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CMSC 405

Project 3

In this project you will create a unique 3D animated scene composed of Three.js graphic components. The scene should include animation, lighting and multiple objects.

Test Plan

	Aspect being tested	Input	Expected Output	Actual Output	Pass?
0	GUI	N/A	Six 3D shapes	As expected	Yes
1	Start Animation	Check Start Animation	Animation for all object start	As expected	Yes
2	Ring Animation Only	Ring Animation Box Checked	Ring is only animation running	As expected	Yes
3	Sun Animation	Sun Animation Box Checked	Only sun and plane around sun animation running	As expected	Yes
4	Planet Animation	Planet Animation Box Checked	Only the three smaller objects animations will be running	As expected	Yes
5	Cyan Directional Light	Cyan light commented out	No visible cyan light	As expected	Yes

All animation box checks will be tested with “Start Animation” checked as well. Each test will be initiated at the default state. To get to the default state the “home” key must be pressed.

Test Case 0

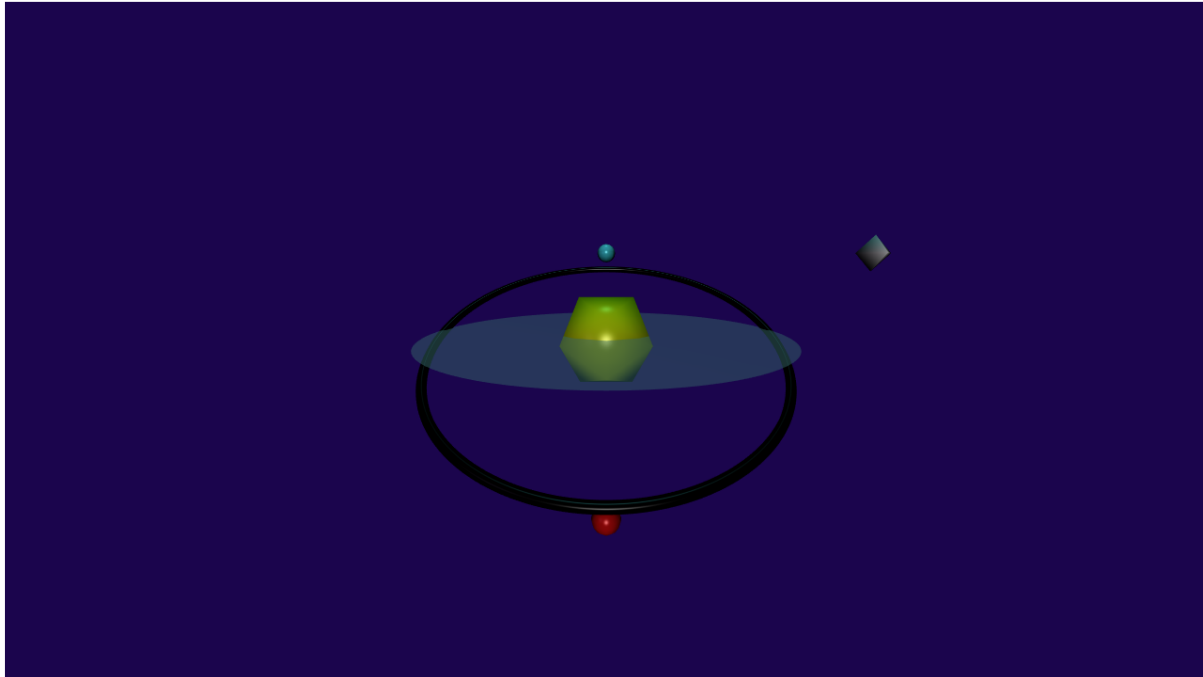
This is a control test case to show the program running at its default state.

