A BRIEF INTRO
TILE MAPS, SPRITESHEETS AND ATLASES

FOR

SPRITEKIT

WHAT ARE TILEMAPS

TILE MAPS ARE GRAPHIC FILES THAT HOLD ALL THE SPRITES FOR AN APPLICATION, GAME, OR ANIMATION.

HISTORY OF SPRITES

Sprites are tiny components of design or animation.

Sprites have been used since 1977.
Coincidentally, this is roughly the start of
"The Golden Age of Video Games"
1978-1986

Other contributing
factors like
vector graphics
and microprocessors
made
Arcade culture
profitable.

BENEFITS OF USING SPRITESHEETS/TILEMAPS

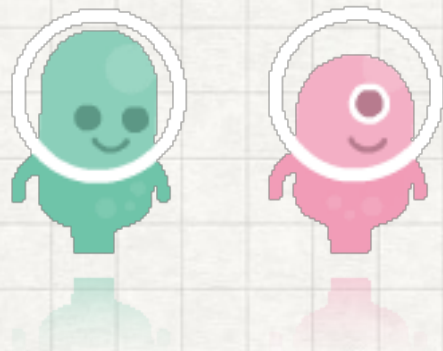# ANIMATION

ASSET MANAGEMENT

BENEFITS OF USING SPRITESHEETS/TILEMAPS
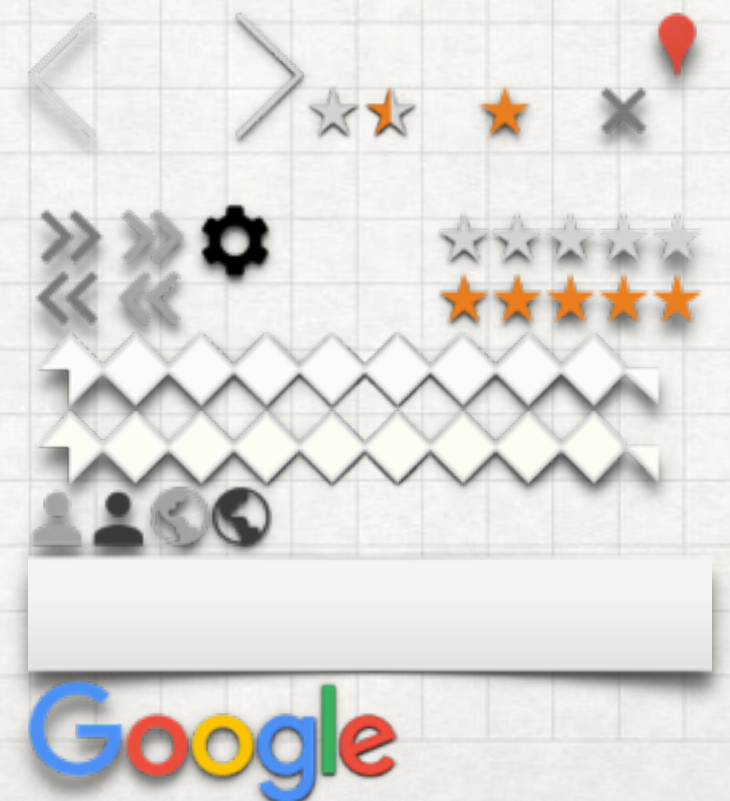
MEMORY MANAGEMENT

