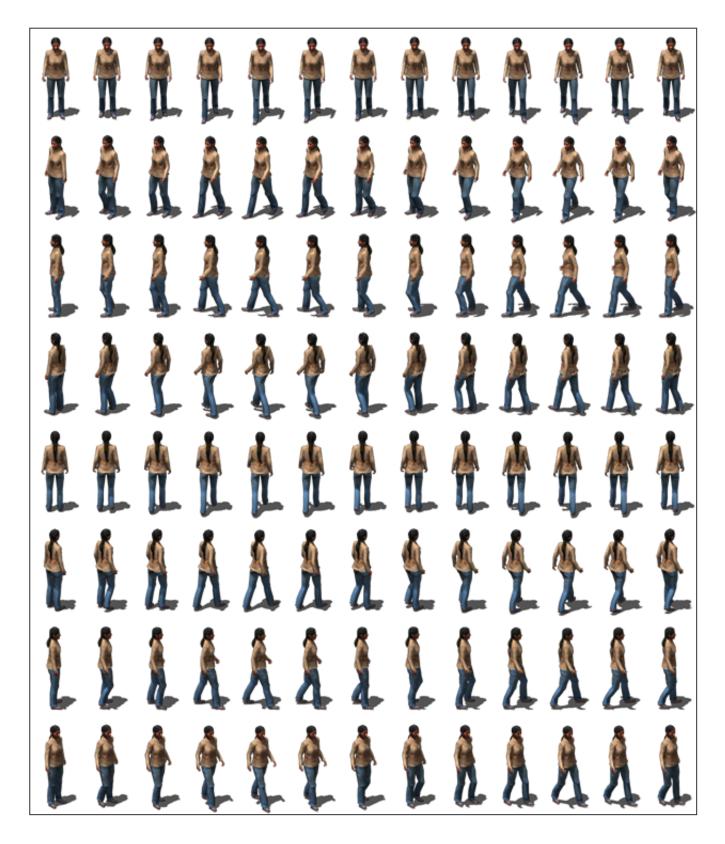# Sprite-based animation

INTRODUCTION

In this lesson, we learn how to animate images - which are known as "sprites". This technique uses particular parts of images that contain lots of animation frames. By drawing different sub-images we obtain an animation effect.

Here is an example of a *spritesheet*, where each line corresponds to a direction for animating a moving woman:
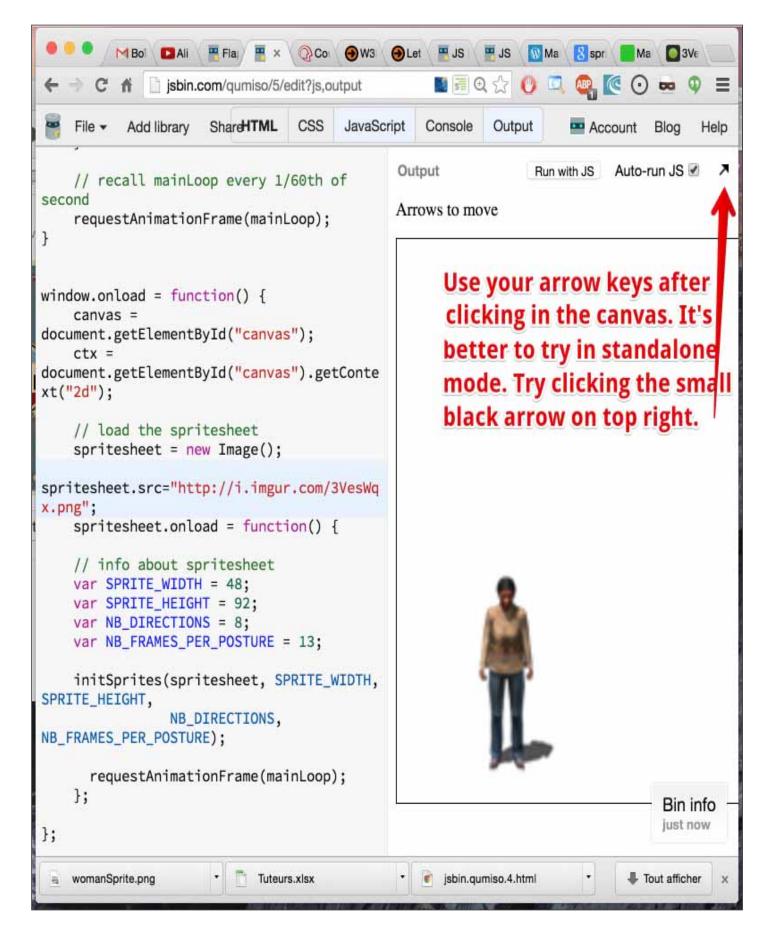
The first line corresponds to the direction we called "south", the second "south west", the third "west", etc. We've got 8 different lines for animating a woman moving in 8 different directions along the cardinal points.

Each line is composed of 13 small images that will make an "animated" sprite. If we

draw each of the 13 animations of the first line in turn, we will see a woman that seems to move towards the bottom of the screen. And if we draw it a little closer to the bottom of the screen, we obtain a woman that walks to the bottom of the screen and is moving her legs and arms as well!

Try it yourself: here is a quick and dirty example to try at JSBin that works with the above sprite sheet. Use the arrow keys and take a look! We accentuated the movement by changing the scale of the sprite as the woman moves up (further from us) or down (closer to us).

We have not yet explained how this works, nor have we re-used the small game engine

we started to build in earlier chapters. First, let's explain how to use "sprites" in JavaScript + canvas.