Parallax Scrolling in Web Design

tutorialspoint

SIMPLY EASY LEARNING

www.tutorialspoint.com

https://www.facebook.com/tutorialspointindia https://twitter.com/tutorialspoint

About the Tutorial

This tutorial aims to make you acquainted with Parallax Scrolling in Web Design. If you are using any modern day website on computers or mobile phones, you might have come across an effect when you scroll up/down the website, it appears like the whole screen is moving in the direction of scroll. If this is the effect in the background, the information in the foreground changes as you scroll. This effect can be vaguely described as Parallax Scrolling.

As you read through this tutorial, you will understand the history of scrolling, how it evolved, the parallax scrolling definition and finally some plugins to help you get started with implementation of Parallax Scrolling.

Audience

Any aspiring web designer who wants to gain a deeper understanding of parallax scrolling effect in web designing can read this tutorial. If you have an eye for detail when designing and using websites on desktops, laptops and other handheld electronic devices, you will gain a solid understanding of parallax scrolling concept in web design through this tutorial.

Prerequisites

This tutorial is written keeping in mind that the learners have an idea of basic knowledge of web design. An introductory knowledge of HTML, CSS and jQuery would be an added advantage for the learner. If you are a beginner to any of these concepts, we suggest you to go through tutorials related to these before you start with this tutorial.

Copyright & Disclaimer

@Copyright 2018 by Tutorials Point (I) Pvt. Ltd.

All the content and graphics published in this e-book are the property of Tutorials Point (I) Pvt. Ltd. The user of this e-book is prohibited to reuse, retain, copy, distribute or republish any contents or a part of contents of this e-book in any manner without written consent of the publisher.

We strive to update the contents of our website and tutorials as timely and as precisely as possible, however, the contents may contain inaccuracies or errors. Tutorials Point (I) Pvt. Ltd. provides no guarantee regarding the accuracy, timeliness or completeness of our website or its contents including this tutorial. If you discover any errors on our website or in this tutorial, please notify us at contact@tutorialspoint.com

Table of Contents

About the Tutorial i

Audience i

Prerequisites i

Copyright & Disclaimer i

Table of Contents ii

1. PARALLAX SCROLLING IN WEB DESIGN — BACKGROUND AND INTRODUCTION 1

Scrolling 1

History 1

Parallax Scrolling Origin 2

2. PARALLAX SCROLLING IN WEB DESIGN — CONCEPTS 3

Definition 3

Examples 3

Applications of Parallax Scrolling 5

3. PARALLAX SCROLLING IN WEB DESIGN — WEB DESIGN AND PARALLAX SCROLL 6

Web Design Background 6

Modern Day Web Design 6

Using Parallax Scrolling 7

Advantages of Parallax Scrolling in Web and Mobile 9

4. PARALLAX SCROLLING IN WEB DESIGN — CSS TECHNIQUES 10

Absolute Position Method 10

Single Background Method 10

Multiple Background Method 14

Pure CSS Parallax 16

5. PARALLAX SCROLLING IN WEB DESIGN — JAVASCRIPT TECHNIQUES 20

Parallax Scrolling using Pure JavaScript 20

Using ScrollMagic JavaScript Library **23**

Trigger Animations **26**

Horizontal Scrolling **29**

6. PARALLAX SCROLLING IN WEB DESIGN — JQUERY TECHNIQUES 33

Simple Parallax Scrolling using Parallax.js **33**

Parallaxator jQuery Plugin **36**

Stellar.js jQuery Plugin for Parallax Scrolling **39**

7. PARALLAX SCROLLING IN WEB DESIGN — BOOTSTRAP TECHNIQUE 43

Full Width Parallax Page with Bootstrap4 Jumbotron **43**

8. PARALLAX SCROLLING IN WEB DESIGN — CONCLUSION 46

Utilization of Parallax Scrolling **46**

Future of Web UI **47**

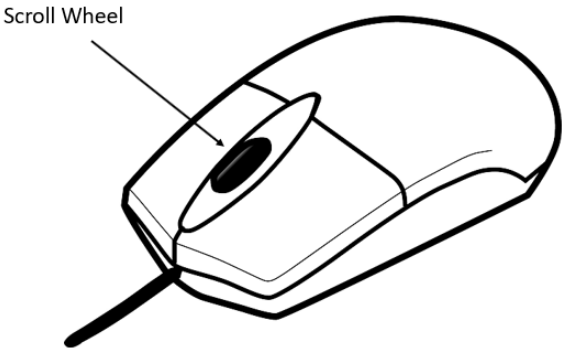
1. Parallax Scrolling in Web Design — Background and Introduction

If you are browsing any modern day website on computers or mobile phones, you might have experienced that when you scroll down/up the website, it appears like the whole screen is moving in the direction of scroll. If this is the effect in the background, the information in the foreground too changes as you scroll. This effect can be briefly described as Parallax Scrolling.

