Name : Chakradhar Reddi Vitta

Mail Id : vittac@oregonstate.edu

ID : 934595987

Project 06
Shaders

Description:

In this project, I have demonstrated a 3D fish model with dynamic lighting and shading effects, along with a visible XYZ coordinate system for spatial orientation. The model is shown from different angles, including side, top, and front views, to highlight transformations and 3D rendering.

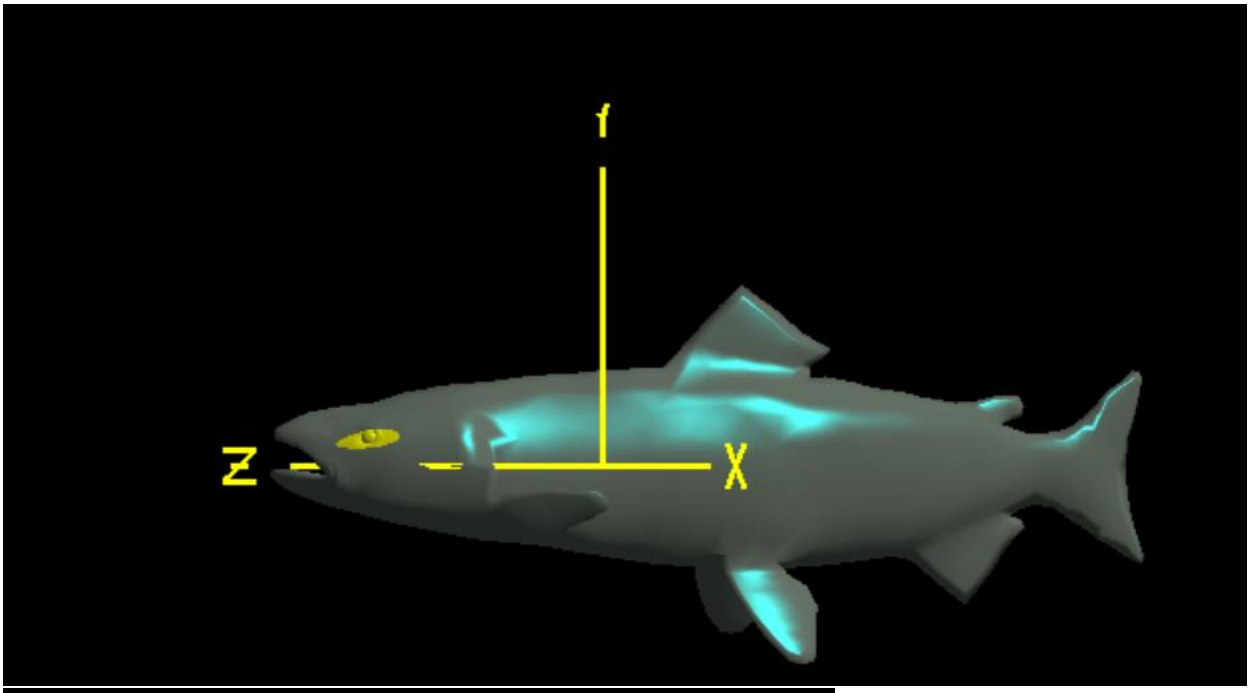
The fish's body has realistic reflective effects created using shading calculations and normalized vectors. The eye is given a distinct color to make it stand out. I also applied transformations like rotations and scaling to position the fish correctly in the 3D space.

