CMPM 120

Particles

Objectives

By the end of today you should be able to…

1. Describe what **particles** are in games and visual effects
2. Create **particle effects** in Phaser
3. Understand what the requirements are for your **final presentations**

Today's code exercise

https://github.com/ikarth/phaser_particles

SETs

➔ Remember that the course evaluations are now available.

➔ You can access them via the class canvas site.

➔ https://canvas.ucsc.edu/courses/26569/external_tools/1399

➔ Please fill them out, it directly affects what classes we will be teaching in the future!

Your Final Project

You will turn in:

➔ A **presentation** (next Thursday!)
   ◆ Your **whole team** needs to be there
   ◆ Your presentation needs to be uploaded by the **end of Tuesday**
➔ Your game **posted online**, where people can play it
   ◆ This is the version I'm grading for the playable parts of the grade
   ◆ I suggest posting a version to itch.io early so you can test it
     ● You may need to **move** the `framework` folder or `index.html` to work on itch.io
➔ A **zip file** of your game
➔ A link to your team's **git repository**

Everyone needs to submit these files to Canvas

Biggest Issues I've Seen So Far

➔ You forgot to include a **link to your git repository**

➔ You forgot to mention your **team members' names**

➔ You need to **organize your code better**
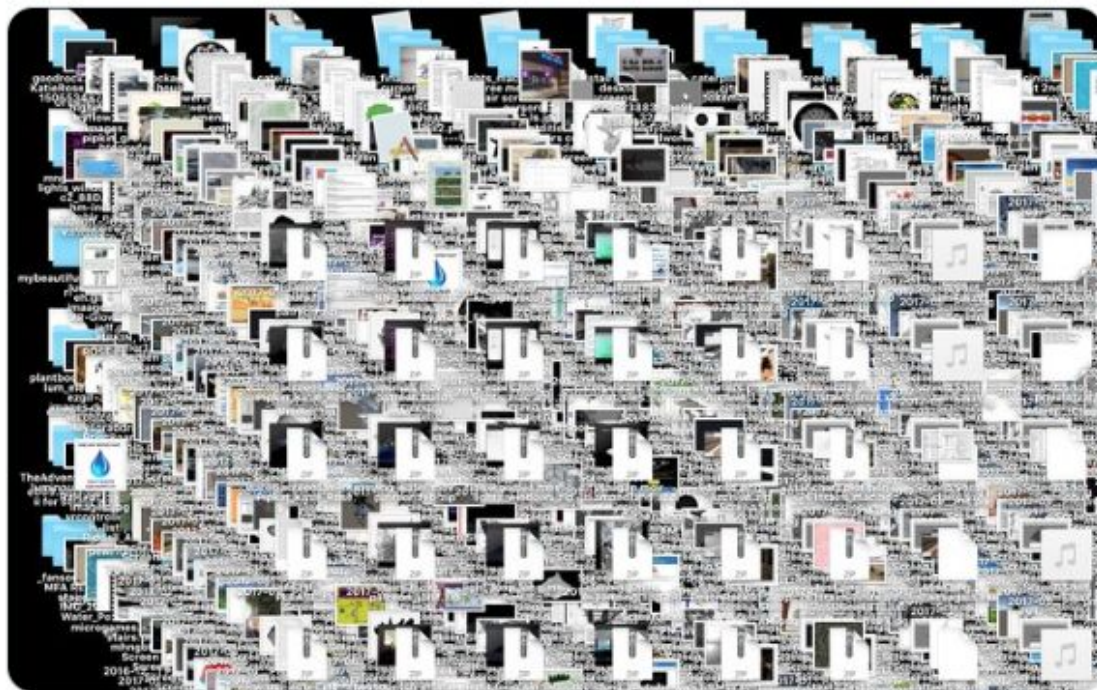
Remember:

You can turn in an early version and update it later!

Don't be everest pipkin

everest
@everestpipkin

i also accidentally took a screenshot of my unobscured desktop and gave myself a tiny panic attack

