Intro to programming II

Week 7

Images

To draw an image, we first load it before the game starts

image = simplegui.load_image(image_URL)

.. and then, in the draw handler, draw it:

canvas.draw_image(image, src_center, src_size, dest_center, dest_size)

where the centers are lists in [col, row] order, and the sizes are lists in [width, height] order; the image will not be drawn if a portion of the dest is outside the canvas.

Tiled images (sprite sheet)

An easy way to achieve animation is to have a series of images of the moving object and then show them in sequence; characters that moved with this style of animation are called sprites. Instead of loading each of the images of the sequence independently, though, we download a single image that contains all these sequences and then draw the portion of the image that we want in the location that we want.
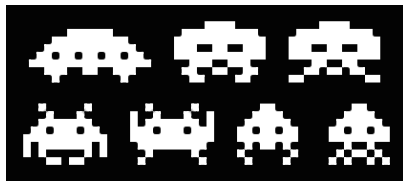
Side-scrollers and motion parallax

We can make a side scroller using a background that 'loops', i.e., we connect its end to its beginning. In our side scroller, the character will remain in the middle of the screen; the arrows will move the background in the direction opposite of our command, e.g., the right arrow moves the background to the left. To give depth to our scene we use motion parallax; the idea is that the camera is moving with the character, i.e., the subject; hence, objects between the subject and the camera (the foreground) move faster than the subject, while objects behind the subject (the background) move slower than it.