

Web Application Engineer Challenge (path)

Without using any external libraries, create a 2D "Path" constructor in JavaScript that accepts either an array of points (which are arrays themselves of length two) or a subset of an SVG path string (see <http://www.w3.org/TR/SVG/paths.html>), where only the *moveto*, *closepath* and *lineto* commands are accepted. The path must be connected, so the *moveto* command must only appear at the beginning and the *closepath* may optionally appear only at the end. The *lineto* must accept both absolute and relative integer coordinates.

The *Path* objects must inherit from *Arrays*, so all array methods should work on *Path* objects. This means that *new Path instanceof Path* and *new Path instanceof Array* must both return true.

A *Path* object must have a *clone* method that returns a new *Path* with the same points and a *toString* method that returns an SVG path string representing the *Path*. Additionally, the methods *map*, *filter*, and *slice* must return *Path* objects rather than pure arrays.

This implementation only needs to function in the latest versions of Firefox and Safari.