

# Special Topics: Parallax Scrolling

- What is Parallax
- Single Parallax
- Multi-Level Parallax

# Parallax

---

*par · al · lax*

*noun*

The effect whereby the position or direction of an object appears to differ when viewed from different positions, e.g., through the viewfinder and the lens of a camera.

# Parallax

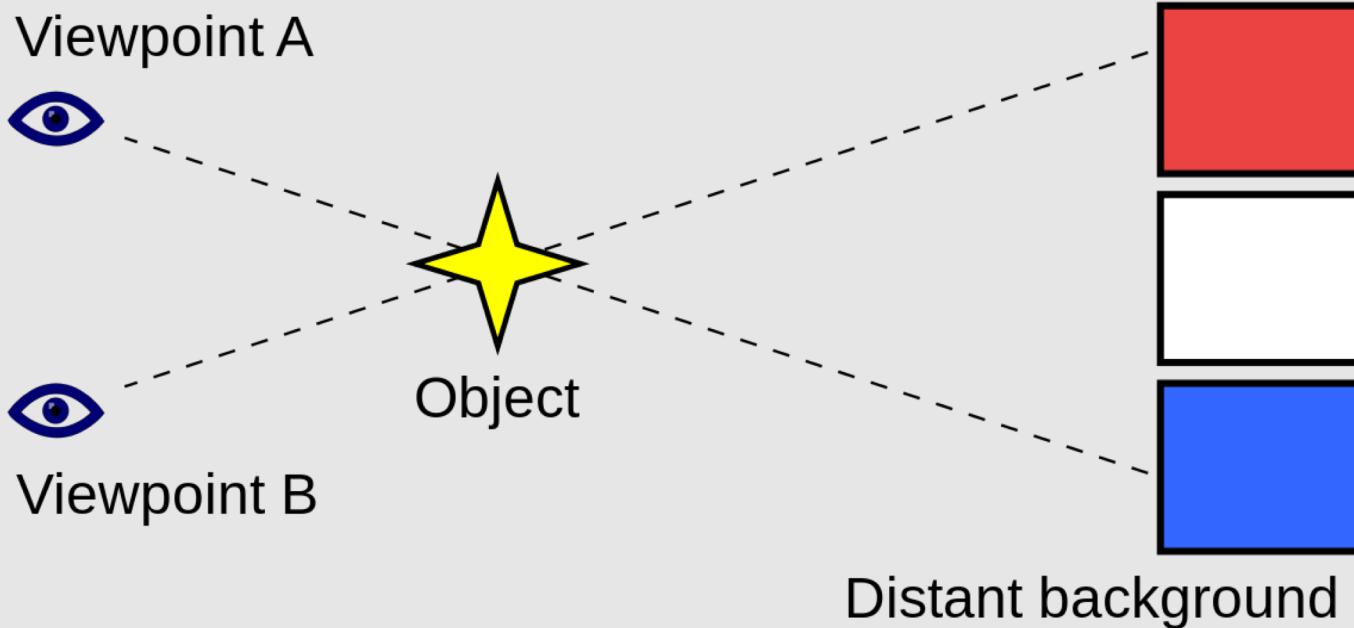
---



In a car ride, which moves faster: trees or mountains?

