**System Integration Issue**

runs but has graphical issues?

Removed all object except for the sun, and saw nothing. Added mercury, and got a small circle with the same

bizarre colored pattern on it. Perhaps the sun isn't getting properly modeled nor emitting light. Going out

of focus mode either doesn't allow movement, or the mercury is fixed to the screen center regardless.

Resizing the sun made it appear, with the same color pattern, and since the object's shape obeys

the bodies, it is indeed a body itself, fixed to the screen. The objects refuse to overlap, but the largest one

takes precedence for whatever reason when two bodies are initialized. I feel like it must therefore be an

issue with a section of code that takes all bodies into account via the System pointer vector.

It isn't System transferring the bodies vector.

It isn't the shaders.

It isn't the model position.

It isn't the model matrix.

It isn't Camera or Render - the only change is the bodies vector from array.

Removing shadow render does not change anything.

Fucking with the lightColor parameter doesn't modify the shades of the colored pattern either, I wonder how

that wheel is chosen.

I manually turned off the shader switcher and that's why the object is now blue and covers the screen. At least

I know now that the shader setting does modify the nature of the disc, so there may indeed be issues

transporting uniforms - shader and otherwise. cv

When I take the shader switch off of the old iteration, the camera keys don't work and all bodies are blue

and cannot be rotated - fixed to the center of the screen. Getting out of focus mode doesn't let me roam

around the body. There's definitely a shader related issue because of all the similar symptoms - only the

system doesn't fully exist and the colors are different.

When saturn and it's rings are initialized a stuttering happens - i assume because of their identical positions.

Though, no ring like in the old sim siwtch off, it seems to swap between the normal abberation and the blue shade

from off switch.

I text compared the main files for the program with the working version of the old and there are no changes

beyond those which integrate System. My biggest issue with all this is that one works and the other doesn't

so there must be a discrepancy between how values are handled in the iterations. I can't figure out what it is.

It should absolutely hold true that any issues are not related to programs with little to no change and that

only leaves a handful of suspects which is why I believe it's a System program

The only solid lead I have is line 164 in Render that makes dull bodies blue and light bodies disappear.

When the normal shader is set to the shadow shader this does not occur (nothing does), only when the second switch

is commented out is it triggered. What's the difference?

If the old sim gets swapped shaders manually then whatever object dissapears entirely. If the old switch

is turned off the dull bodies are blue and I'm not sure about the light bodies, but the solar system still exists

Well well well? In Render when I print the shaderprogram ID I get 0 and that's usually a non zero number. This

might be it. The shadowShaderProgram has an ID of 21 so the issue might just be with the one. There is a point

after the system is initialiuzed that ShadowRender is run twice and the first has ID 0 and the second has

ID 4294967295. It's always that number. In the Old sim the ID's stay the same as when initialized: 3 and 6.

These values are held by Mesh in the New sim too as the respective ID's.

I went to find when exactly these values change and it's always immediately after Sys is initialized - though

not at the end of Sys's run time. Since there's nothing for me to debug I asked GPT about possible issues

and they noted that multithreading could cause changes like that. The program does use multithreading.

Used Debug->Step In->breakpoint when changed on the ID to find the problem may be related to a stream

deconstructor. Perhaps the multithreading accidently frees the memory space for the Shader ID.

Issue in corecrt\_internal\_stdio.h line 294 fxn

Some issue with the Shader pointers but I found out the Shader Actual wasn't changing so I just reformed

all the functions to accept the Shader itself and not a pointer to a Shader and the problem fixed itself.