CS775 2023 - Character Animation and VFX in Blender
Part 1: Character Choice and Augmentation Plan

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Declaration

The entire code of this assignment is purely our own work and we have not taken any assistance from other students or copied the code from internet and at any point of time we both will be able to explain any part of the code that I have written.

1. Animesh (21q050015)

1 Fictional Character : Spider-Man

Figure 1: Rendered Character Mesh

For animating a fictional character in this assignment, I have chosen Spider-Man, as it is one of the most recognizable character in fiction. I was able to obtain a well defined 3D character model online from blenderkit website. The mesh is already textured which saves me time in modelling procedure. Rendered model can be is shown in Fig. 1.

Reason for choosing Spider-Man are his unique and recognizable movement and poses, e.g. jumping and flying with the help of webs. I am planning to the character based on his natural movements.

2 Proposed Animation Sequence

I have planned to use at least four moving parts in the animation including arms, legs, hands and head. Additionally, I will also use inverse kinematics while animating Spider-Man's feet for obtaining smooth movements.

The script for the animation sequence defining various movements could be as follows:

- Spider-Man is running away from the bad guys on a high platform, evading various obstacles by jumping over them.

- When he reached the end of the platform, he'll jump off and shoot his web on a tall building in front of the platform.

- Spider-Man will successfully be able to evade the goons by climbing up the tall building.

3   Static Scene to be Captured

After completing the animation of the character model in blender, I will capture a static scene in my hostel room. I will use plane surface of my study table which will serve as the high platform referred in previous section. I will record the table by moving the camera from left to right until the end of table. Then I will capture the gap between the table and a wall which will serve as a gap where the Spider-Man will shoot his web and finally he'll stick to the wall on right which will serve as a tall building.

3.1   Texturing real world for realism

Apart from augmenting the character in the recorded scene, I will also apply some textures on table and wall to make them look like some metallic platform and tall building respectively. I may also add some synthetic objects on the platform to serve as obstacles.

3.2   Augmenting video with the animated character

The background and the platform colours recorded in the video will have different colour from Spider-Man's suit's colour to ensure that the character is properly visible in the augmented scene. I will also add few lights and shadows in the character model to make it coherent with the real world lighting conditions.