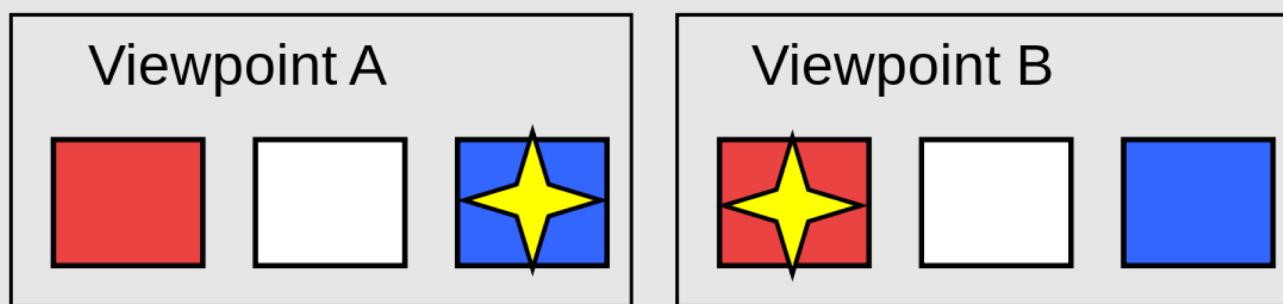
# Parallax

---



As we move from Viewpoint A to Viewpoint B, foreground objects move more rapidly while background objects appear stationary.

Our minds work the opposite: seeing the star move faster relative to us makes us think the star is a foreground element.



# Parallax

---

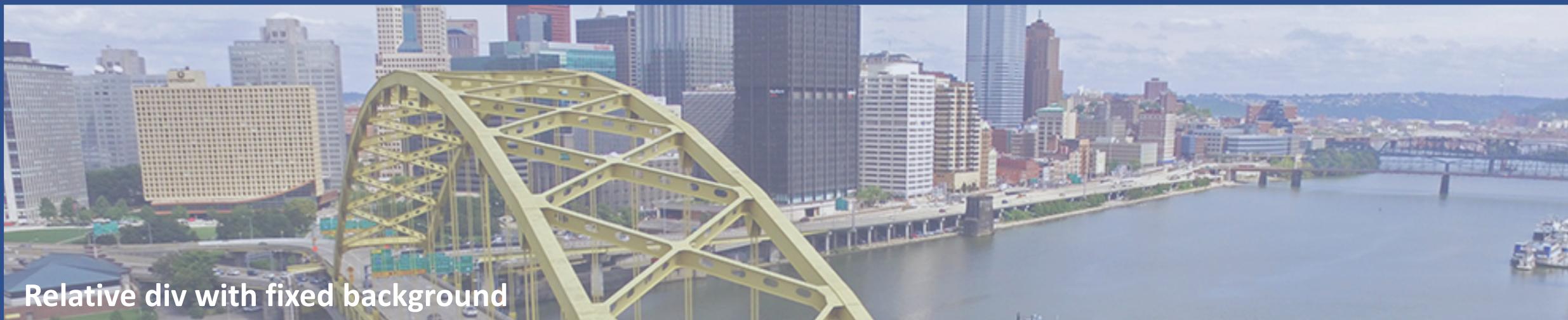


Essence of Scene Animations: Foreground layers have higher speeds than background layers.

- What is Parallax
- Single Parallax
- Multi-Level Parallax

# Single Parallax

---



Relative div with fixed background

Relative div with text/images

**Lorem Ipsum**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi et elit sit amet ipsum tempor efficitur. Praesent metus metus, malesuada et nunc in, maximus dictum magna. Cras vitae porttitor tellus, ac aliquet urna. Etiam purus urna, consectetur eu quam vitae, eleifend scelerisque magna. Donec condimentum, nunc vel elementum blandit, lacus neque venenatis nisi, et rhoncus mi neque laoreet purus. Nulla ut eros convallis, rutrum nisi nec, lobortis neque. Pellentesque interdum varius venenatis. Sed id vulputate purus. Donec quis sagittis arcu. Fusce a ultricies enim, nec efficitur erat. Donec dapibus turpis eget est lobortis ornare.

# Single Parallax

---

Why is this Parallax?

The background is moving so slowly as if it is not moving at all! (It's fixed).  
The foreground moves (scrolls) regularly.



## Placeholder Text

Placeholder text for the single parallax section. This text is used to demonstrate how the foreground content scrolls while the background remains fixed.

# Single Parallax

Are these two the same?

```
<div style='background-image: url(pittsburgh.png); width: 100%; height: 500px;'></div>
```

```
<img src='pittsburgh.png' style='width: 100%; height: 500px;'></div>
```

No

The first is a div with its background set to an image.

The second is space specifically allocated for an image.

How are these different?