Scrolling

Let us understand what it means by scrolling. When you are viewing a web page, the action for browsing the web page in any direction (up, down, left and right), is known as Scrolling.

Usually, if you are a desktop computer user, this action is done by using the scroll wheel on the mouse.



History

Let us look at the word – Scroll. In olden days, to send a message to other people who are located at a great distance, handwritten scrolls were used. These scrolls looked like as shown below:

Imagine the action of the person who is holding the scroll. To read the content in full, the person would have to "scroll" and roll it further. The use of these scrolls was also for maintaining a record text or decisions. As the time went by, the use of scroll increased as it was prepared from different writing materials such as – papyrus, parchment and paper.

As the computers evolved, processing and storing very large documents, tables and images became possible. Sometimes the data was so much so that the screen size was just not sufficient to present the data to the user. When the data to be displayed was larger than the size of window or display area, the data would remain hidden. This necessitated for an approach of expanding the screen area.

Some options to achieve expansion of screen are listed below:

- To increase the screen size
- To reduce the data size
- To use scrolling

This scrolling mechanism is more important for people working with graphics design and photo editing.

Parallax Scrolling Origin

Let us look into the history of parallax scrolling. First, we will understand what the word parallax means. The word parallax comes from Greek word **παράλλαξις** (parallaxis), which means alternation.

If we are viewing an object from an angle, the object will appear in a specific manner. But if you're moving the same object from different positions, there will be an apparent movement of objects. This phenomenon is referred to as Parallax.

2. Parallax Scrolling in Web Design — Concepts

Now that we have understood the origin and background of Parallax, let us understand the history and the concept of Parallax scrolling in web design.

Definition

According to Wikipedia – **Parallax scrolling** is a technique in computer graphics where background images move past the camera more slowly than foreground images, creating an illusion of depth in a 2D scene and adding to the sense of immersion in the virtual experience.

Parallax scrolling was employed in the early days of animation. Many of the animation studios (like Disney) used multiplane cameras to achieve the parallax effect.

As the computer graphics technologies evolved along with the cutting edge frameworks like JavaScript, web designers and developers can now build sites with a rich experience. Although parallax scrolling started with a couple of layers, it was taken to the next level with scroll bars in computers. The technique remained the same, but due to its application for Scrolling, a unique experience was created.

Examples

The parallax scrolling is extensively used in modern web sites. As parallax scrolling can be implemented for mobiles as well as desktop sites in one go, the popularity of such sites has skyrocketed in the recent years.

Some examples of websites that employ parallax scrolling are given below:

