**Computer Graphics ClassAssignment3 Report**

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DISCLAIMER

Because of this program also loads multiple .obj files upon execution, users may experience stuck on execution around ~5s to finish loading all .obj files for extra requirements.

Implemented Requirements

A. Manipulating the camera the same way in ClassAssignment1 using the same code. 18x18 reference grid is also included.

B. i. When user does a drag and drop action, the program will load the .bvh file.

B. i. 2. The viewer will only render one .bvh file at a time. If new .bvh file dropped, only the latest file will be loaded in the viewer.

B ii. The viewer provides 2 rendering mode – line rendering (by pressing ‘1’) and box rendering (by pressing ‘2’). When these 2 keys are **pressed at any time**, the rendering mode will immediately change during execution.

B. iii. Upon the first file loading, the skeleton (t-pose) of the character will be loaded. The character will NOT automatically animated upon drop. The joints are drawn using only information from HIERARCHY section in .bvh file and GL\_Lines without any transformation matrices. End-effector joints are also drawn.

B. iv. Pressing spacebar will animate the character. Animation is based from the MOTION section in .bvh file. After drawing the last frame, the motion animation will be replayed.

B. v. When loading a .bvh file, the file data (file name, number of frames, FPS, number of joints, list of all joints) will be printed on console.

EXTRA CREDIT. A. For one of the sample .bvh file - “**sample-spin.bvh**” will be using multiple obj files from “./HierarchialModelFiles/” directory to render the character. All obj are rendered with proper shading and lighting. By pressing ‘2’ after loading this .bvh file, multiple obj files will be rendered instead of box rendering.

.BVH Viewer + Extra Credit Demo Video

https://www.youtube.com/watch?v=tGs3StDHh90