Computer Graphics Lab 10-

Unity Basics - part 2

# Reference:

1. <https://www.youtube.com/playlist?list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE> (arabic),
2. <https://www.youtube.com/playlist?list=PLGmYIROty-5bpzKQNK3mRMi4pmh_LinV4> very good but some parts are old) ,
3. <https://www.youtube.com/watch?v=gON_hhhvheI>
4. <https://youtu.be/G4Ja-asl8hQ>
5. <https://www.youtube.com/playlist?list=PLS6sInD7ThM2VO5pGgImyfjl5lNApip-7>
6. <https://www.youtube.com/watch?v=A4q29rTeidk>
7. <https://www.youtube.com/watch?v=NjflKgMepQs>
8. <https://www.youtube.com/watch?v=0ABH0xqXUOc>
9. <https://www.youtube.com/playlist?list=PL9z3tc0RL6Z4WenhJiJieCcrPVNxYszod> (ar foundation)

# Tools

1. **Unity 3d 2018+ (if 2020 is available it would be very good) , to learn more about how to install unity :**
   1. **For 64 bits devices:** [**https://youtu.be/Y7zjEQrJVzY**](https://youtu.be/Y7zjEQrJVzY)
   2. **For 32bits devices (old version but still working):** [**https://www.youtube.com/watch?v=3NQVjeWDd4o&list=PLhPa7T8XPi0I7XkxrTEYyyU\_YR1sePyTE&index=2**](https://www.youtube.com/watch?v=3NQVjeWDd4o&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=2)
2. **Visual studio community edition 2019 with unity tools: to learn more about how to integrate it with unity please check this video:** [**https://www.youtube.com/watch?v=TpnmTwkNpNU**](https://www.youtube.com/watch?v=TpnmTwkNpNU)
3. **Blender 3D 2.8+ (for lab 10-10)**
4. Note for linux users: unity is available also for linux ubuntu users, however you can install Monodevelop editor instead of visual studio community edition

# Labs

| **Lab ID** | 10-1 |
| --- | --- |
| **Goal** | Using standard assets |
| **Steps** | <https://www.youtube.com/watch?v=DCAU3vNV-34&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=25>  (note: in unity 2019/2020, the standards asset has some old scripts to be updated, that’s to replace GUIText with Text in 2 lines of code mainly as described here <http://answers.unity.com/answers/1716719/view.html> ) |

| **Lab ID** | 10-2 |
| --- | --- |
| **Goal** | raycasts |
| **Steps** | <https://www.youtube.com/watch?v=e477G5CMbs0&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=26> |

| **Lab ID** | 10-3 |
| --- | --- |
| **Goal** | Prefab and instantiate |
| **Steps** | <https://www.youtube.com/watch?v=fOXMd7_2j6w&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=27> |

| **Lab ID** | 10-4 |
| --- | --- |
| **Goal** | Add force |
| **Steps** | <https://www.youtube.com/watch?v=NDd64HoKLM4&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=28> |

| **Lab ID** | 10-5 |
| --- | --- |
| **Goal** | Cross hair and shot sound |
| **Steps** | <https://www.youtube.com/watch?v=OBqM_OhmLc8&list=PLhPa7T8XPi0I7XkxrTEYyyU_YR1sePyTE&index=29> |

| **Lab ID** | 10-6 |
| --- | --- |
| **Goal** | Unity animation |
| **Steps** | <https://youtu.be/G4Ja-asl8hQ> |

| **Lab ID** | 10-7 |
| --- | --- |
| **Goal** | Coding basics and using public fields for inspector |
| **Steps** | <https://www.youtube.com/watch?v=WwCP9v12HyY&list=PLS6sInD7ThM2VO5pGgImyfjl5lNApip-7&index=1> |

| **Lab ID** | 10-8 |
| --- | --- |
| **Goal** | UI canvas |
| **Steps** | <https://www.youtube.com/watch?v=mXTYwUqdv78&list=PLS6sInD7ThM2VO5pGgImyfjl5lNApip-7&index=2> |

| **Lab ID** | 10-8 |
| --- | --- |
| **Goal** | Health bar |
| **Steps** | <https://www.youtube.com/watch?v=ZYeXmze5gxg&list=PLS6sInD7ThM2VO5pGgImyfjl5lNApip-7&index=6> |

| **Lab ID** | 10-9 |
| --- | --- |
| **Goal** | Making **Solar System simulation** |
| **Steps** | <https://www.youtube.com/watch?v=A4q29rTeidk> |

| **Lab ID** | 10-10 |
| --- | --- |
| **Goal** | Creating a model in Blender and **export it to Unity** |
| **Steps** | Step 1- create model: <https://www.youtube.com/watch?v=V0DTEQqVzA0>   Step 2: continue modeling <https://www.youtube.com/watch?v=Rtn-pvyklms>  Step 3: uv and material  <https://www.youtube.com/watch?v=EtVLw3_LDwY>  Step 3: import into unity <https://www.youtube.com/watch?v=0ABH0xqXUOc>  (note : there are downloads in video description) |

**Bonus Optional Lab 10-11:**

If you are interested in Augmented reality please check this playlist:  
<https://www.youtube.com/playlist?list=PL9z3tc0RL6Z4WenhJiJieCcrPVNxYszod>

**BonusOptional Lab 11-12:**

For VR interested developers, please check those playlist:

<https://www.youtube.com/watch?v=OEP7sMwfZnE&list=PLiuDBLn1FK-QOmpA3Vs2JY0DVAj0GfFPn>