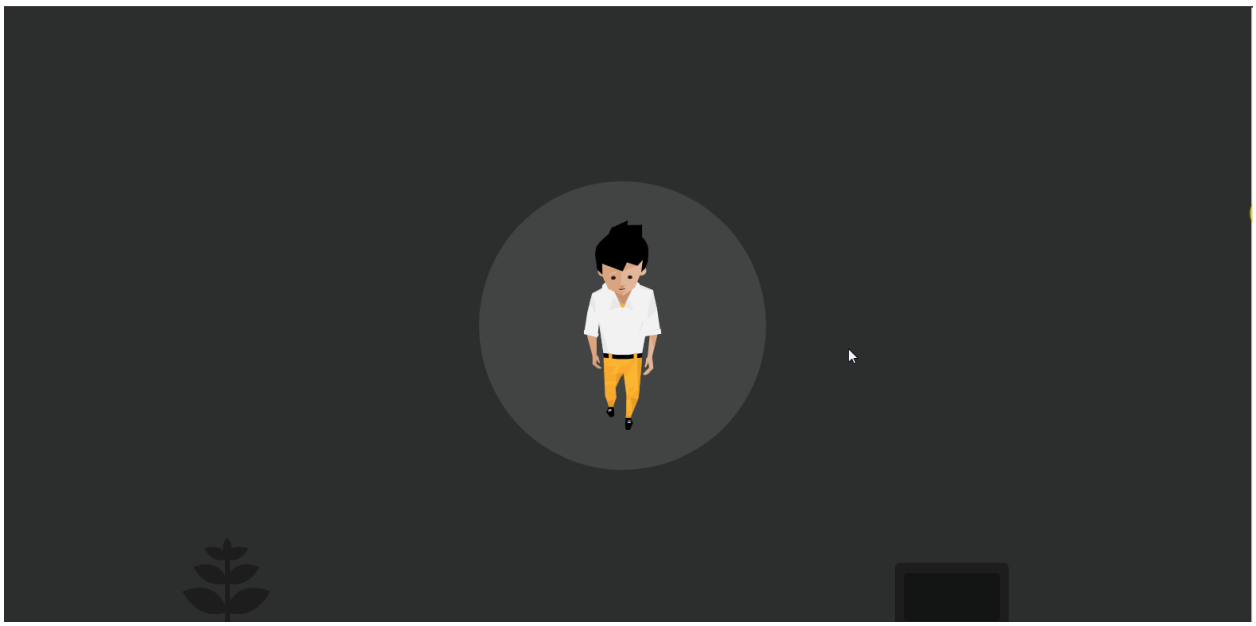
Bear Grylls

As the animation proceeds, you will be able to see how the website content is going interactive. As you scroll ahead, more and more information will reveal.

Make Your Money Matter

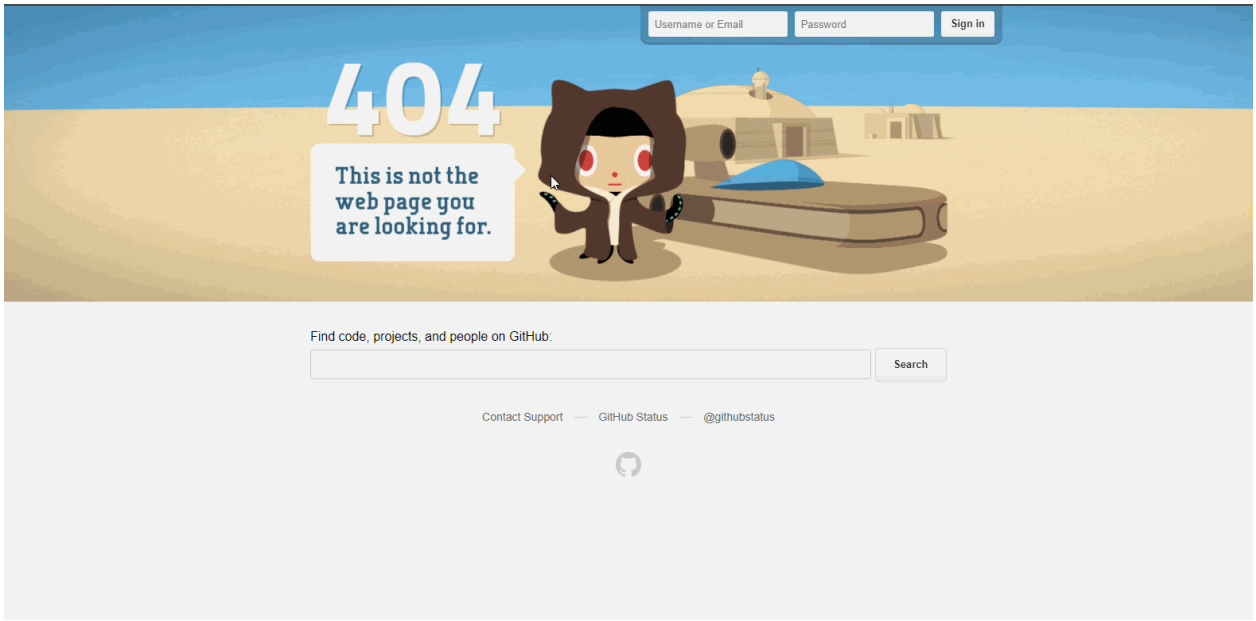
To introduce the reader to the benefits of a credit union, this site takes you through a storyline. As you scroll ahead, information is revealed in a unique way.

