. Unity will automatically install it as a part of its installation process. However, simply launch the installer in the aforementioned folder to install it separately for whatever reason you may need.

1.3.   Unity

To install Unity first you must install the Unity Hub and then the Unity Editor.

1.   To install the Unity Hub go to **Tait, Kieona (3418918) - Assignment 3\Software\Unity\Unity Hub** and launch the UnityHubSetup. Follow the setup wizard to install.
2.   To install the Unity Editor, open Unity Hub.
3.   Click the **Installs** tab.
4.   Click the **Add** button and select a specific version of the Editor (Editor 2019.2.7f2 was used to create Quest).
     a.   If you want to use Editor 2019.2.7f2 and it is no longer available, you can manually install it with **ONE** of the files from the **Tait, Kieona (3418918) - Assignment 3\Software\Unity\Unity Editor** folder. Simply launch the executable and follow the setup to install.
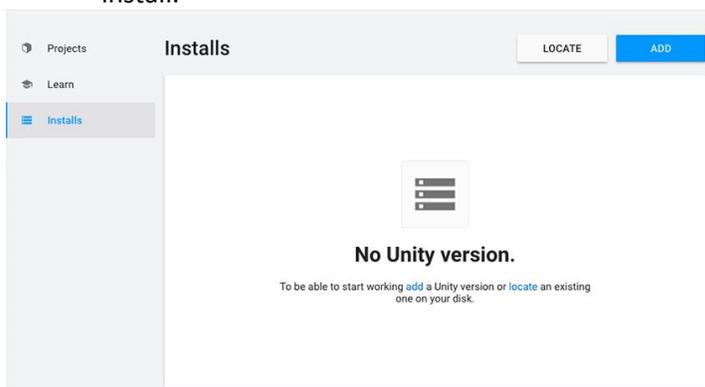
5.   Click the **Next** button and select the modules you want to install with the Editor. If you don't install a component now, you can add it later after the installation (by simply clicking the three dots of the Editor and selecting Add Modules). When you've selected all the modules you need, click **Done**. *(NOTE: Make sure that you select Android Build Support, to build for Android).*

2. Instructions for Deployment

2.1.   Android Studio

Note: Please update Android Studio prior to importing the assignment.

1. Open Android Studio and select **Import Project**, then navigate to **Tait, Kieona (3418918) – Assignment 3\Installation\Android Studio Import\Quest**. If you're asked to select whether to use a Gradle wrapper, select **OK**. Later, you need to override the Gradle distribution that it downloads (this is to workaround a bug in Android Studio, where it believes Unity's Gradle version is invalid). *Note: When importing you may be asked for the Unity version of the SDK. Your version (if it is up to date) should be fine. If later when running, there is an issue with the SDK, I have provided Unity's SDK as backup.*

2. At this point, the project should be able to run. However, some computers may encounter a Gradle bug. To fix this, go to Android Studio's preferences and search for **Gradle**. From here you can select a specific Gradle version for your project. Select **Use local Gradle distribution**, then navigate to Unity's Gradle installation, located at: **Tait, Kieona (3418918) – Assignment 3\Installation\Android Studio Import\gradle**
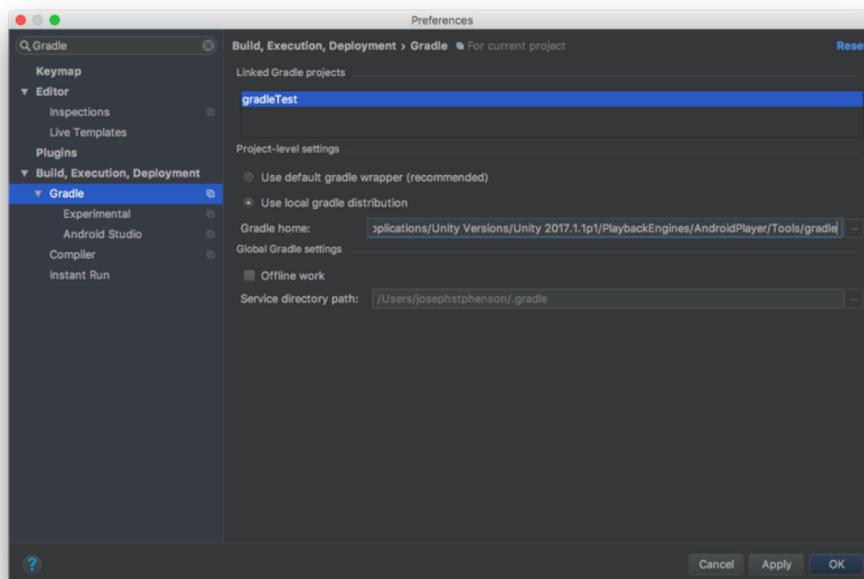
3. Click Apply, and wait for your project to perform another Gradle sync. After this is finished, you should be able to run the project.

