



initializeGL

- Load three models and textures to corresponding VAOs and textureId
- Load instance positions to vector<float> positions
- Load slime into VAO
- Create shader programs (grass/slime/reset/collect)
- Setup 3 ssbos
- Setup draw commands
- Bind 2nd ssbo onto model vao 3rd attribute

paintGL

- Dispatch reset program
- Set uniforms and Dispatch collect program
- Use grass program
 - Set uniforms as god and draw with left viewport (glMultiDrawElementsIndirect)
 - Set uniforms as player and draw with right viewport (glMultiDrawElementsIndirect)
- Use slime program and set slime position with model matrix
 - Set uniforms as god and draw with left viewport (glDrawElements)
 - Set uniforms as player and draw with right viewport (glDrawElements)

mouseButtonCallback

setup mouseClicked = true when holding down mouse button

set firstMouse = true when release mouse button

cursorPosCallback

when mouseClicked = true, calculate mouse movement and update pitch and yaw to

update godViewMat

keyCallback

when wasd is pressed, update playerCenter and playerPosition

Update playerViewMat, godViewMat, godPosition

IDE

Visual studio 2017 / C++14