CS74.42A Game Development

Fall 2018 ~ Ethan Wilde   *Week 5*

SANTA ROSA
JUNIOR COLLEGE

Welcome

- Course Outline: This Week

- Textbook Reading This Week

- Software This Week
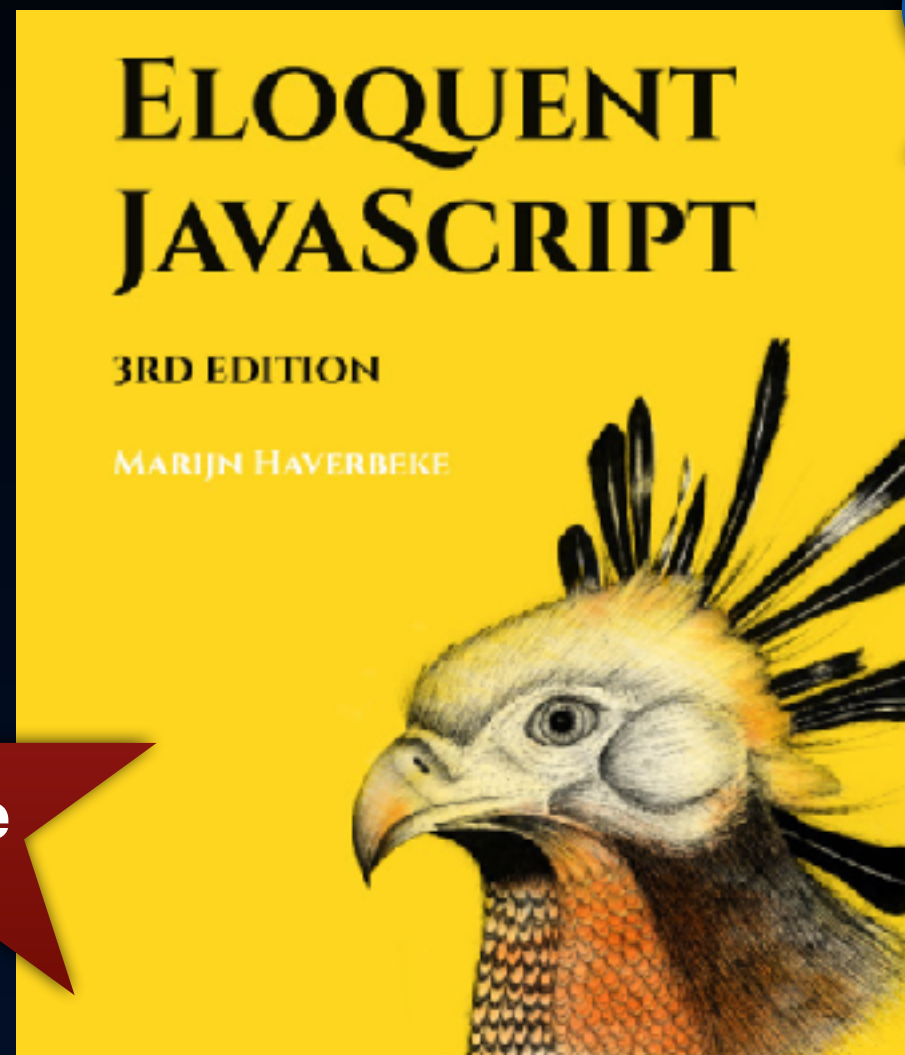
- HTML5 Games with Phaser.js

- Introduction to Phaser.js

Course Outline

1 World of Game Development	10 Physics, Particles + Effects
2 Play a Game, Learn to Code 1	11 Midterm Review / Draft GDD
3 Play a Game, Learn to Code 2	12 Prefabs + Classes / Build Sys
4 Intro to JavaScript + Systems	13 Final Project: Design Game
5 Browser-Based Games	14 Adv Development Techniques
6 Working with Sprites + Controls	15 Build + Playtest Sprint 1
7 Level Maps, Atlases + Tiles	16 Build + Playtest Sprint 2
8 UI + Sound	17 Build + Playtest Sprint 3
9 Simulating the Physical World	18 Final Exam (online)

Get all of the details in the complete syllabus on Canvas.
Weeks 11-17 include extra credit coverage of Unity3D.