InfoQuest Infographic



The journey of an employee to find critical information at his workplace is depicted using the scrolling experience.

GitHub 404



This is a bit different from the usual parallax experience, the object at the top of screen moves as you hover the mouse pointer over it.

Applications of Parallax Scrolling

By now, it should be clear from the definition and the background that parallax scrolling is useful in wide variety of digital media. Some of the applications are parallax scrolling are below:

Game Design

Parallax scrolling is widely used in game design. The character needs to move relative to the background and with the player's control using mouse and keyboard, the whole experience needs to change. Game design is very primitive yet trendy way of using parallax scrolling.

Websites

To make the user gripped to the website, some dynamic and different experience is important. As you might have noticed from the examples of websites discussed above, parallax scrolling adds to the content because of its representation in an interactive manner.

3. Parallax Scrolling in Web Design — Web Design and Parallax Scroll

This chapter talks about concepts of web design and advantages of using parallax scroll in web design.

Web Design Background

Since the beginning of 20th century, paper media has got into a cut-throat competition due to digital media. The digital media includes what we see on internet and hence the allied magazines that come along.

The newsletters that you get as a part of weekly/monthly subscriptions are also included in the digital media. Primarily, digital media heavily depends on mobile and desktop devices. It makes a difference when you can see content on your mobile (handheld) as well as desktop devices. The way content is displayed on either of devices, a specific style of designing the content is at play.

This style of designing is referred as **Web Designing**. From a designing or coding standpoint, when a web page designer sets out to build a webpage, he/she takes the mobile devices in consideration as well.

According to Wikipedia, **Web design** encompasses many different skills and disciplines in the production and maintenance of websites. One of such skills is designing an impactful experience for users. Web design caters for this experience and provides an organized way for arranging the page contents and provides different styling to them.

Web design includes – interface design, graphic design and using certain standards to write the code. This work can be performed by a single person or by a team of people.

There are many tools available in market to make this work easy, however, it is up to one's creative skills to create the appearance of web page.

Modern Day Web Design

With the technology evolution, there is an explosion of knowledge. Internet has become a thing and it has skyrocketed the quality of our lives. At any given point, more and more information is being processed by an average internet user. This information can be in the form of a website on a desktop computer or from a handheld device; tablet or a mobile phone.

Though so much information tries to attract the user's attention, it is obvious that as a person designing a web experience, **there are only 3 seconds allocated to pass the message across.**

How does one deal with this? It is more than important to pass the message, because it is at the source for any web design. You want to build a website that communicates, at the same time it has to attract and make the user stick to the content. It is a difficult task indeed.

Considering the vast scope of work for any given web content, more and more people are getting into the world of Web Design. A creative web designer is the talk of the town thanks to his/her amazing talent of creating a good user experience. The web designer may currently take up a job at a marketing/advertising company or start on his/her own to dive into the web designing.

Aesthetic appeal is the key for a given content on web. This means a web designer must be aware of the principles and foundation of design, color, spacing, etc. More and more users get to see great quality web content every day. It is obvious that one will compare the current webpage or website with the one that was visited few hours or few minutes back. The ordering of the content, coupled with good graphics and colors has made many standalone banners/pages a popular thing on the internet.

Example

Let us take the case of a simple graphic. There are many graphics on the internet, called memes. They are simple **Graphics Interchange Format (GIF)** images with some text embedded inside the graphics. These memes are making rounds of internet based on a recent event in some part of the world. If we look at this example, the only appeal they have is graphic and some relevant or irrelevant text.

Still, it has gained so much of popularity which makes one think about amazing possibilities on the Internet.

Thus, for a web design to be effective, both the creativity and method to communicate the message play important roles.

It is important point to note that a successful web page is combination of Web Design and Web Development. As per current market trend, along with web designer, a web developer is a must have in the team. A web designer will always look for inspiration and use his/her creativity to create graphics and relevant color schemes. Whereas a web developer will use his/her coding skills to bring the graphics and color schemes live on the website.

