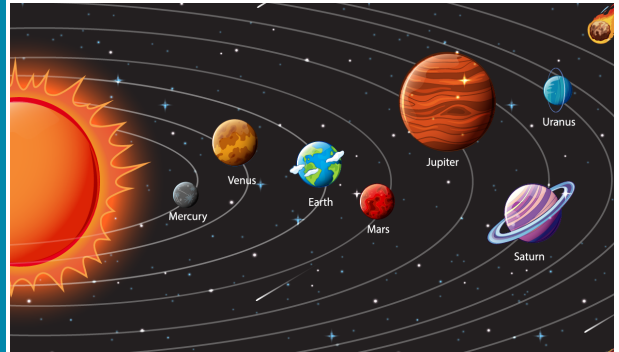


3D Solar System



What is our GOAL for this MODULE?

The goal of this class is to add sky and torus components in A-Frame and learn the concept of relative positioning using the parent/child entity component system.

What did we ACHIEVE in the class TODAY?

We learned how to add a sky element, textures and sounds in the A-Frame. We also learned about the concept of parent and child entity to create the Moon for the planet earth and rings of the planet Saturn.

Which CONCEPTS/CODING BLOCKS did we cover today?

- `<a-sky>` tag
- `<a-torus>` tag
- Textures in A-Frame
- Sounds in A-Frame
- Parent/Child entity

How did we do the activities?

1. We learned how to add <a-sky> primitive.

```
<!--Camera-->
<a-entity position="0 0 15">
  <a-camera></a-camera>
</a-entity>

<!--Sky-->
<a-sky>
  |
</a-sky>

<!--Sun-->
<a-entity>
  <a-sphere position="0 0 0" radius="2" color="orange"></a-sphere>
</a-entity>
```

2. We learned how to add an image texture source using "src" to the sky element.

```
<!--Sky-->
<a-sky src="https://cdn.glitch.com/050dd813-e5e9-4dd0-9751-38981ae74172%2Fvia_lactea.png?v=1604296331712">
</a-sky>

<!--Sun-->
<a-entity>
  <a-sphere position="0 0 0" radius="2" color="orange"></a-sphere>
</a-entity>
```

3. We learned how to add an image texture source to any entity using "src".

4. We learned how to use `<a-torus>` to create orbiting paths of the planets.

```

<!--Neptune-->
<a-entity position="0 0 0" rotation="0 0 0"
  animation="property: rotation; to: 0 360 0; easing: linear; loop: true; dur: 55000">
  <a-sphere position="36 0 -5" radius="0.3" color="purple"></a-sphere>
</a-entity>

<!--Orbital Paths-->
<!--Mercury-->
<a-torus color="grey" arc="180" radius="5" radius-tubular="0.1"></a-torus>

</a-scene>
</body>

```

5. We learned how to make one entity as a child of another entity to add the Moon.

```

<!--Earth-->
<a-entity position="0 0 0" rotation="0 0 0"
  animation="property: rotation; to: 0 360 0; easing: linear; loop: true; dur: 30000">
  <a-sphere position="11 0 -5" radius="0.4"
    src="https://cdn.glitch.com/850dd813-e5e9-4dd0-9751-38981ae74172X2Fearth.jpg?v=1604312404511">
  <!--Moon-->
  <a-entity position="0 0 0" rotation="0 0 0" animation="property: rotation; to: 0 360 0; easing: linear; loop: true; dur: 10000">
    <a-sphere color="yellow" position="2 0 0" radius="0.2"></a-sphere>
  </a-entity>
</a-sphere>
</a-entity>

```

6. We learned how to add a sound component.

```

<a-entity
  sound="src: https://cdn.glitch.com/850dd813-e5e9-4dd0-9751-38981ae74172X2Ffh_space_discovery_-_earth_proud_music_preview(1).mp3?v=1604312404511"
</a-entity>

```

7. We learned how to make Saturn rings using torus components as the child entity.

WhiteHat Jr + WhiteHat Jr + WhiteHat Jr

```

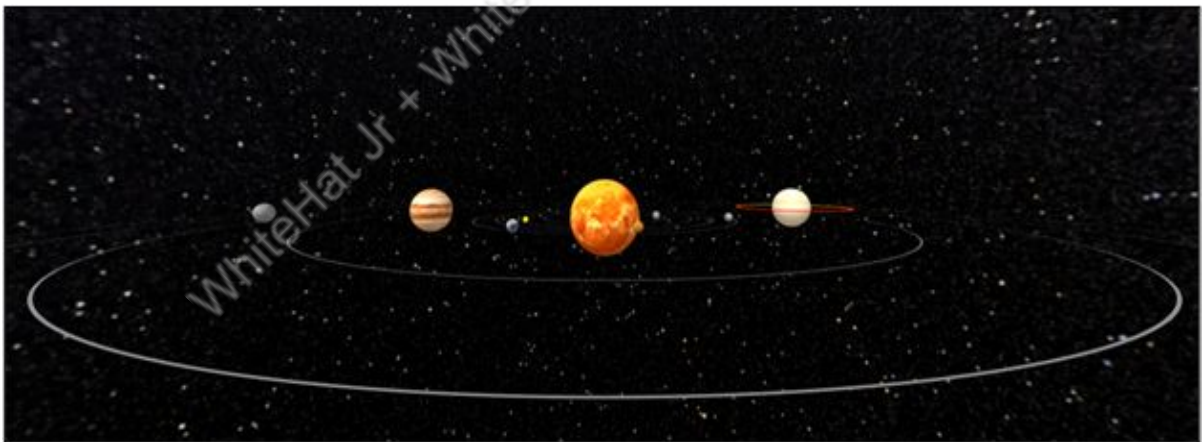
<!--Saturn-->
<a-entity position="0 0 0" rotation="0 0 0"
  animation="property: rotation; to: 0 360 0; easing: linear; loop: true; dur: 45000">
  <a-sphere position="26 0 -5" radius="0.9"
    src="https://cdn.glitch.com/850dd813-e5e9-4dd0-9751-38981ae74172%2Fsaturn.png?v=1604312433927">

    <!--Saturn Rings-->
    <a-torus color="red" radius="3" rotation="90 0 0 " radius-tubular="0.015" segments-tubular="1000">
    </a-torus>
    <a-torus color="pink" radius="2.9" rotation="90 0 0 " radius-tubular="0.02" segments-tubular="1000">
    </a-torus>
    <a-torus color="orange" radius="2.8" rotation="90 0 0 " radius-tubular="0.025" segments-tubular="1000">
    </a-torus>

  </a-sphere>
</a-entity>

<!--Uranus-->
<a-entity position="0 0 0" rotation="0 0 0"
  animation="property: rotation; to: 0 360 0; easing: linear; loop: true; dur: 50000">
  <a-sphere position="31 0 -5" radius="0.6"
    src="https://cdn.glitch.com/850dd813-e5e9-4dd0-9751-38981ae74172%2Fmercuroio.jpg?v=1604298142259">
  </a-sphere>
</a-entity>

```



We completed the 3D Web VR Solar System design.

What's NEXT?

We will be learning about lights & shadows in A-Frame and 3D models.

EXTEND YOUR KNOWLEDGE:

You can refer to the below link for more information

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<https://aframe.io/docs/1.1.0/introduction/>.

WhiteHat Jr + WhiteHat Jr + WhiteHat Jr