

CSI 422 (B) Assignment

Keyboard and Mouse Input, 3D Objects

Tasks

- **FIRST OF ALL, CHECK THE EXE FILE NAMED `offline3.exe` TO UNDERSTAND WHAT IS HAPPENING PROPERLY BY PROVIDING INPUTS ACCORDING TO THE DESCRIPTION BELOW.**
- **A SHORT ONLINE WILL BE TAKEN ON THE DAY OF THE SUBMISSION. DURING THE ONLINE, YOU WILL HAVE TO MODIFY THE CODE THAT YOU SUBMITTED.**
- Draw a sphere at the origin. But, the two parts of the sphere (upper hemisphere and lower hemisphere) should be of different colors. You can choose any color you like.
- **Rotation of Sphere:**
 - If the **'w'** key is pressed, the sphere will start rotating with respect to x axis. If it is pressed again, the rotation speed will increase. It will keep increasing if this key is pressed again and again (there is no limit).
 - If the **'s'** key is pressed, the rotation speed of the sphere will decrease. It will keep decreasing if the key is pressed again and again.
- **Movement Along the Axes:**
 - If the **RIGHT ARROW** is pressed, the sphere will start moving along the X-axis. The speed will increase depending on the number of times this key is pressed.
 - If the **LEFT ARROW** is pressed, the spheres speed along the X-axis will decrease.
 - If the **UP ARROW** is pressed, the sphere will start moving along the Y-axis. The speed will increase depending on the number of times this key is pressed.
 - If the **DOWN ARROW** is pressed, the spheres speed along the Y-axis will decrease.

- If the **RIGHT MOUSE BUTTON** is clicked, the sphere will start moving along the Z-axis. The speed will increase depending on the number of times this key is pressed.
- If the **LEFT MOUSE BUTTON** is pressed, the spheres speed along the Z-axis will decrease.

- **Scaling Along the Axes:**

- If the 'y' key is pressed, the sphere will be scaled along the X-axis. If it is pressed again and again, the amount of scaling will keep increasing.
- If the 'u' key is pressed, the amount of scaling along the X-axis will decrease.
- If the 'i' key is pressed, the sphere will be scaled along the Y-axis. If it is pressed again and again, the amount of scaling will keep increasing.
- If the 'o' key is pressed, the amount of scaling along the Y-axis will decrease.

Assignment Rules

- Assignment must be submitted in eLMS. Only submitting the cpp file will suffice.
- Deadline for the assignment is 16/09/2020 11:30 AM.
- Do not copy any code. Penalty for plagiarism is -100%.
- No request for extending assignment deadline will be entertained.