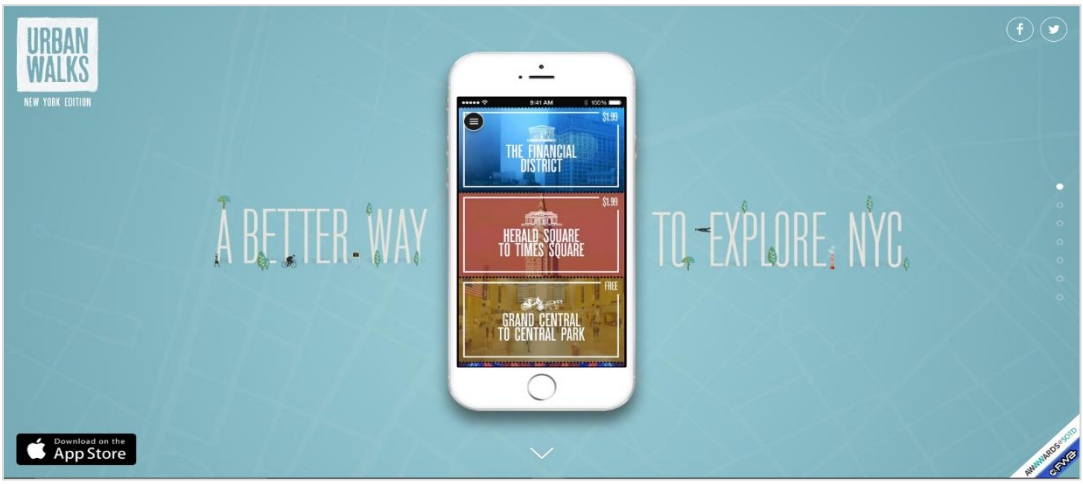
A web designer should have a knowledge of writing the code as well, to make the intended graphic or color scheme usable for a web developer. A simple code in a simple application like Notepad can help a web designer to take the driving seat in the web development.

Using Parallax Scrolling

Parallax Scrolling falls into the work boundary of both web designer and web developer. A web designer might create the effect of Parallax Scrolling using the tools such as InVision, UXPin to convey the web developer the intended behavior on scroll. Further, a web developer will take it on his/her skills to create the parallax scrolling effect. This can be done by different JavaScript, CSS and jQuery techniques. A detailed description of each of these methods is provided in next chapters.

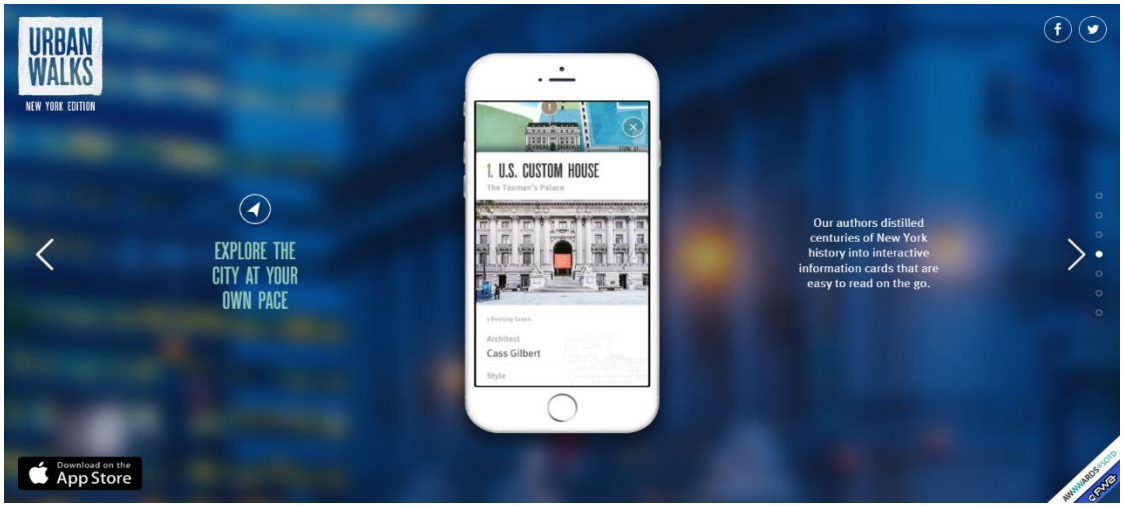
As per the definition specified in the previous section, **parallax scrolling is a technique when the background content is moved at a different speed than the foreground content when scrolling.**

A simple CSS technique to create parallax scrolling effect is shown on this website – [The Urban Walks](#).