We will soon see that we can fix backgrounds while moving divs around, making the first more useful for parallax.

# Single Parallax

Creates a fixed background image the size of the canvas.

```
.parallax-img {  
    position: relative;  
    background-attachment: fixed;  
    background-position: center;  
    background-repeat: no-repeat;  
    background-size: cover; }
```

The original div hosting the image is relative and can move freely.

Adds a div with image pittsburgh.png and shows only 500px of its height.

```
<div class=parallax-img style='background-image: url(pittsburgh.png); height: 500px;'></div>
```

Think of it as we opened up a 100%x500px transparent window to our background, where the window is relative and is affected by scrolling.

# Single Parallax

To use per cents to set the height, set body & html heights to 100% for reference.

```
body, html {  
    height: 100%; }  
  
.parallax-img {  
    position: relative;  
    background-attachment: fixed;  
    background-position: center;  
    background-repeat: no-repeat;  
    background-size: cover; }
```

Adds a div with image pittsburgh.png and shows 100% of its height.

```
<div class=parallax-img style='background-image: url(pittsburgh.png); height: 100%;'></div>
```

# Single Parallax

Can add divs with text following parallax images:

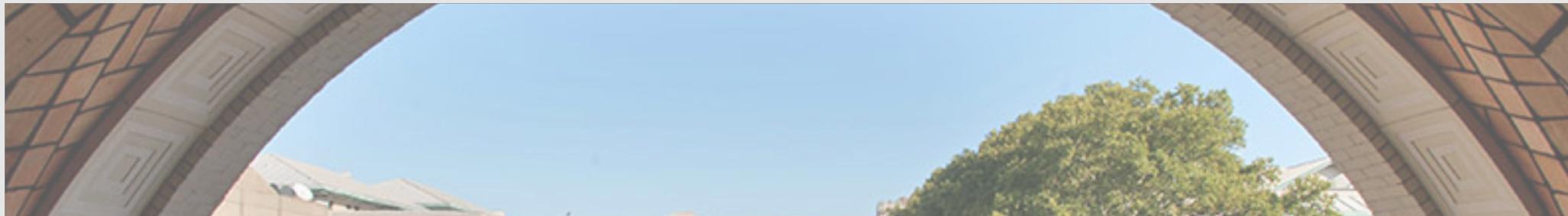
```
<div class=parallax-img style='background-image: url(pittsburgh.png); height: 100%;'></div>
<div class=content>
    <p class=title>Lorem Ipsum</p>
    <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi et elit sit ame.</p>
</div>
```

- What is Parallax
- Single Parallax
- Multi-Level Parallax

# Multi-Level Parallax

---

Sometimes we want to have different images appear as we scroll down.



## Lorem Ipsum? Dolor Sit!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi et elit sit amet ipsum tempor efficitur. Praesent metus metus, malesuada et nunc in, maximus dictum magna. Cras vitae porttitor tellus, ac aliquet urna. Etiam purus urna, consectetur eu quam vitae, eleifend scelerisque magna. Donec condimentum, nunc vel elementum blandit, lacus neque venenatis nisi, et rhoncus mi neque laoreet purus. Nulla ut eros convallis, rutrum nisi nec, lobortis neque. Pellentesque interdum varius venenatis. Sed id vulputate purus. Donec quis sagittis arcu. Fusce a ultricies enim, nec efficitur erat. Donec dapibus turpis eget est lobortis ornare.



# Multi-Level Parallax

---

Uses the same parallax-img class. Just need to change *background-image* and *height* properties.

```
<div class=parallax-img style='background-image: url(CMU-01.png); height: 500px;'></div>
<div class=content>
  <p class=title>Lorem Ipsum</p>
  <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi et elit sit ame.</p>
</div>
<div class=parallax-img style='background-image: url(CMU-02.png); height: 250px;'></div>
```

These images are background-size: cover; so make sure they are high res!

# Homework Ideas

---

- ❑ Implement single or multi-level parallax as introduction to site.
- ❑ Replace static images with parallax.

# Live Demo