Three.js Project 3

← → ↓ ↑ and Home keys are enables

☐ Start Animation

☒ Ring Animation ☒ Sun Animation ☒ Planet Animation



Test Case 1

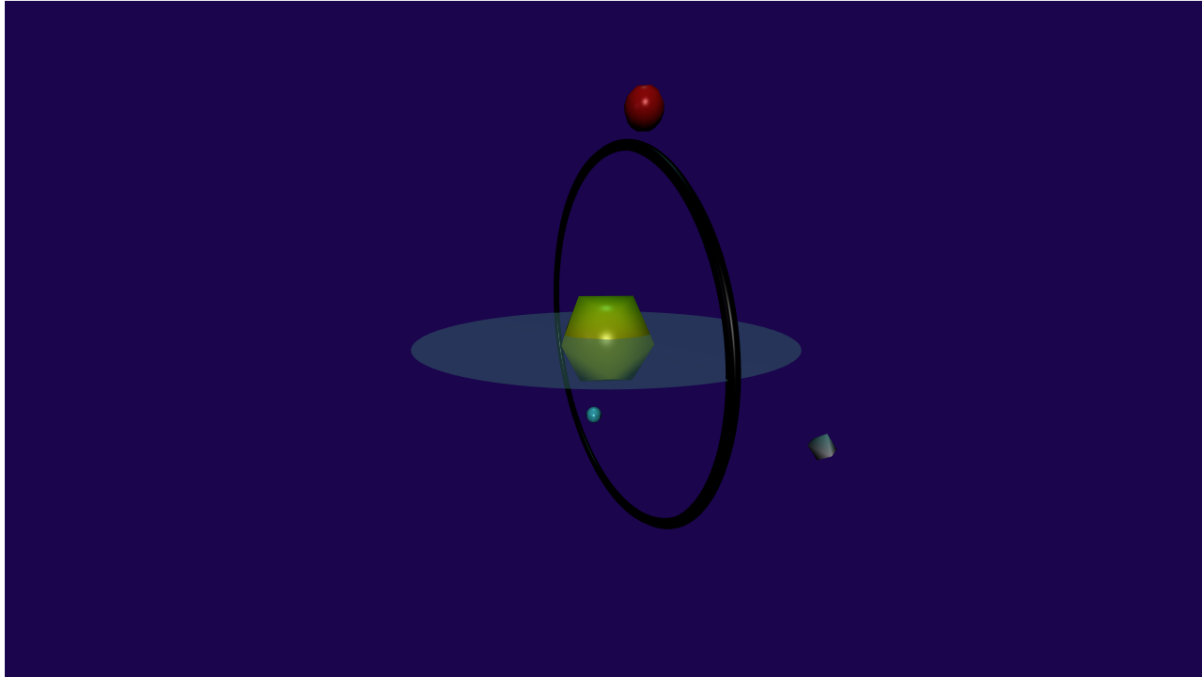
All animation boxes are checked and all objects in scene will show animation.

