Week 5: Get Started with Browser-Based 2D Games

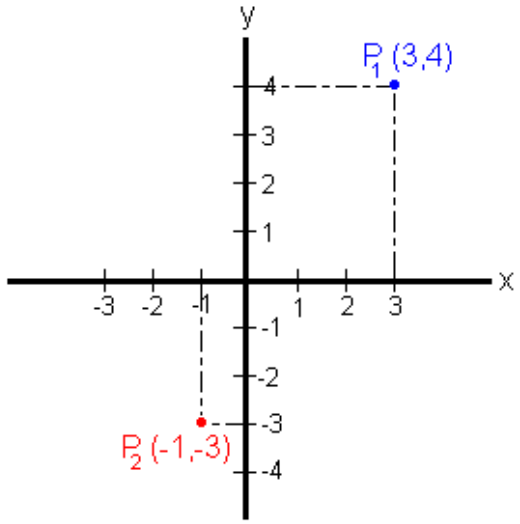
Topic

This week we continue working hands-on with the JavaScript language in our Web browser. We will spend the rest of the semester exploring the JavaScript-based Phaser.js game engine.

In this first week of exploration, we will continue to experiment with JavaScript literals, variables, constants, data types, expressions and operators, as we create a simple game with Phaser. We will travel on this journey using our new cloud-based hosting and development environment, Cloud9.

What Does 2D Mean?

In our game explorations this term, we will work mostly in two-dimensions, or 2D. This refers to the fact that all of our games will take place on a flat surface, kind of like a physical board game. We describe these two dimensions are the horizontal and vertical axes. We can visualize this world simply as a flat surface, or plane. When we talk about the horizontal, we will often call it the x-axis, whereas the vertical is called the y-axis. All of this vocabulary comes from geometry, and more specifically from Rene Descartes.



René Descartes was a French man who lived in the 1600s. When he was a child, he was often sick, so the teachers at his boarding school let him stay in bed until noon. He went on staying in bed until noon for almost all his life. While in bed, Descartes thought about math and philosophy.

One day, Descartes noticed a fly crawling around on the ceiling. He watched the fly for a long time. He wanted to know how to tell someone else where the fly was. Finally he realized that he could describe the position of the fly by its distance from the walls of the room. When he got out of bed, Descartes wrote down what he had discovered. Then he tried describing the positions of points, the same way he described the position of the fly. Descartes had invented the coordinate plane! In fact, the coordinate plane is sometimes called the Cartesian plane, in his honor.

Objectives

By the end of this week you will be able to...

- Start coding a sprite-based game in JavaScript as you acquire knowledge of the core language and its features.
- Use and understand JavaScript literals, variables, constants and data types.
- Work with JavaScript expressions and operators.