



# CS74.42A Game Development

Fall 2018 ~ Ethan Wilde

*Week 8*



# Welcome

- Course Outline: This Week
- Textbook Reading This Week
- Software This Week
- Phaser Concepts
  - Audio, Text, UI
- Working with Audio and User Interface Elements

# 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. 6



pages  
76-81

***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

<b>Text Editor + File Transfer</b>	<b>Cloud9</b> (Browser-based, Mac + Win)
<b>Web Browser</b>	<b>Google Chrome</b> (Preferred for Cloud9)
<b>Game Engine</b>	<b>Phaser CE (v2)</b> (Browser-based 2D Game Engine)
<b>Audio Editor</b>	<b>Audacity</b> (Mac + Win application, free version) <a href="https://www.audacityteam.org/">https://www.audacityteam.org/</a>
<b>Tilemap Level Editor</b>	<b>Tiled</b> (Mac + Win application, free version) <a href="https://www.mapeditor.org/">https://www.mapeditor.org/</a>
<b>Free Game Assets</b>	<b><a href="https://opengameart.org/">opengameart.org</a></b> (Free Game Assets)



# Phaser

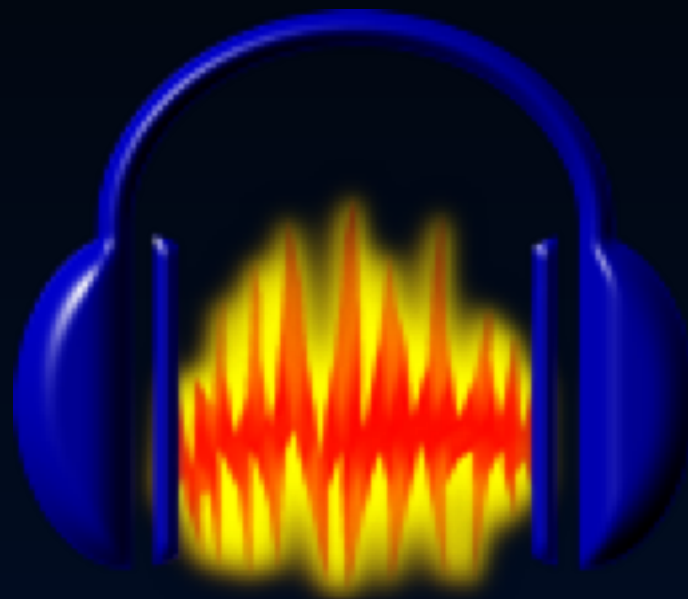
## 2D Game Engine



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

# Phaser Game Concepts

## Audio



*An **Audio Asset** is a sound file asset that is saved in a browser-compatible file format.*