Three.js Project 3

← → ↓ ↑ and Home keys are enables

☒ Start Animation

☒ Ring Animation ☒ Sun Animation ☒ Planet Animation



Test Case 2

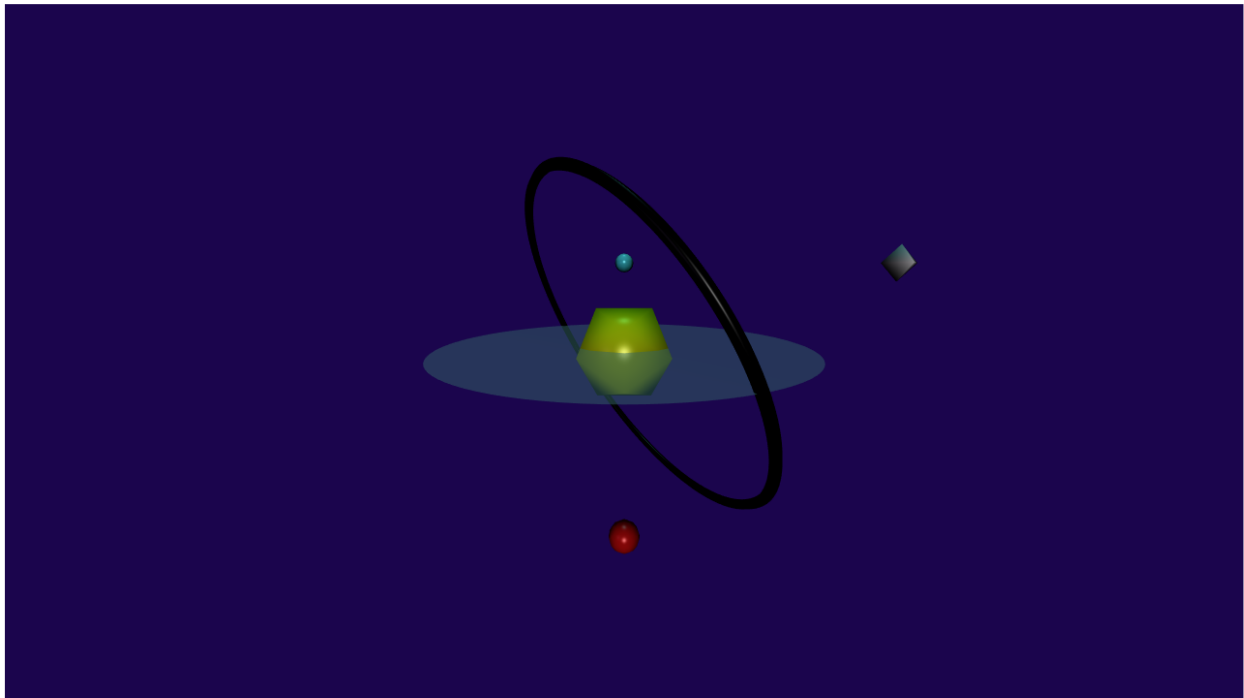
Only the “Ring Animation” box is checked and the black ring object will move from its default state.

Three.js Project 3

← → ↓ ↑ and Home keys are enables

☒ Start Animation

☒ Ring Animation ☐ Sun Animation ☐ Planet Animation



Test Case 3

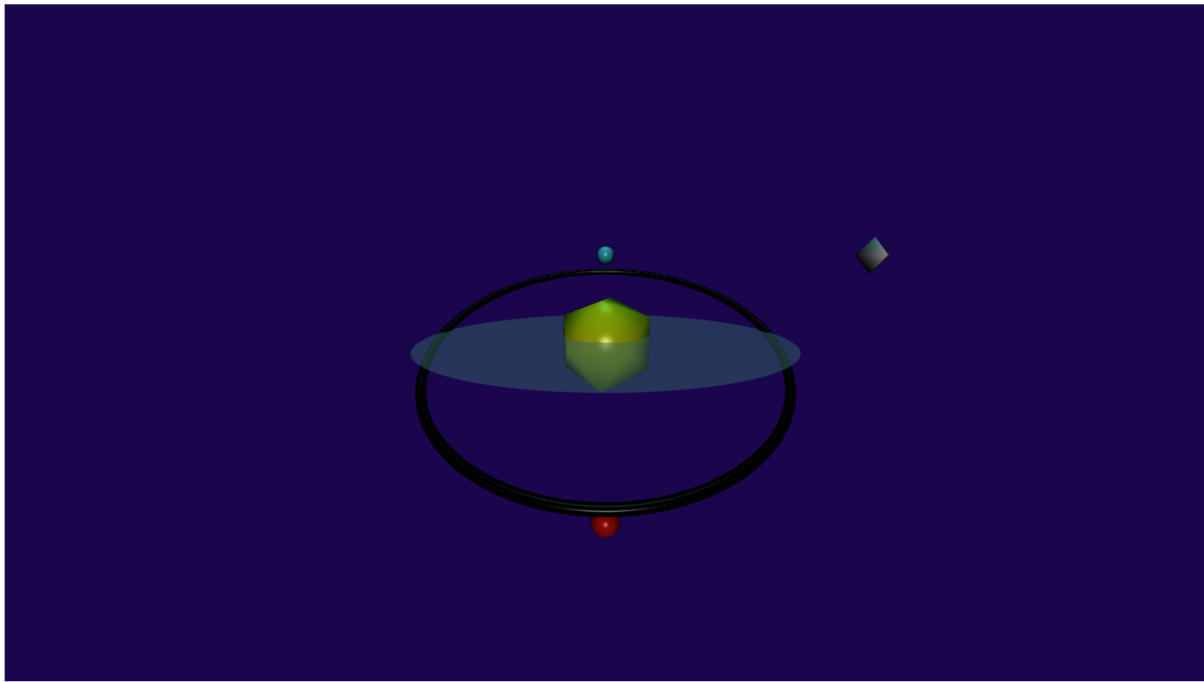
Only the “Sun Animation” box is checked and the yellow icosahedron and transparent cylinder objects will move from its default state. Reference “Test Case 0” to see differences in rotation.

