**Lab 7: Unity – Animation**

**Aim of this lab session:**

To familiarize the students with the animation system provided by Unity and to explore the constraints set by the engine to allow optimization of their content pipeline.

**Task 1: Load and animate the sample model**

1. Create a new 3D game project, Lab7\_Unity.
2. Import the Lab 7\_Player.unitypackage into the project
3. Drag and drop the “Models/Ethan” into the scene and set up the camera so that it is visible when the game is run.
4. Create a new AnimatorController (Assets/Create/Animator Controller) and call it IdleController
5. Drag and drop it into Animator/Controller on the recently added GameObject, i.e. ‘Model/Ethan’.
6. Run the game to observe results.
7. Double click on IdleController in the Inspector to open the node tool (Animator window/tab). Drag HumanoidIdle (from the folder Assets/Player/Animation) into the Animator Window. You should see an orange arrow connecting the Entry to HumanoidIdle.
8. Run the game to see results.
9. Similarly, create another AnimatorController, named “RunController”; Add the HumanoidRun animation to it and run the game.
10. Now try switching between the two in code using the code below (i.e. Add a new script to the Player object and amend the script according to the code below).
11. Add/Drop the two animator controllers above to the component (Script) in the Inspector window by clicking the small circle (with a dot in the center) on the right side of the box (that has text like: “None (Runtime Animator Controller) …”).
12. Run the game and press the Up arrow key to see what happens.

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| Animator anim;  public RuntimeAnimatorController runController;  public RuntimeAnimatorController idleController;  void Start()  {  anim = GetComponent<Animator>();  }  void Update ()  {  if (Input.GetKey(KeyCode.UpArrow) == true)  {  anim.runtimeAnimatorController = runController;  }  else  {  anim.runtimeAnimatorController = idleController;  }  } |

**Task 7.1**: Finish the steps above and zip two folders, Assets and Project Settings, (Not Include other folders), and email to hit\_submission2023@163.com.

You may want to review and practice the steps above. If you are comfortable what you’ve done so far, go ahead to try the followings (**Bonus Points!**):

**Task 2: Add more work to make the character jump.**