# Phaser Game Concepts

## Audio

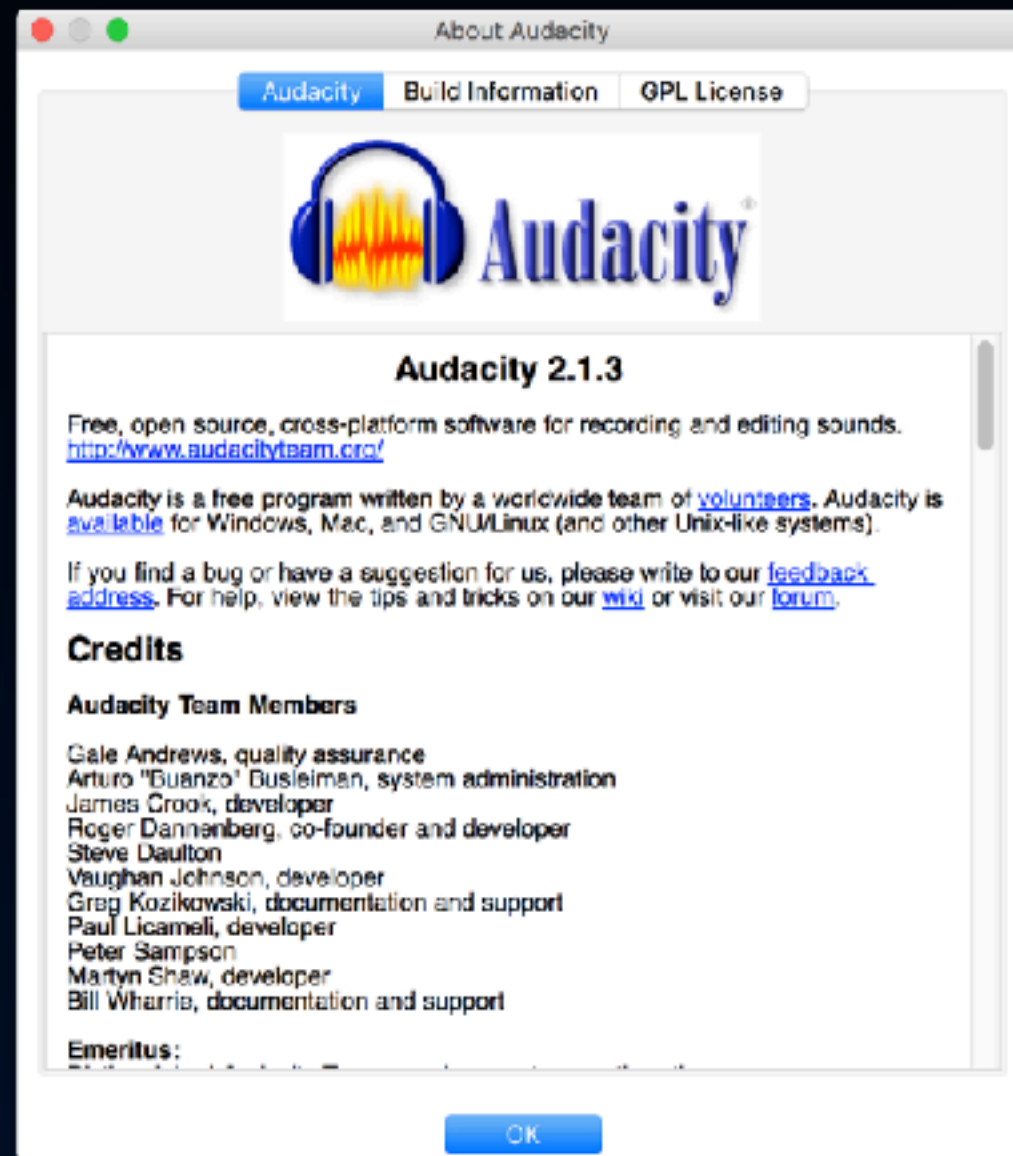
<i>formats</i>	<b>WAV</b>	<b>MP3</b>	<b>MP4</b>
<b>mime type</b>	audio/wav	audio/mpeg	audio/mp4
<b>compression</b>	minimal	“lossy”	“lossy”

\*You must have your audio asset saved in a browser-compatible format.



# Phaser Game Concepts

## Audio



<https://www.audacityteam.org/>

# Phaser Game Concepts

## Audio

load assets  
files in preload()

```
function preload() {  
  game.load.audio('soundtrack', 'assets/wind.mp3');  
  game.load.audio('soundeffect', 'assets/coin1.wav');  
}  
  
function create() {  
  audioeffect = game.add.audio('soundeffect');  
  audiotrack = game.add.audio('soundtrack');  
  audiotrack.play("", 0, 0.3, true);  
}  
  
function update() {  
  if (...) {  
    audioeffect.play();  
  }  
}
```


# Phaser Game Concepts

## Audio

```
function preload() {  
    game.load.audio('soundtrack', 'assets/wind.mp3');  
    game.load.audio('soundeffect', 'assets/coin1.wav');  
}
```

```
function create() {  
    audioeffect = game.add.audio('soundeffect');  
    audiotrack = game.add.audio('soundtrack');  
    audiotrack.play("", 0, 0.3, true);  
}
```

add audio  
to game  
in create()



```
function update() {  
    if (...) {  
        audioeffect.play();  
    }  
}
```

# Phaser Game Concepts

## Audio

```
function preload() {  
    game.load.audio('soundtrack', 'assets/wind.mp3');  
    game.load.audio('soundeffect', 'assets/coin1.wav');  
}
```

```
function create() {  
    audioeffect = game.add.audio('soundeffect');  
    audiotrack = game.add.audio('soundtrack');  
    audiotrack.play("", 0, 0.3, true);  
}
```

start playing  
background  
music in create()

```
function update() {  
    if (...) {  
        audioeffect.play();  
    }  
}
```

