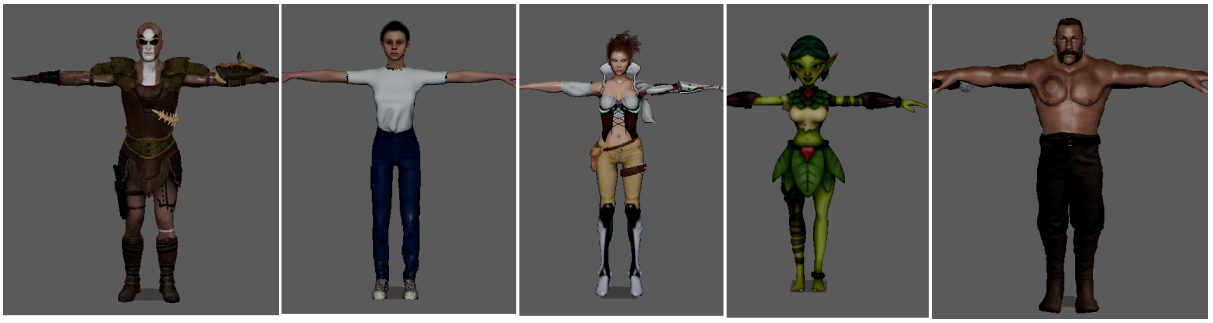
Rigging Final Assignment

Choose a character from the provided Maya scene file. There are 5 different characters you can choose from. Each character has a display layer assigned to it, so feel free to choose and work on any character you like, and delete the others from the scene. If you want to work on your own character, let me know so I can review it first before you start rigging it.



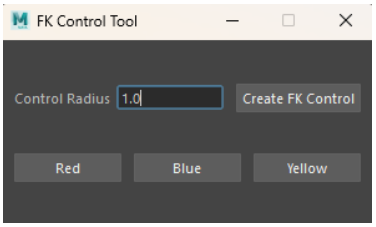
To pass the assignment (G):

- Create full skeleton the character:
  - Spine
  - Shoulders/Arms
  - Fingers
  - Legs
  - Neck/Head
- Orient the joints properly so you have **X** as the primary axis.
- Create **FK** controls for shoulders and arms.
- Create **IK** controls for legs with pole vector knee controls.
- Create **FK** controls for spine, neck and head.
- Have frozen transformations on all controls with no junk history.
- Clear naming convention and organized node structure in Outliner.
- Clean skeleton hierarchy for skinned joints so they can work in game engines.
- Skin the mesh to the skeleton and paint weights to have acceptable deformations(No major clipping or stiffness).
- Add unique colors to Left, Right and Center controls.
- **Python:** Write a script that generates **FK** controls for selected joints.
  - Create a function with 3 parameters (joint **name**/list of joints, control **radius**, circle **normal**) Add more if you want to.
  - **Note:** These arguments should have default values so you don't have to define them every time you create an **FK** control.

To pass the assignment with distinction (VG):

- Create full skeleton the character:

    - Spine
    - Shoulders/Arms
    - Fingers
    - Legs
    - Neck/Head
- Orient the joints properly so you have **X** as the primary axis.
- Create **FK** controls for shoulders and arms.
- Create **IK** controls for legs with pole vector knee controls.
- Create **FK** controls for spine, neck and head.
- Have frozen transformations on all controls with no junk history.
- Create a hybrid IK/FK rig setup for at least one arm and one leg with a blend attribute.
- Clear naming convention and organized node structure in Outliner.
- Clean skeleton hierarchy for skinned joints so they can work in game engines.
- Skin the mesh to the skeleton and paint weights to have acceptable deformations(No major clipping or stiffness).
- Add unique colors to Left, Right and Center controls.
- **FK** space switch attribute for one arm, so **FK** controls could either rotate with shoulder, chest, hips or global control.
- Lock and hide unused/unnecessary attributes from controls.
- **Python:** Write a tool with UI using Qt.
    - It should have a button to create FK control for selected joints.
    - The FK method(function) should have the parameters (joint **name**/list of joints, control **radius**, circle **normal**).
    - Radius parameter should be exposed to the user in the UI.
    - Create additional 3 buttons (Red, Blue, Yellow) and connect them when clicked to color the selected controls accordingly.
    - **Note:** These arguments should have default values so you don't have to define them every time you create an **FK** control.
    - Reference Image:



Feel free to push this further if you feel comfortable, I would like to be surprised. Have fun and good luck. Reach out if you have any questions or concerns.

Note: ***copy pasting from chatgpt or importing existing skeletons or using autorigs is NOT allowed. Joints and Blendshapes are the only deformers you should use.***

Deadline: 10 March 2024

Hand in Assignment: Since **Studentportalen** can't handle large files, hand in the **Maya rig** file and **python script(as text file)** by uploading them to **Google Drive** and submit the download link under: **Examinerande moment - T3d24 - Rigging - Exam**