# Computer Graphics Class Assignment 3

## 컴퓨터소프트웨어학부 2017030473 - 함지성

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## Which requirements I implemented (5 pts)

1. (10 pts) Manipulate the camera in the same way as in ClassAssignment1 (**done**)

2. (100 pts) Load a bvh file and render it

    1. (10 pts) Open a bvh file by drag-and-drop to your bvh viewer window (**done**)
    - 높은 반응성을 위해 python concurrent.futures 패키지를 이용해 별도의 프로세스에서 bvh 파일을 읽도록 비동기 처리함, 중도에 새로운 bvh 읽기 요청이 들어올 경우 기존 작업은 취소하도록 처리됨

    2. (20 pts) Provide **two rendering modes** – line / box rendering (**done**)
    - **1**번은 **line** 렌더링, **2**번은 **box** 렌더링으로 구현 함

    3. (30 pts) Read the bvh file and render the "skeleton" (t-pose) of the motion when you load the file by drag-and-drop (**done**)
    - 처음 **bvh**를 읽었을 때엔 **t-pose**를 취하도록 설정

    4. (30 pts) Animate the loaded motion if you press the <spacebar> key (**done**)
    - 스페이스 바를 누를 때만 애니메이션이 재생되도록 구현

    5. (10 pts) When open a bvh file, print out the following information of the bvh file to stdout (console) (**done**)
    - **bvh** 파일을 드래그 앤 드롭할 때에만 정보를 표준 출력으로 내보냄

3. (10 pts) Extra Credits

    1. (+10 pts) Use different obj files to draw each body part instead of a line segment (**done**)

# Uploaded Video Link (5 pts)

<u>유튜브 링크</u>
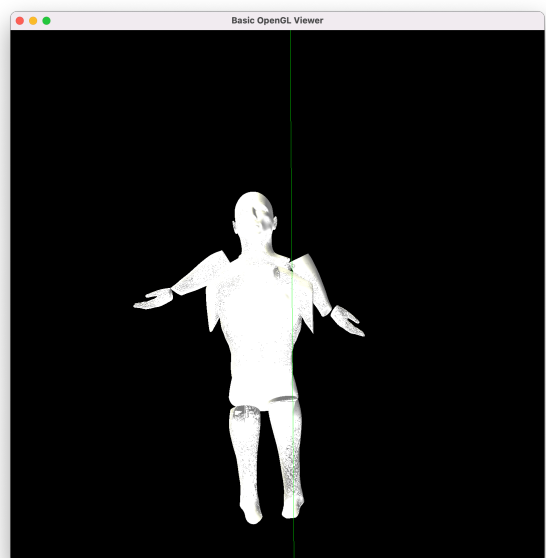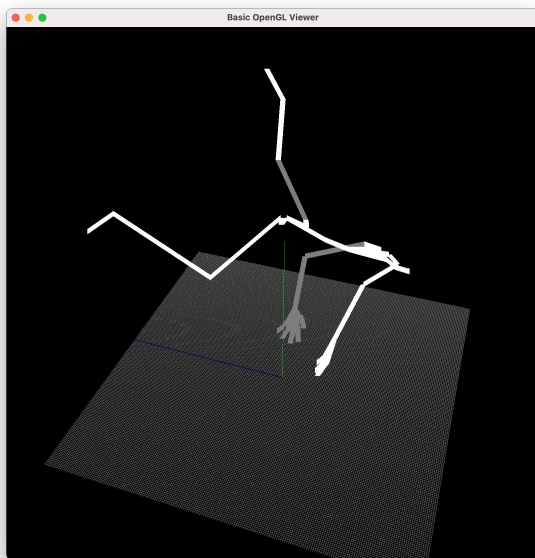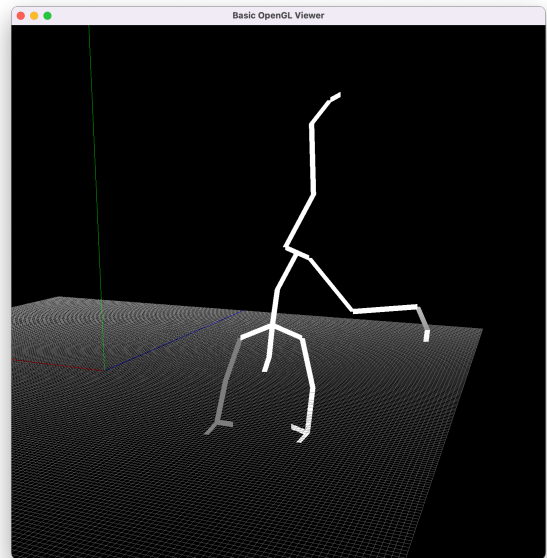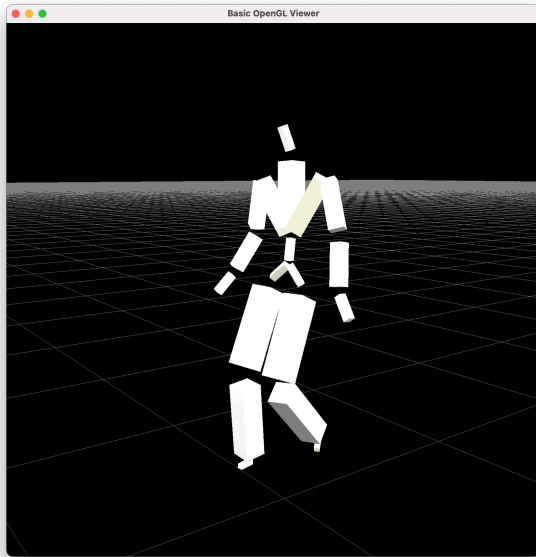








```
BVH File is loading
Loading a bvh file is on progress.
Finished to load bvh file
1. File name: Fanie_Hiphop-01.bvh
2. Number of frames: 15586
3. FPS (which is 1/FrameTime): 120.00004738571131
4. Number of joints (including root): 31
5. List of all joint names: ['LeftFingerBase', 'LHipJoint', 'LowerBack', 'Spine', 'LeftLeg', '
RightUpLeg', 'LeftShoulder', 'Neck1', 'LeftFoot', 'RightForeArm', 'LeftHandIndex1', 'LeftUpLeg
', 'RightFingerBase', 'RightToeBase', 'RightFoot', 'Neck', 'Head', 'LeftToeBase', 'LeftArm', '
Hips', 'RightShoulder', 'LeftHand', 'RHipJoint', 'RightHandIndex1', 'RThumb', 'RightHand', 'Ri
ghtLeg', 'RightArm', 'LeftForeArm', 'LThumb', 'Spine1']
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