REUSABILITY

SPRITESHEETS ON THE WEB
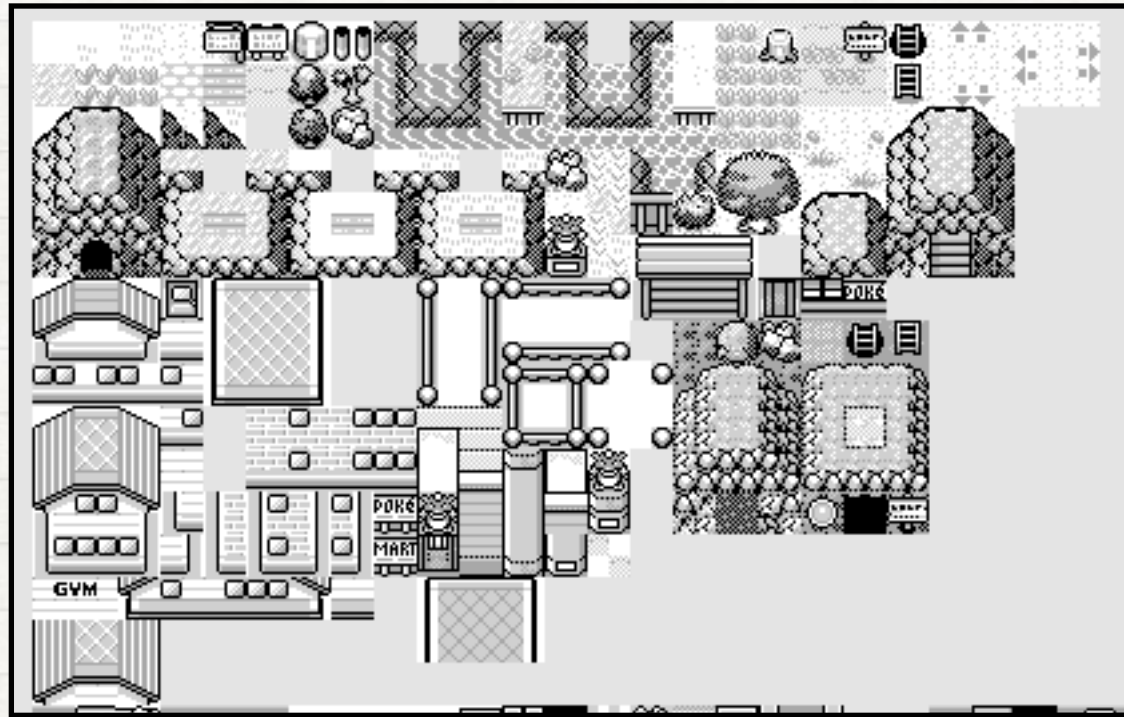
HERE'S A FUN TASK.

- GO TO GOOGLE.COM
- RIGHT CLICK ON THE LOGO
- OPEN IMAGE IN NEW TAB OR WINDOW'

This is Google's Spritesheet for
user interface elements and animations.

The website refers to the CSS (cascading
style sheets) to know how to which part of the sheet to
display, or animate.

SPRITESHEETS IN VIDEO GAMES

Pokemon Red/Blue

Castlevania Symphony of the Night

Doom Hero Face

SPRITES AND TILES IN APPS

THE ATLAS

HOW IS AN ATLAS DIFFERENT THAN A TILEMAP

A Tilemap or Spritesheet is just one graphic with many elements you can cut and use.

An Atlas is both a graphic and an xml or JSON like file that defines all the x and why coordinates.

If you collect all your images into a folder with name.atlas, and import it into your resources then Xcode will create an atlas file for you at runtime. (you may never actually see this file, but it's part of the build optimization.)

You can still use tile maps or spritesheets, but you'll need to use SKTexture textureWithRect