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← → ↓ ↑ and Home keys are enables

☒ Start Animation

☐ Ring Animation ☒ Sun Animation ☐ Planet Animation



Test Case 4

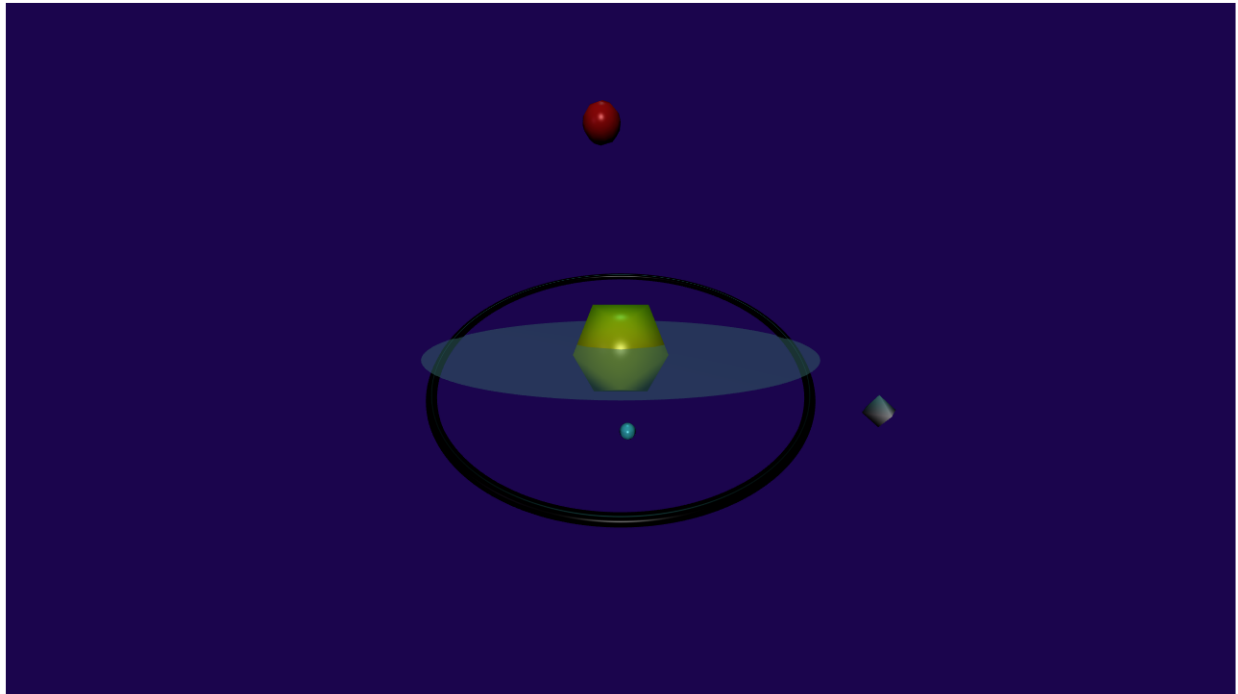
Only the “Planet Animation” box is checked and the blue sphere, red dodecahedron, and grey octahedron objects will move from its default state.