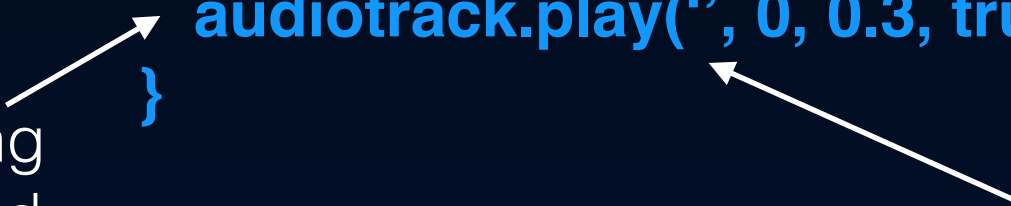
# Phaser Game Concepts

## Audio

```
function preload() {  
    game.load.audio('soundtrack', 'assets/wind.mp3');  
    game.load.audio('soundeffect', 'assets/coin1.wav');  
}
```

```
function create() {  
    audioeffect = game.add.audio('soundeffect');  
    audiotrack = game.add.audio('soundtrack');  
    audiotrack.play("", 0, 0.3, true);  
}
```

start playing  
background  
music in create()



```
function update() {  
    if (...) {  
        audioeffect.play();  
    }  
}
```

### **play() arguments:**

1. audio marker name (if any)
2. starting position or 0 for beginning
3. volume 0.0 – 1.0
4. loop? boolean



# Phaser Game Concepts


## Audio

```
function preload() {  
    game.load.audio('soundtrack', 'assets/wind.mp3');  
    game.load.audio('soundeffect', 'assets/coin1.wav');  
}
```

```
function create() {  
    audioeffect = game.add.audio('soundeffect');  
    audiotrack = game.add.audio('soundtrack');  
    audiotrack.play("", 0, 0.3, true);  
}
```

```
function update() {  
    if (...) {  
        audioeffect.play();  
    }  
}
```

sound effects  
can be played  
anytime in update()



# Phaser Game Concepts

## Text

text objects  
can be made  
in create()

```
function create() {  
  textObject = game.add.text(  
    40,  
    100,  
    "Text message",  
    {  
      font: "20px Arial",  
      fill: "#f00"  
    }  
  )  
}  
  
function update() {  
  textObject.setText("New text message");  
}
```


*An **Text** object is like a sprite but only shows text.*

# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
  
function update() {  
    textObject.setText("New text message");  
}
```

first two arguments are x and y position




An **Text** object is like a sprite but only shows text.

# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
  
function update() {  
    textObject.setText("New text message");  
}
```

third  
argument  
is quoted  
text string




An **Text** object is like a sprite but only shows text.

# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
  
function update() {  
    textObject.setText("New text message");  
}
```

fourth  
argument  
is style object



*An **Text** object is like a sprite but only shows text.*



# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
  
function update() {  
    textObject.setText("New text message");  
}
```

fourth  
argument  
is style object

style object  
property 1 is quoted text for  
font size and name

*An **Text** object is like a sprite but only shows text.*

# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
  
function update() {  
    textObject.setText("New text message");  
}
```

fourth  
argument  
is style object


style object  
property 2 is quoted text for  
color using hex colors

*An **Text** object is like a sprite but only shows text.*

# Phaser Game Concepts

## Text

```
function create() {  
    textObject = game.add.text(  
        40,  
        100,  
        "Text message",  
        {  
            font: "20px Arial",  
            fill: "#f00"  
        }  
    )  
}  
change  
text in  
existing  
text object  
with setText()
```



```
function update() {  
    textObject.setText("New text message");  
}
```

*An **Text** object is like a sprite but only shows text.*

# Working with Audio + Text



*Code Demo*

# What to Do Next

- **Reading + Watching + Doing**
  - Read *HTML5 Game Development with Phaser*, Ch. 6, pages 76-81
- **Homework**
  - **Assignment 8: UI + Sound**
  - Homework due to Canvas by **11:59pm Thurs 10/18**
- **Canvas Site**
  - All materials available there
  - **[canvas.santarosa.edu/courses/33387](https://canvas.santarosa.edu/courses/33387)**