

FDP Development Tutorial (Unity)

- Heena Nagda heenan@gatech.edu
- Rakesh Nagda rakeshn@seas.upenn.edu
- Nik Sultana nsultana@seas.upenn.edu
- Swapneel Sheth swapneel@seas.upenn.edu
- Boon Thau Loo boonloo@seas.upenn.edu

Unity Installations

- To download Unity Hub, to get the license, and to install Unity Editor, go to the following link and follow the instructions:

<https://docs.unity3d.com/Manual/GettingStartedInstallingHub.html>

- For License and activation go to the following link and follow the instructions:

<https://docs.unity3d.com/Manual/ManualActivationGuide.html>

Unity Archived Editor Installation Instructions

- Go to the "Installs" Tab in Unity Hub.
- Click "ADD" button.
- On pop-up window, there will be link to "download archived". Go to that link.
- Choose your desired editor version, and click on "Release note" button.

****There is a button to download the editor as well but when we click on that, nothing happens. So we will need to download it via terminal commands.****

- At Right side of "Quick jump" window, you will get the exact editor version name
- At the end of the file you will get a unique ID for this, written right next to "Changeset"
- Go to the location of Unity Hub via terminal.
- Run the following command on terminal: `./UnityHub.AppImage unityhub://<version name>/<unique ID>`
- Example: Unity archived version 2019.1.14: `./UnityHub.AppImage unityhub://2019.1.14f1/148b5891095a`

Instructions to Create New Project

- Go to the "Projects" tab in Unity Hub.
- Click on "Arrow" button, close to the "New" button, and choose the editor version to create new project with.
- Click "New" button.
- Choose "Template" for the project, give name of the project, and choose the location to store this, and click "Create" button.

****CAUTION: Don't use any character other than 'A-Z', 'a-z', '0-9'. It may cause error while building the project.****

- Editor window will appear.
- Start your project and enjoy!

Instructions to Import Assets or any beginner game

- Go to the Window -> asset store.
- Search Asset of your choice, and press enter. (for example "Creator Kit")
- If you are doing it for the first time, it may ask you to login. Login via your credential which you have created while getting license.
- If you are importing this asset first time, there will be "Download" button. It will be downloaded on the cloud.
- "Download" will now change to "Import" button. Click on that.
- There may be a pop-up window. "Importing a complete project will overwrite your current project settings. If you're not sure what this means, you should switch to an empty project before importing this package". Simply click on "Import" button.
- There may be other "Warning" window with "This Unity Package has Package manager dependencies".

****CAUTION: click on "skip" button.****

- Another window will appear on the screen. Simply click on "Import" button.
- Asset will start importing into your project.

Instructions to Import FDP

- Download directory `FlightPlanDemo` from git repository.
- Open Unity Hub.
- Click on `ADD` button at top right corner.
- A window will be opened. Choose `FlightPlanDemo` directory.
- A new row will be added to Unity Hub named `FlightPlanDemo`.
- Double click on that row.
- First time all the dependencies will be installed automatically for this project. It may take a while.
- After installation the main Unity Editor window will be open.
- Enjoy!

Build/Export projects for different platforms

- Open the Unity Editor.
- Go to File->Build Settings. `Build Settings` window will be popped-up.
- In the `Platform` section, choose the type of platform on which you want to run the animation. For the web build choose `WebGL` option.
- Click on `Build` button. Choose the location of build and give a name. Finally click OK.
- System will start building your project, it may take a while. Go to your build location and double click on executable.

For more information, please refer the following link:

<https://www.youtube.com/watch?v=7nxKAtxGSn8>

Troubleshooting

- **Many Games/Assets use videos in unity, for these you need to install `ffmpeg` software. Otherwise you can get the following error while building it for WebGL:**

make sure you have `avconv` or `ffmpeg` installed

Solution:

Following are the instructions for linux to install the `ffmpeg`:

```
sudo add-apt-repository ppa:mc3man/trusty-media
```

```
sudo apt-get update
```

```
sudo apt-get install ffmpeg
```

```
sudo apt-get install frei0r-plugins
```


Troubleshooting Cont...

- **After importing assets, you may get errors on console. These errors reads as**

...namespace <namespace name> is not found

Solution:

Go to the Window -> Package Manager.

Packages will appear in one window. Some times it takes some time for all the packages to appear on the window.

Search "namespace name" in the list and click on "Import" button.

Troubleshooting Cont...

- **Sometimes you may get errors such as:**

GlCache: Couldn't create /temp/... directory ...

Solution:

Go to Edit -> Preferences -> Gl Cache

Increase the Cache size.

Close the app, restart the system.

open the project again.

Troubleshooting Cont...

- **On linux machine you may face issue while building the project for WebGL platform.**

Solution:

Download the shared library with the help of following instruction:

```
sudo ln -s /lib/x86_64-linux-gnu/libtinfo.so.6 /lib/x86_64-linux-gnu/libtinfo.so.5
```