

Comp 465 “Warbird Simulation”  
Class Diagram  
October 2, 2014  
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### CelestialBodySolid3D

- radianSpin : float  
- radianRot : float  
- orbital : bool  
- rotational : bool  
- missileCount : UINT32  
- gravityVector : float  
- cb3D : CelestialBodySolid3D\*  
- rotationAxis : glm::vec3  
- spinning : bool  
- spinAxis : glm::vec3  
- lastModelMatrix : glm::mat4  
+ (All associated get/set functions)  
+ getModelMatrix() : glm::mat4  
+ update(bool) : void

### AnimationSpeed

- id[20] : char  
- speed : UINT32  
+ (All associated get/set functions)

### MathHelperJWF

+ static get3D\_ScaledVector(glm::vec3, float) : glm::vec3

### Object3D

# objName[25] : char  
# fileName[25] : char  
# vertexCount : UINT32  
# modelSize: float  
# active : bool  
# rotationMatrix : glm::mat4  
# scaleMatrix : glm::mat4  
# translationMatrix : glm::mat4  
+ (All associated get/set functions)  
+ virtual getModelMatrix() : glm::mat4

### SpaceShip

- missileCount : UINT32  
+ (All associated get/set functions)  
+ getModelMatrix : glm::vec4  
+ moveAdjust(float) : void  
+ yawAdjust(float) : void  
+ pitchAdjust(float) : void  
+ rollAdjust(float) : void

### CameraView

- eye : glm::vec3  
- at : glm::vec3  
- up : glm::vec3  
- viewID[20] : char  
- obj : Object3D\*  
- eyeDynamic : glm::vec3  
- atDynamic : glm::vec3  
- upDynamic : glm::vec3  
+ (All associated get/set functions)  
+ getLookAt() : glm::mat4  
+ static moveForwardOrBackwards(CameraView\*, float, bool) : glm::vec3  
+ static turnRightOrLeft(CameraView\*, float, bool) : glm::vec3  
+ static pitchUpOrDown(CameraView\*, float, bool) : glm::vec3