Textbook: Phaser Game Engine

Ch. 3

Buy Used

An Introduction to HTML5 Game Development with Phaser.JS
Travis Faas, CRC Press, 2016
ISBN 978-1-138-92184-9 print
ISBN 978-1-315-31921-6 ebook

Software
This Week

Text Editor + File Transfer	**Cloud9** (Browser-based, Mac + Win)
Web Browser	**Google Chrome** (Preferred for Cloud9)
Game Engine	**Phaser CE (v2)** (Browser-based 2D Game Engine)
Bitmap Graphics Editor	**pixlr.com** (Browser-based, Mac + Win, Flash plugin)
Free Game Assets	**opengameart.org** (Free Game Assets)

Phaser
2D Game Engine

https://github.com/photonstorm/phaser-ce

Phaser
2D Game Engine

Online Resources

1. **Software Repository**
   https://github.com/photonstorm/phaser-ce

2. **Online Documentation**
   https://photonstorm.github.io/phaser-ce/

3. **Examples + Sample Code**
   http://phaser.io/examples

Phaser Game Concepts

Game States

1. **Preload**

2. **Create**

3. **Update**

4. **Render**

Phaser Game Concepts

Game States

1. **Preload**
   Load assets used in game
2. **Create**

3. **Update**

4. **Render**

Preload *allows us to load images and sounds to use during the game.*

Phaser Game Concepts

Game States

1. **Preload**

2. **Create**
   Compose game stage
3. **Update**

4. **Render**

Create *is where we make game objects like sprites, backgrounds, and other game stage setup.*

