

COMMAND LINE HEROES ARCADE: A PRACTICAL GUIDE TO OPEN GAME DEVELOPMENT

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WHAT IS THIS ALL ABOUT?

- 1 A PRACTICAL GUIDE TO OPEN GAME DEVELOPMENT
- 2 THE MAKING OF "COMMAND LINE HEROES: BASH" AS A PRACTICAL EXAMPLE



COMMAND_LINE
HEROES
BASH



WHAT WILL YOU GET?

- ① The process of game development
- ② Open source game development tools available
- ③ Elements of what make a good game
- ④ How to make a game fun
- ⑤ How to make it open source friendly

WHAT THIS TALK IS NOT

- ① LOOKING AT A LOT OF SOURCE CODE, OR TEACHING THE DETAILS OF ANY GIVEN FRAMEWORK.
- ② I'LL LEAVE THAT UP TO YOU TO LEARN, AND THE SOURCE CODE IS AVAILABLE HERE:

<https://github.com/CommandLineHeroes/clh-bash>

THE STORY OF COMMAND LINE HEROES: BASH



Test your command line skills.
You have 60 seconds to type commands from:

BASH · JAVASCRIPT · PYTHON · HTML5

Set the terminal on fire.

Created by Michael Clayton, Jared Sprague, and the Command Line Heroes team @ Red Hat. Listen to the podcast at redhat.com/en/command-line-heroes.



OPPORTUNITY KNOCKS



PROTOTYPING IDEAS



WHEN **INSPIRATION** COMES,
LISTEN



FINDING AN ARTIST HELPS A TON

I learned that the guy who made the 3D animation of the computer works at Red Hat



PICK YOUR TOOLS THERE IS AN OPEN SOURCE OPTION FOR EVERYTHING



[BIT.LY/AWESOME-GAMEDEV](https://bit.ly/awesome-gamedev)

PICK YOUR TOOLS

ENGINES



Godot
(gdscript & C++)



Phaser
(JavaScript 2D)



LÖVE
(Lua)



pygame
(Python)

PICK YOUR TOOLS

GRAPHICS



Piskel



Blender



GIMP



three.js (JavaScript)



Babylon (JavaScript)



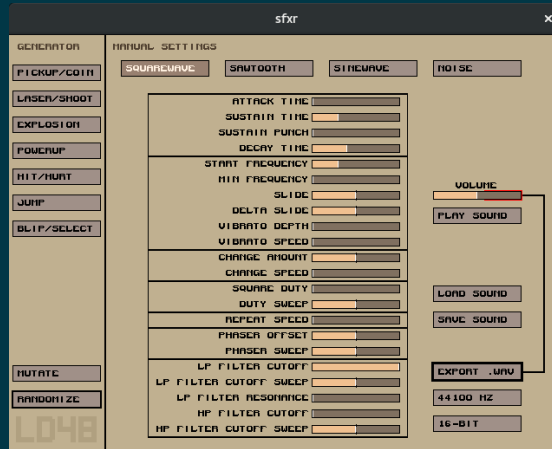
Inkscape

PICK YOUR TOOLS

AUDIO



BeepBox



sfxr (& co)