As you can see in the screenshot above, the mobile phone at the center of the screen will change the content after you scroll twice. Also, observe on the first scroll, the background with the mobile phone will change.

This transition is giving you a feeling that the phone is constant in its place and the background is getting changed as you scroll down. This effect is called parallax scrolling effect. You know that you are scrolling it down as there is an indicator of the screens towards the very right of the screen in the form of some dots.



The first use of parallax scrolling was in the old computer games. Where a fixed background image would move at a slower speed as the character moved faster than the background. Some examples of these games – Disney's Aladdin and Disney's Lion King. These games were launched back in 1993 and 1994 respectively.

While it is true that it started with the games, but currently, many web designers are emphasizing on the effect to have their audience love their site. The advantages of parallax scrolling are extended from website to mobile sites.

These websites, once designed with parallax scrolling for the desktop versions, are added with code that supports mobile screens as well.

Advantages of Parallax Scrolling in Web and Mobile

In this section, we will discuss the advantages of using parallax scrolling based on different categories.

From Audience Perspective

- There is a fun element associated with the parallax scrolling. As you have seen in the above example, conveying the information of thousand words has become easier as the user scrolls from different screens.

- If we consider a first time user, there is a curiosity associated with each scroll. Hence, it not only enriches the experience of the website but also increases the probability of the user spending more time in the first visit to the website itself.

- The proportion of user engagement dramatically increases as the user is intrigued in the scrolling.

- The user does not have to get into the thought of process of figuring out the information, as it is available in a more obvious manner.

- In some cases, you can put a story about the product/service you are offering by animating other items on the screen, such as the logo or the menu icon.

From Technical Perspective

- Once you implement parallax scrolling for a desktop version, very easily the same framework can be used for the mobile website or screens.

- As the code snippet is simple and reusable, if you are a marketing agency or website service provider company, this becomes effortless when gathering new clients.

- Knowledge of parallax scrolling comes with more expertise in frontend frameworks such as CSS, JavaScript, etc.

4. Parallax Scrolling in Web Design — CSS Techniques

For a web developer, when it comes to creating a parallax scrolling effect, various techniques are available. One of such techniques is using **Cascaded Styling Sheets(CSS)**.

CSS explains how the HTML elements are displayed on the screen. One can create a CSS file and it can be used for the complete website. It is simpler to add CSS file than adding styles to each HTML element and manage them in different parts of the web page.

Note: Some of the methods discussed below in this chapter are specific to desktop computers and not for mobile devices. It will be mentioned in the steps when a particular technique is not suitable for mobile devices.

Considering CSS offloads into all the extra drawing into the document object model (DOM), there is a greater utilization of hardware acceleration and a smooth effect without burdening the CPU.

Absolute Position Method

This method is frequently used to create a parallax effect, as this is relatively light in weight compared to other options available. The position of the background image is kept fixed as relative to other content on the screen. In the example discussed below, you will see how to do it using the magic of CSS.

In this section, we will go through two methods for Absolute Position Method:

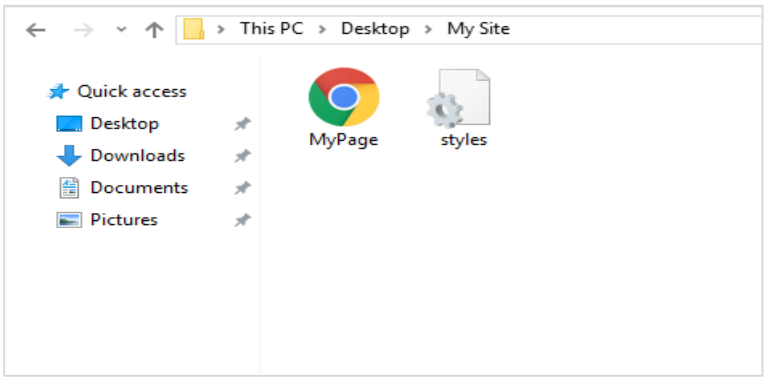
- Single Background
- Multiple Background

Single Background Method

In this method, we will create two files in the same folder. Observe the steps given below for the same purpose:

Step 1

We have to create two files in the same folder: first file with HTML markup and the second with CSS code.



End of ebook preview

If you liked what you saw…

Buy it from our store @ https://store.tutorialspoint.com