USING SPRITES IN SPRITEKIT
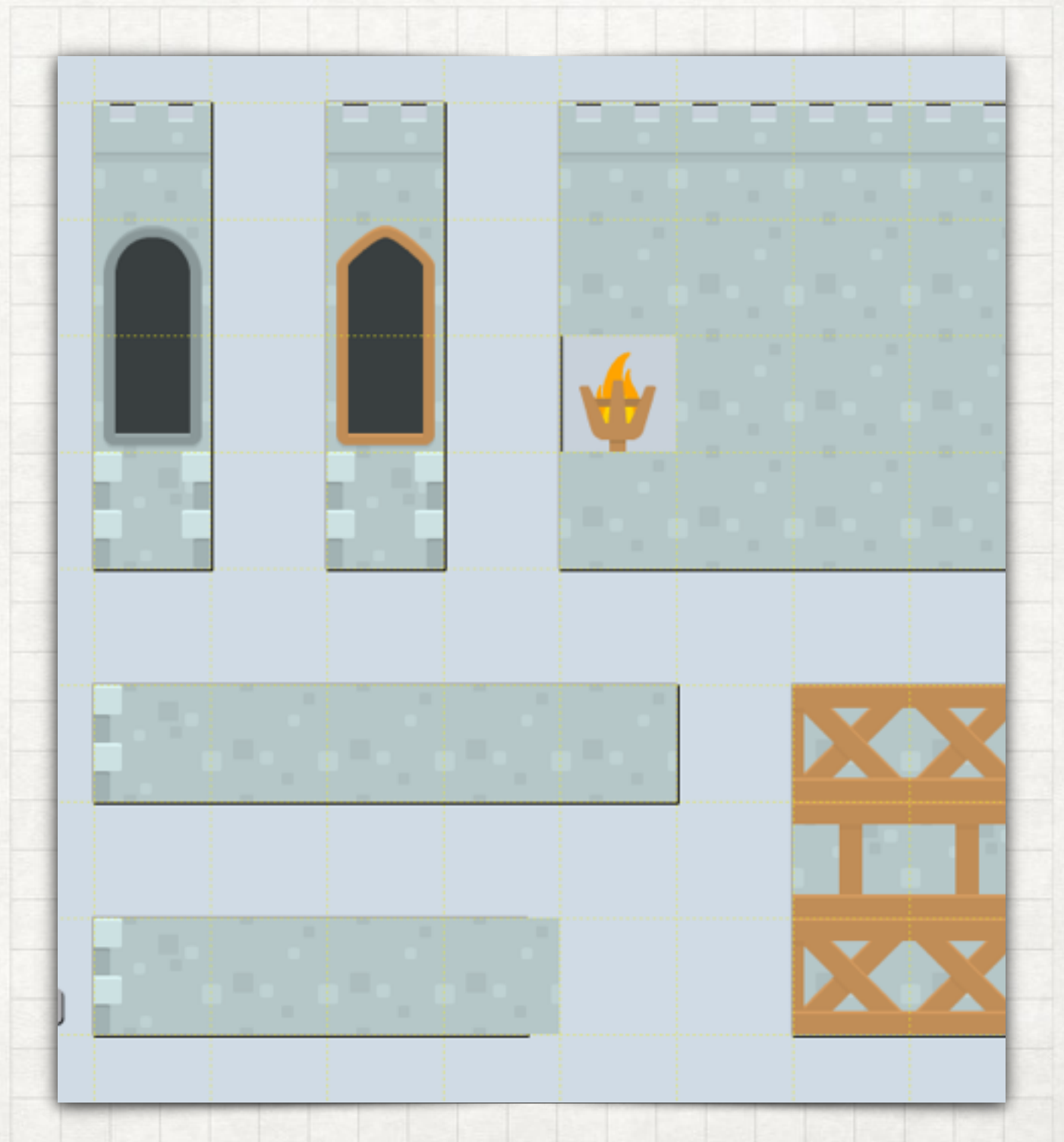
SPRITEKIT SCENE BUILDER