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← → ↓ ↑ and Home keys are enables

☒ Start Animation

☐ Ring Animation ☐ Sun Animation ☒ Planet Animation



Test Case 5

```
/* var cyanLight = new THREE.DirectionalLight(0x39FDFC, .3);  
 * cyanLight.position.set(0, 1, 0);  
 * scene.add(cyanLight);  
 */
```

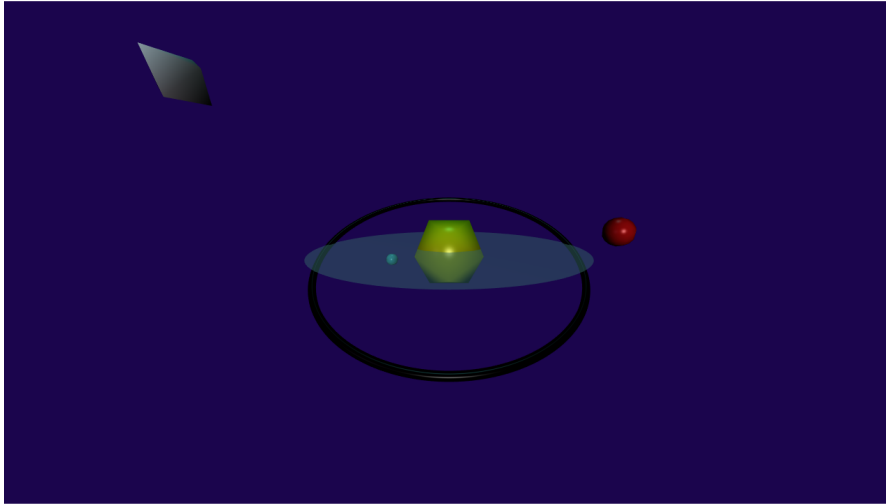
Before: Cyan light is most visible on the grey octahedron and middle plane.

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← → ↓ ↑ and Home keys are enabled

☐ Start Animation

☐ Ring Animation ☐ Sun Animation ☒ Planet Animation



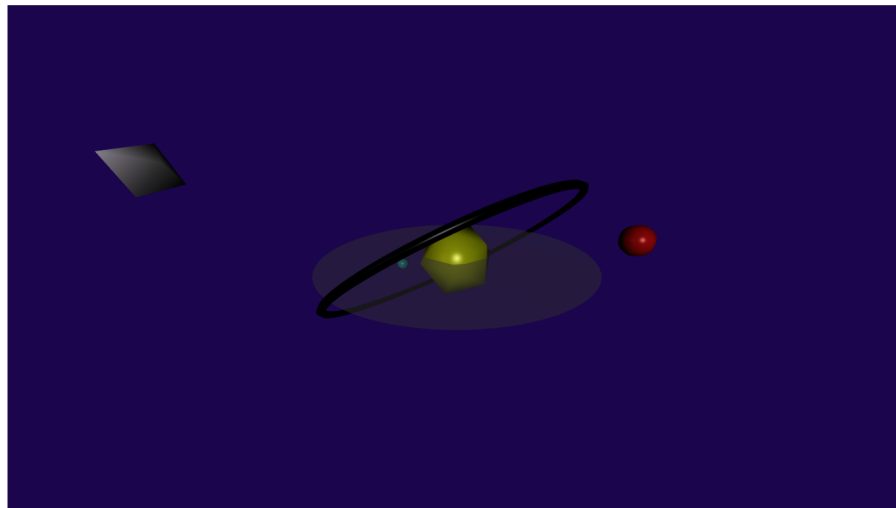
After: You can no longer see the cyan light on the grey octahedron or middle plane.

Three.js Project 3

← → ↓ ↑ and Home keys are enabled

☐ Start Animation

☒ Ring Animation ☒ Sun Animation ☒ Planet Animation



*The code template provided by the instructor was used as the foundation for this project.