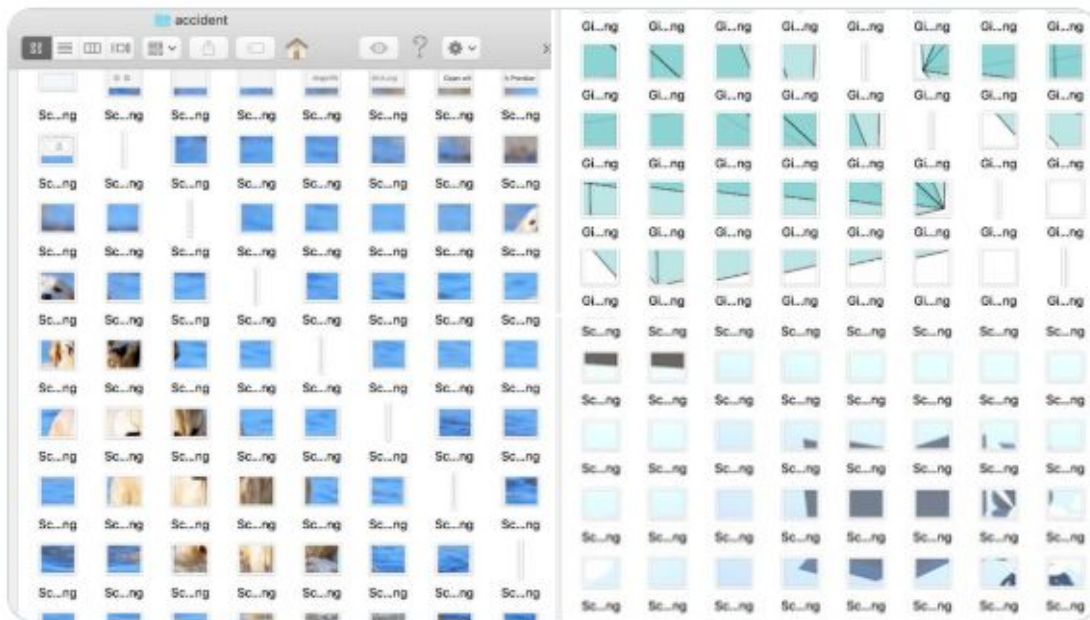4:33 PM · Sep 23, 2017 · Twitter Web Client

CMPM 120

Also, it's bad when this happens

everest
@everestpipkin

tonight i accidentally ran an imagemagick command on the wrong folder and sliced every image on my desktop <thousands> into an 8x8 grid

10:19 PM · Jan 27, 2019 · Twitter Web Client

How can your current games use particles?

→ ???

VFX Particles!

https://www.youtube.com/watch?v=CSQPD3oyvD8

By the way, if you want a career doing things like this,
one job title to look up is

Technical Artist

How can your current games use particles?

→ ???

More Debugging Tips

Useful random debugging advice

1. When you find a problem, change something so that same problem can't happen again
   a. assert()
   b. Keep a debugging notebook
2. Make debug tools
   a. Quicker feedback is better
   b. Display values live if possible
3. Only make one change at a time and then test it
4. Just because you paused the game doesn't mean it's paused
   a. And stopping one update doesn't mean you stopped all of them
5. console.log() is slow
   a. Faster to print an array as a string than to individually print the contents

Useful random debugging advice

Walk through your code step by step, explaining to yourself what is supposed to happen

Useful random debugging advice

1. When you find a problem, change something so that same problem can't happen again
   a. assert()
   b. Keep a debugging notebook
2. Make debug tools
   a. Quicker feedback is better
   b. Display values live if possible
3. Only make one change at a time and then test it
4. Just because you paused the game doesn't mean it's paused
   a. And stopping one update doesn't mean you stopped all of them
5. console.log() is slow
   a. Faster to print an array as a string than to individually print the contents

Useful random debugging advice

1. When you find a problem, change something so that same problem can't happen again
   a. assert()
   b. Keep a debugging notebook
2. Make debug tools
   a. Quicker feedback is better
   b. Display values live if possible
3. Only make one change at a time and then test it
4. Just because you paused the game doesn't mean it's paused
   a. And stopping one update doesn't mean you stopped all of them
5. console.log() is slow
   a. Faster to print an array as a string than to individually print the contents

Useful random debugging advice

1. When you find a problem, change something so that same problem can't happen again
   a. assert()
   b. Keep a debugging notebook
2. Make debug tools
   a. Quicker feedback is better
   b. Display values live if possible
3. Only make one change at a time and then test it
4. Just because you paused the game doesn't mean it's paused
   a. And stopping one update doesn't mean you stopped all of them
5. console.log() is slow
   a. Faster to print an array as a string than to individually print the contents

Useful random debugging advice

1. When you find a problem, change something so that same problem can't happen again
   a. assert()
   b. Keep a debugging notebook
2. Make debug tools
   a. Quicker feedback is better
   b. Display values live if possible
3. Only make one change at a time and then test it
4. Just because you paused the game doesn't mean it's paused
   a. And stopping one update doesn't mean you stopped all of them
5. console.log() is slow
   a. Faster to print an array as a string than to individually print the contents

AABB characters and slopes

An example of a real-world physics-and-debugging problem in a game with 2D physics like yours

https://twitter.com/eevee/status/1133248372624613376