4. To build with Android Studio, go to **Run** > **Edit Configurations**. Create a new Gradle configuration with the plus (**+**) icon. To select a **Gradle project**, click the folder icon. In **Tasks** enter *build,* as shown below. Then apply your changes and click **Run** > **Run <Name of your config>**.

2.2. APK

Since the APK files are stores on the PC and need to be transferred to the Android device, rather than acquiring it from the Google Play store, you need to make sure that your Android device is authorized to support installing third party applications. By default, android smartphones do not allow installation of third party apps, only those that are sourced from Google Play Store are permissible.

1. Verify this by going to **"Menu" > "Settings" > "Security" > check "Unknown Sources"**.
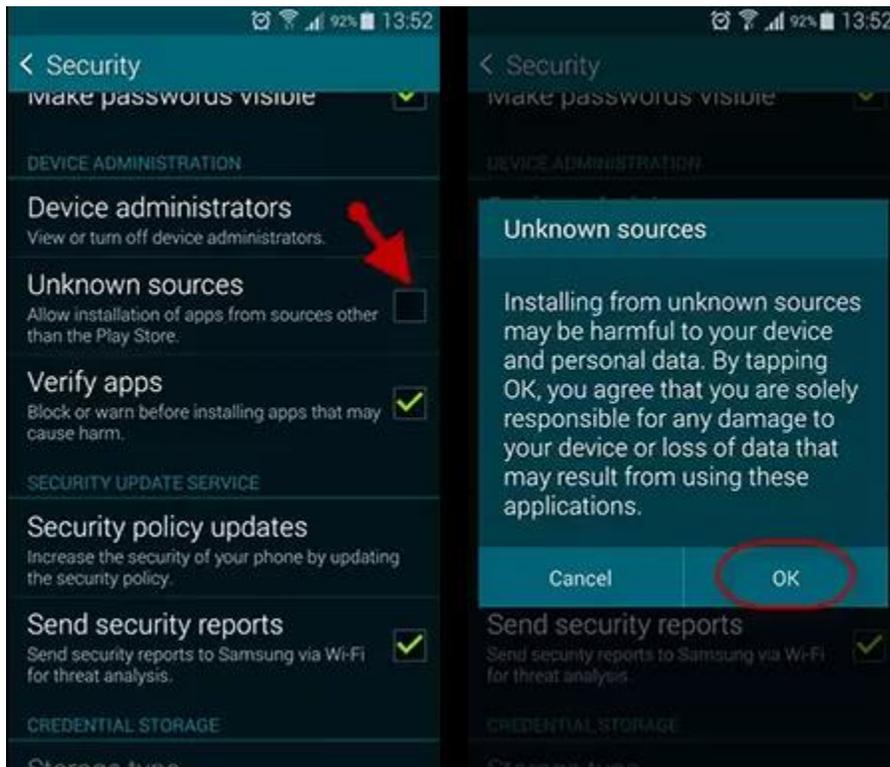
After completing the above steps, you can now install APK on android from PC.

2. Connect your smartphone to computer via USB cable and select **"Media device"** when prompted.
3. Then, open your phone's folder on your PC and copy the APK file **(Tait, Kieona (3418918) – Assignment 3\Installation\APK)** you want to install.
4. Tap the APK file on your handset to facilitate installation.
5. Open the installed software. (Quest)

