EAST WEST UNIVERSITY

Project Report

OpenGL Interactive Scenario Project

Course title: Computer Graphics
Course code: CSE 420
Sec: 1

Prepared By:

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Submitted to:

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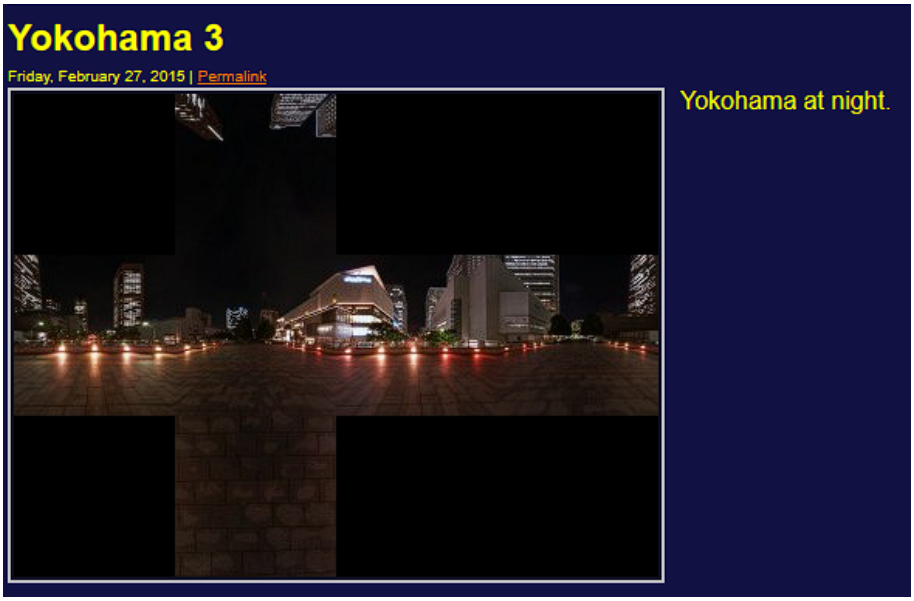
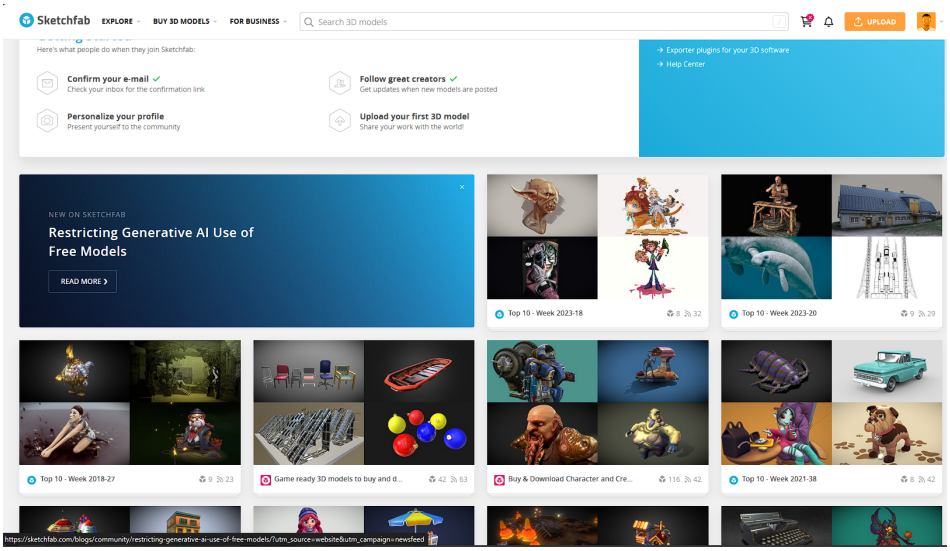
Design Decisions:

Skybox: I have chosen a 360 degree skybox which has a six sided cube map for a seamless background.



3D Models: Imported various 3D models (Bat, Batman, Batmobile, Joker) to populate the scene, showcasing different objects in a Gotham nights setting.



Challenges Faced and Solutions:
I have faced a problem while uploading the models but the texture is not properly located in the file path. I tried to export the OBJ file in Blender, but the .MTL file does not contain 'map_Kd,' 'map_Bump,' and 'map_Ks,' making it unable to load the textures at the specified paths. Then I take those models which have perfect texture file paths in the .MLT.

Resource Citing:
Textures: Night city textures for the skybox were sourced from Humus - Textures.
3D Models: Batman, Bat, Batmobile, and Joker models were obtained from Newsfeed - Sketchfab.

Skybox Quality and Realism:
Achieved high-quality and realistic skybox by using detailed night city textures.
Successfully integrated 3D models into the scene using the Model class. Implemented rotations, translations, and scaling for each model to create dynamic and visually appealing animations.

Creativity and Innovation:
Implemented creative elements such as rotating Bat, inverted Batman, moving Batmobile, and oscillating Joker, adding dynamism and engagement to the scene.

Code Quality and Documentation:
Followed best practices for OpenGL programming, maintaining modular and readable code.
Video Demonstration Link: Video