USING SPRITES IN SPRITEKIT

TILED

- VISUAL TOOL FOR MAKING TILE MAPS

- EXPORTS AS JSON

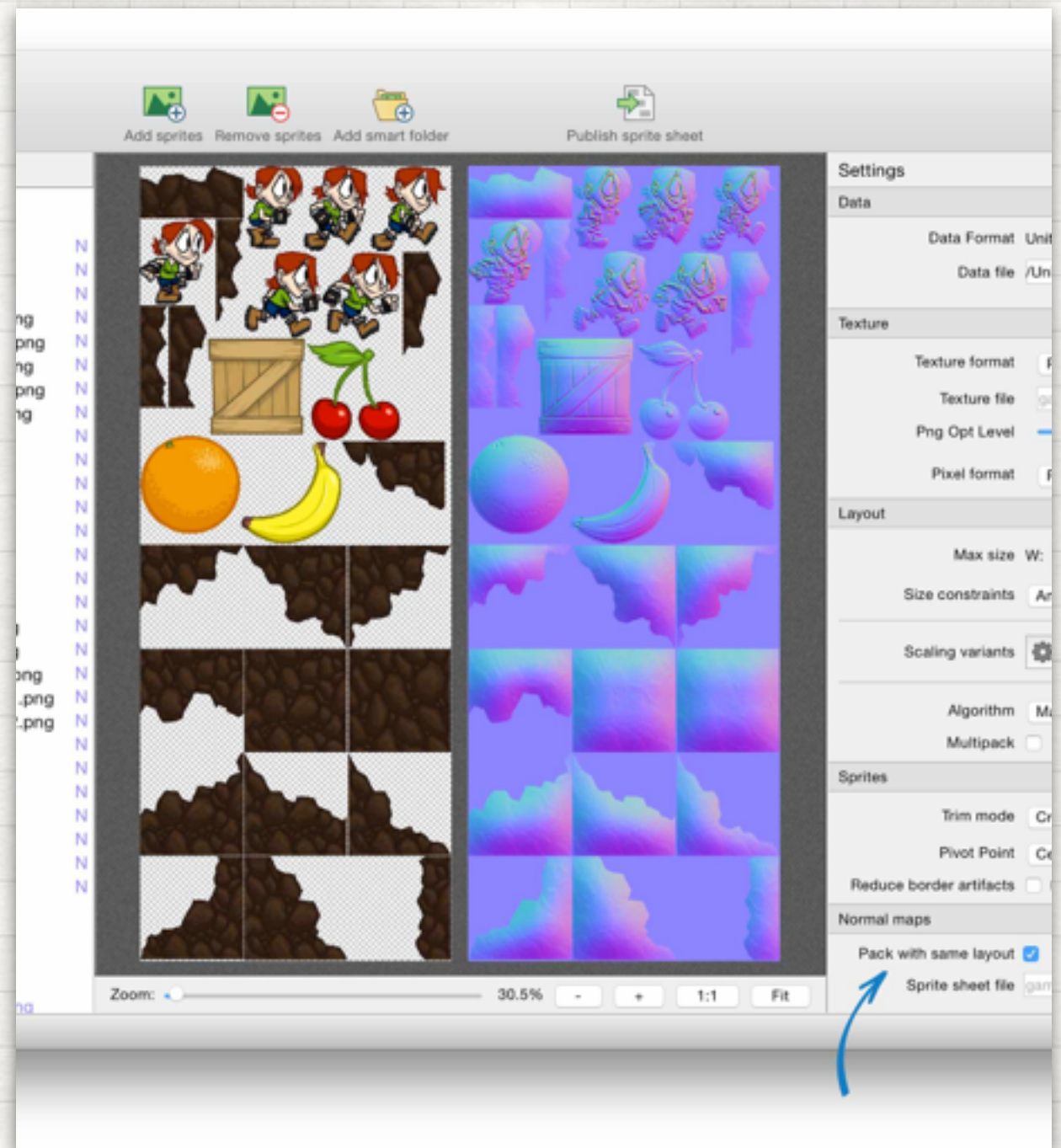- CAN ALSO HELP YOU DESIGN LEVELS WITH YOUR SPRITES.

USING SPRITES IN SPRITEKIT
TEXTURE PACKER - USE WITH SWIFT>>

TEXTURE PACKER

- Organize your sprites

- Export/import multiple sizes

- Animate frames easy

- Optimize your sprite sheet yourself vs Xcode.

RESOURCES

- **Illusion of Motion -**

  - https://paulbakaus.com/tutorials/performance/the-illusion-of-motion/

  - http://ed.ted.com/lessons/animation-basics-the-optical-illusion-of-motion-ted-ed

- **Tiled** - http://www.mapeditor.org

- **Texture packer** - https://www.codeandweb.com/texturepacker

- **Kenney.NL** - Free/low cost, high quality assets/sprites -

  - http://Kenney.nl/assets

- **CSS Sprites** - https://css-tricks.com/css-sprites/