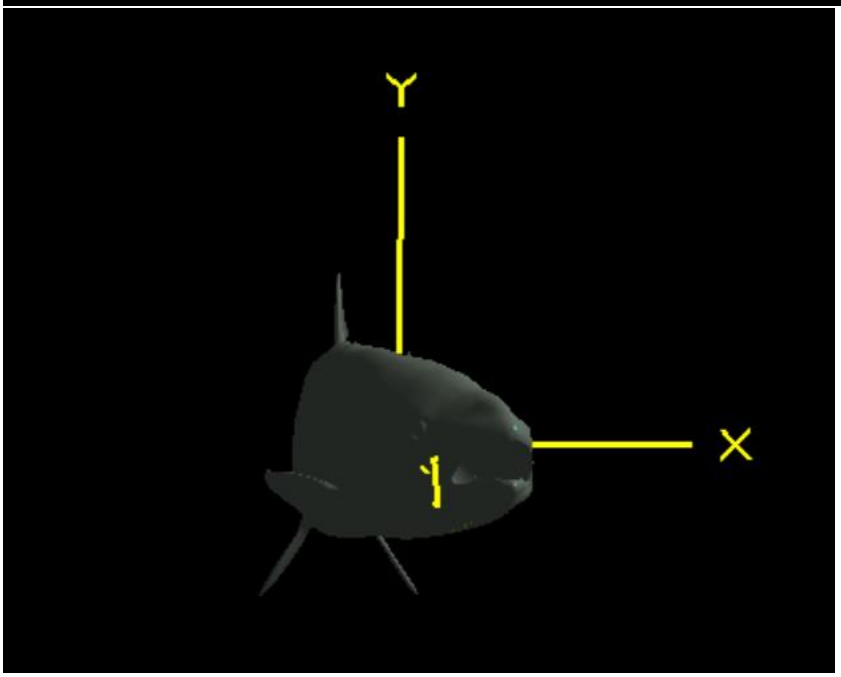
This project involved using shader programs and accurate normal vector calculations to achieve realistic lighting and rendering. The images clearly show the successful application of 3D modeling and rendering techniques.

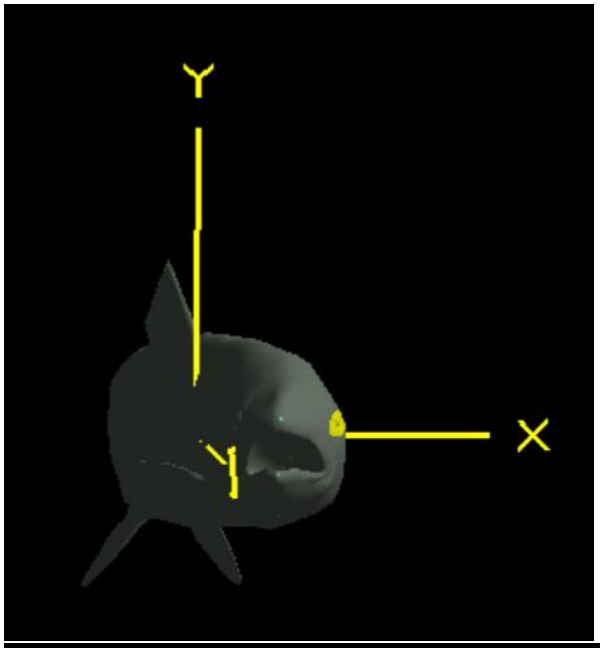
Question 2

The images show that the animation works as expected because the fish is positioned correctly in 3D space with the XYZ axes aligned. The lighting effects, like reflections and shading, change properly with the fish's surface, making it look realistic. Viewing the fish from different angles confirms that the transformations and rendering are accurate and match the setup.

Output:



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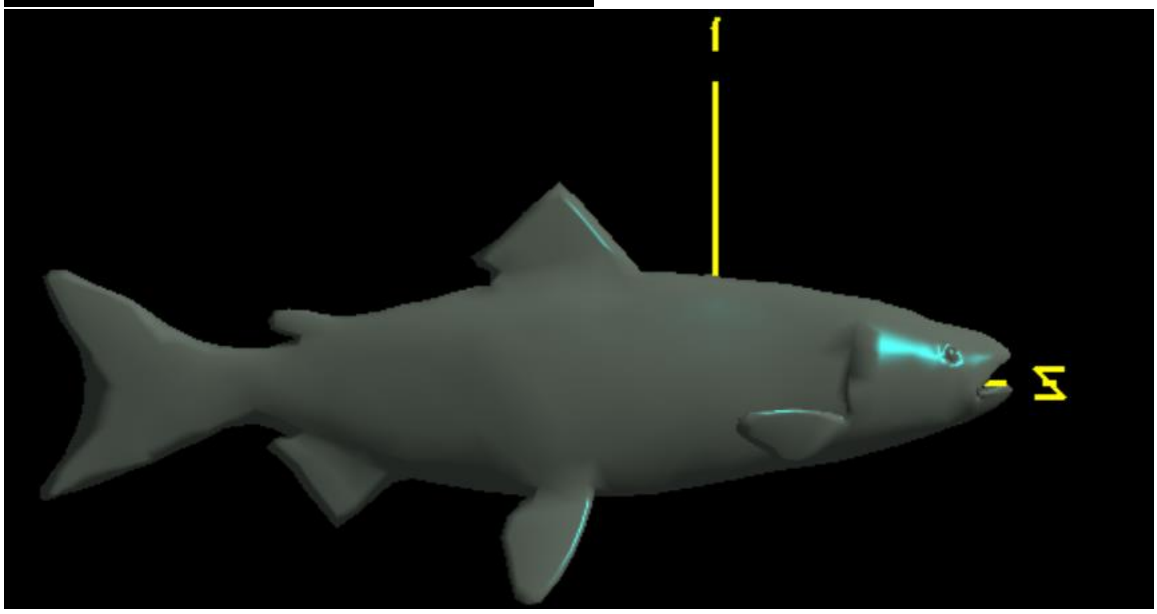
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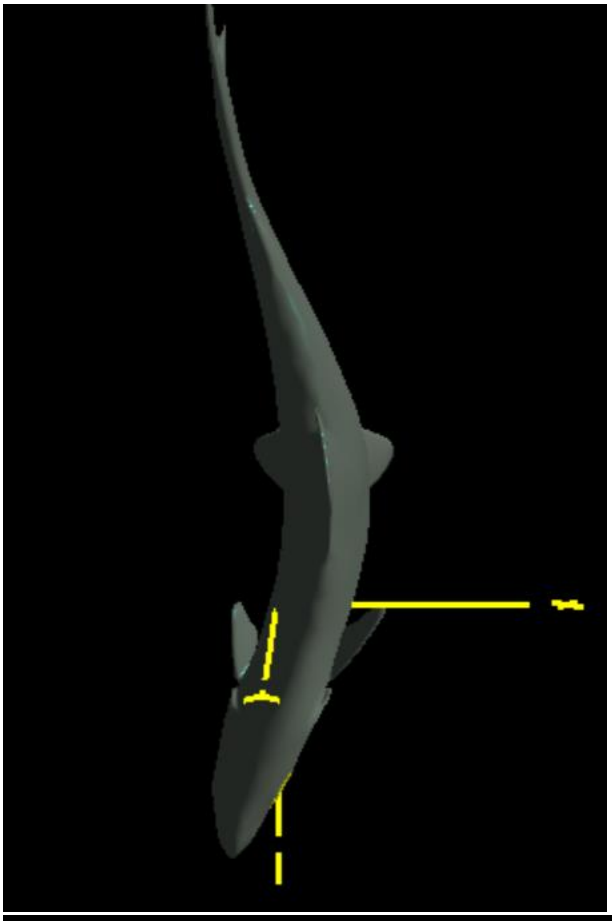

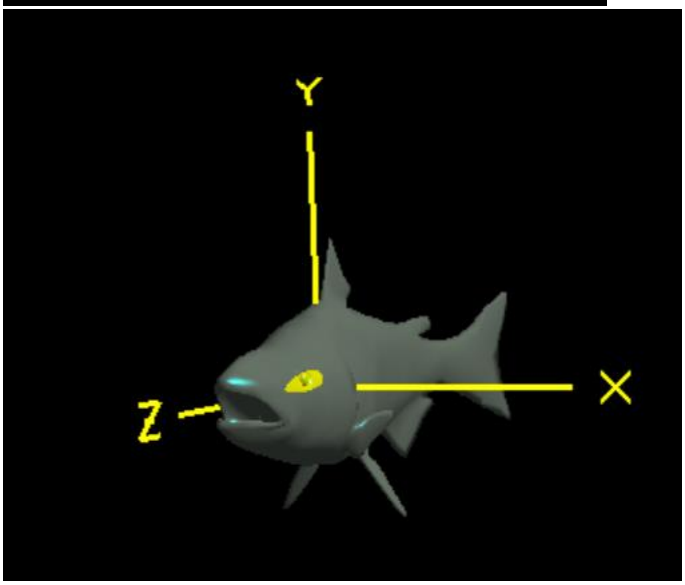

Kaltura link :

https://media.oregonstate.edu/media/t/1_710socsn