Phaser Game Concepts

Game States

1. **Preload**

2. **Create**

3. **Update**
   Runs continuously in loop
4. **Render**

***Update** is the Game Loop runs a block of code over and over again to support real-time gameplay.*

Phaser Game Concepts

Game States

1. **Preload**

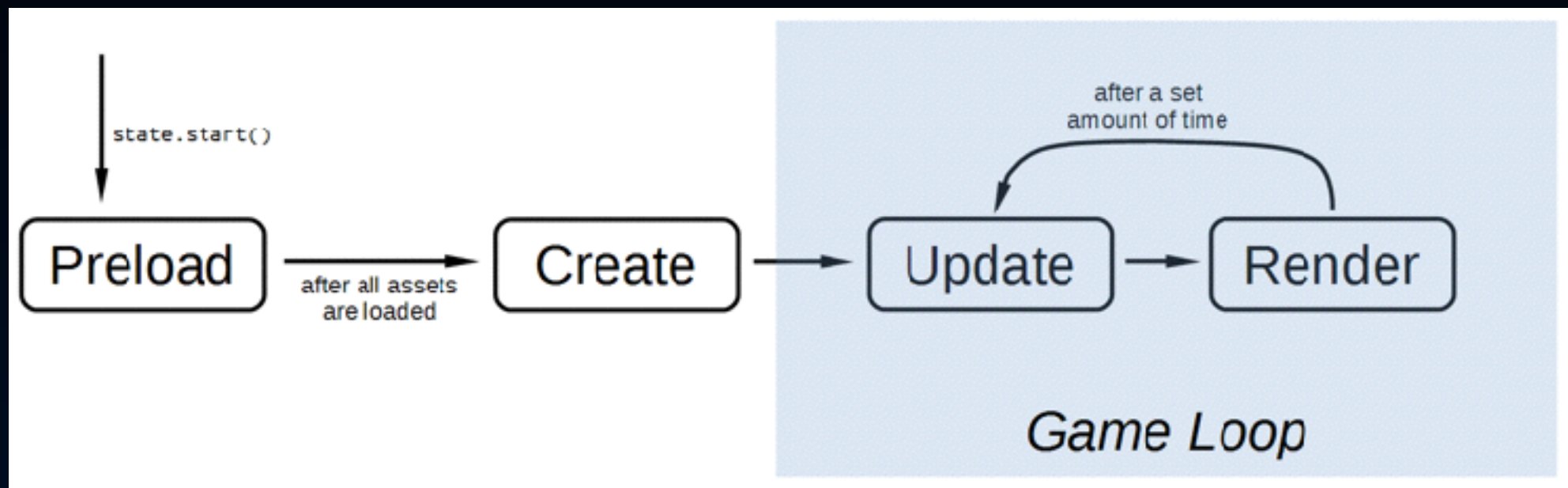2. **Create**

3. **Update**

4. **Render**
   Available for debugging in loop

Render *lets us output debugging info during the Game Loop to support troubleshooting.*
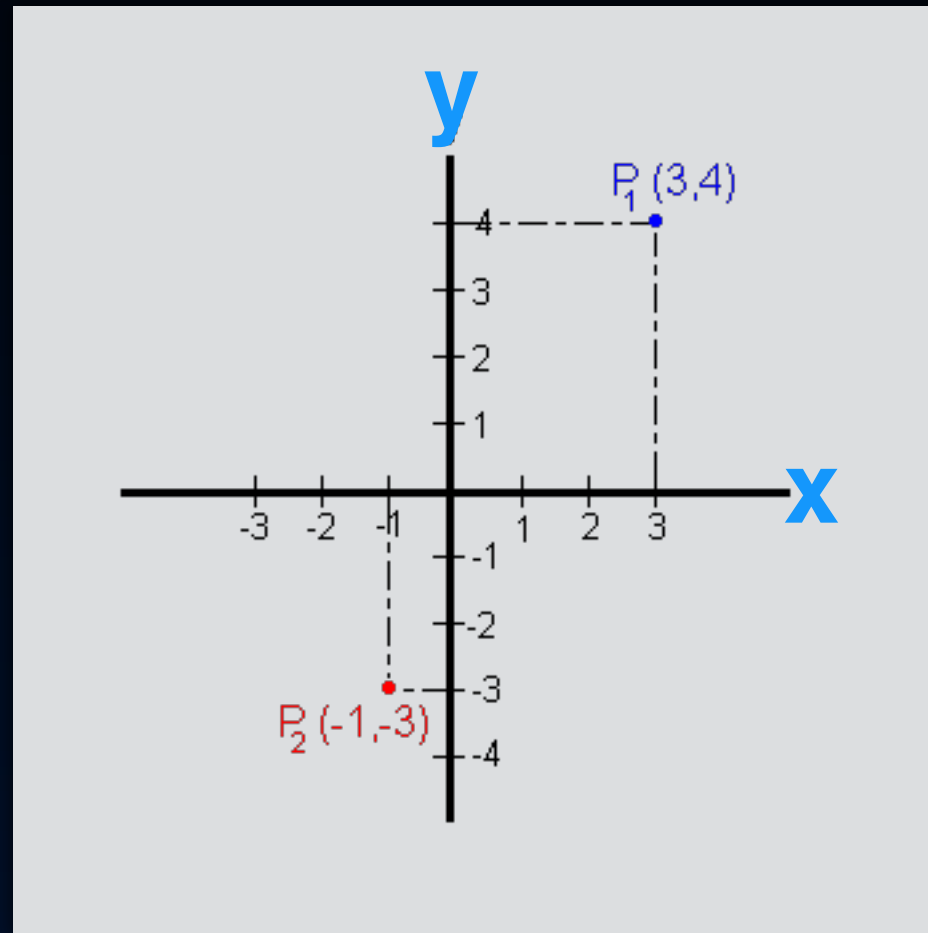
Phaser Game Concepts

Game States

The Game Loop runs a block of code over and over again to support real-time gameplay.

Phaser Game Concepts

Coordinate System

2D world is composed of horizontal and vertical axes.
This world simply a flat surface, or plane.
horizontal = the x-axis, vertical = the y-axis

Phaser Game Concepts

Assets

*An **Asset** is any image, audio or other file resource used in the game. OpenGameArt offers free assets.*

Phaser Game Concepts

Sprites

*A **Sprite** is a game object your code can control, composed visibly with an asset. Players, tokens, collectables, etc. are all sprites.*

A Simple Game

Code Demo

What to Do Next

- **Reading + Watching + Doing**

  - Read *Eloquent JavaScript*, Chs. 2 + 3

  - Read *HTML5 Game Development with Phaser,* Ch. 3

- **Homework**

  - **Assignment 5: First Phaser Game**

  - Homework due to Canvas by **11:59pm Thurs 9/27**

- **Canvas Site**

  - All materials available there

  - *canvas.santarosa.edu/courses/33387*