2.3.   Unity
You may also deploy the game through Unity, by creating and running a project.
1. Open **Unity Hub**.
2. Click **Projects** and select **New** to start the process of creating a new project.
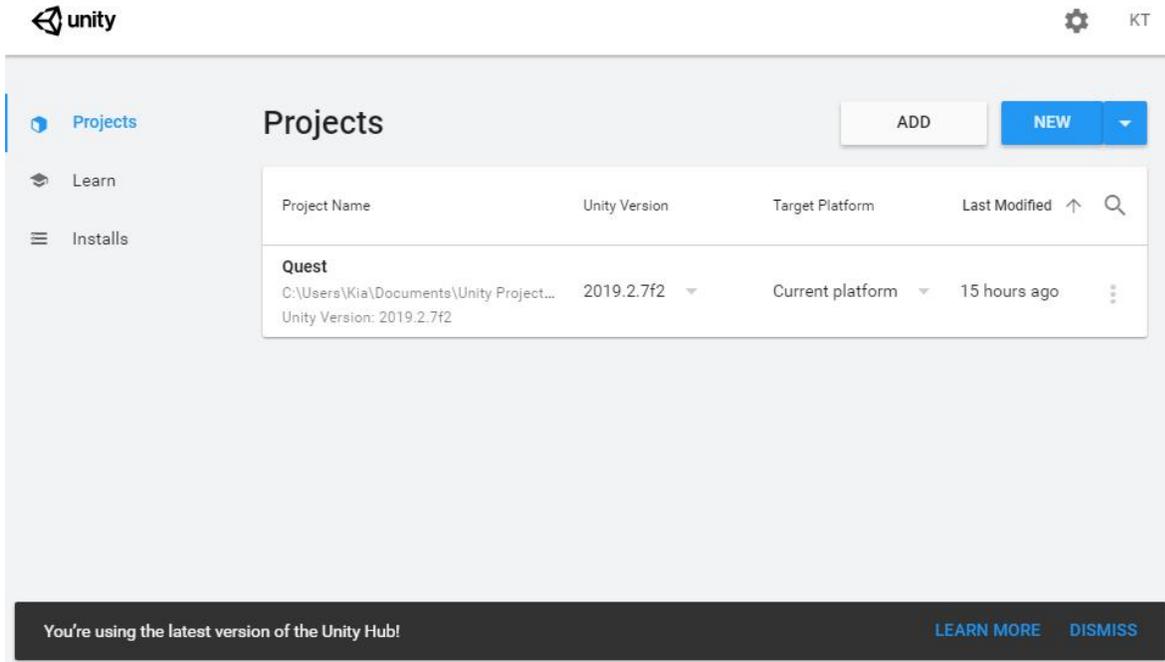
3. Set the template to **2D**, name the project name **Quest** and set an appropriate location. I would recommend just keep the default location and take note of it.
4. Click **Create**.
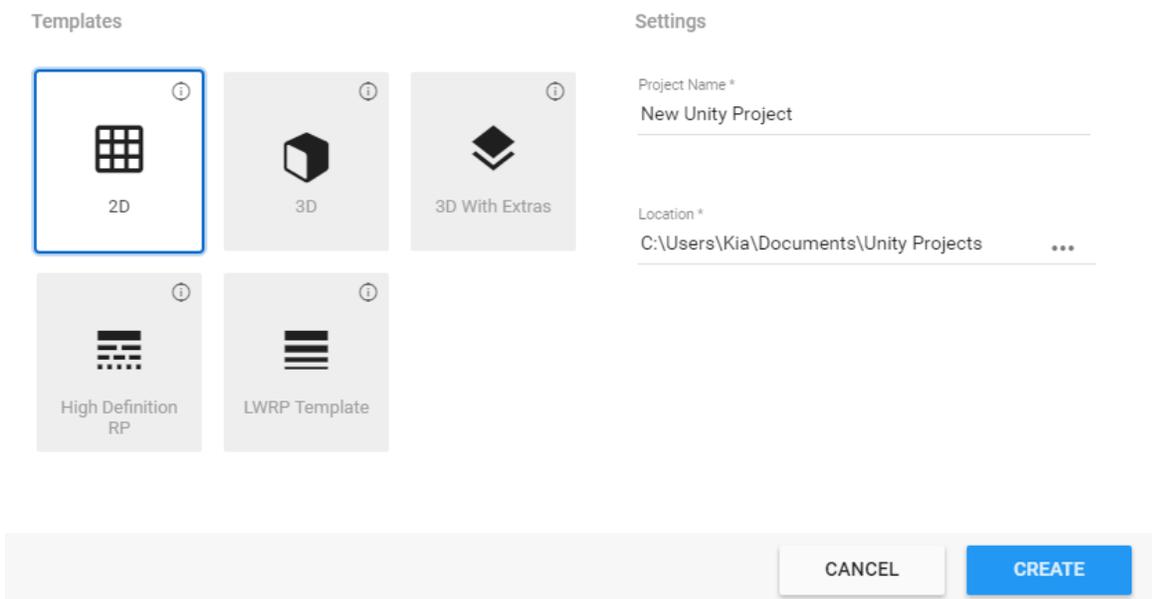
5. Replace the project you just created (in your selected location) with the Unity Project (**Tait, Kieona (3418918) - Assignment 3\Installation\Unity Project**) Quest Folder.
6. Open the project.
7. Click the Scenes folder and open the MainMenu scene.

8. Press Play.

References

- Exporting A Project To Gradle And Building/deploying On Android Studio. (December 8, 2017). Retrieved January 10, 2019, from https://support.unity3d.com/hc/en-us/articles/115005695763-Exporting-a-project-to-Gradle-and-building-deploying-on-Android-Studio
- How to Install APK Files on Android. (November 30, 2018). Retrieved February 29, 2019, from https://airmore.com/install-apk-files-on-android.html
- Install Android Studio. (n.d). Retrieved February 29, 2019, from https://developer.android.com/studio/install