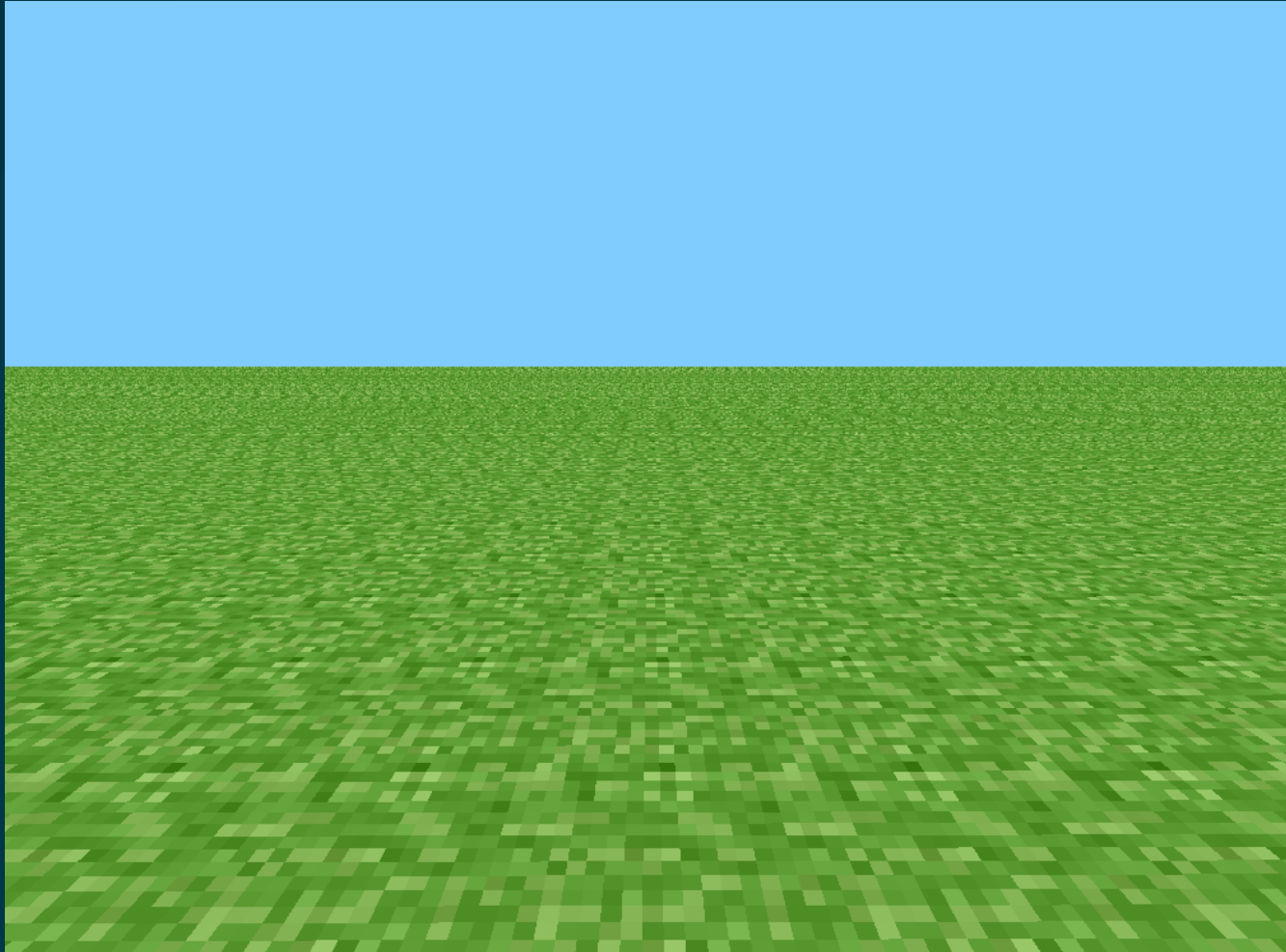


Audacity



howler.js

FOUNDATION FIRST 90% OF GAME DEVELOPMENT IS POLISH



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One of the earliest World of Warcraft screenshots taken during development.

HACK & POLISH MAKE A TASK LIST AND GET CODING

Main elements of CLH-BASH:

- ① 3D MODEL OF COMPUTER
- ② CANVAS TEXTURE FOR THE SCREEN
- ③ HIDDEN TEXT AREA THAT RECEIVES KEYBOARD INPUT THAT IS LINKED TO ABOVE CANVAS
- ④ COMMAND LISTS STORED IN JSON FILES
- ⑤ FIRE SHADER
- ⑥ LEADERBOARD

HACKING MAKE A TASK LIST AND GET CODING

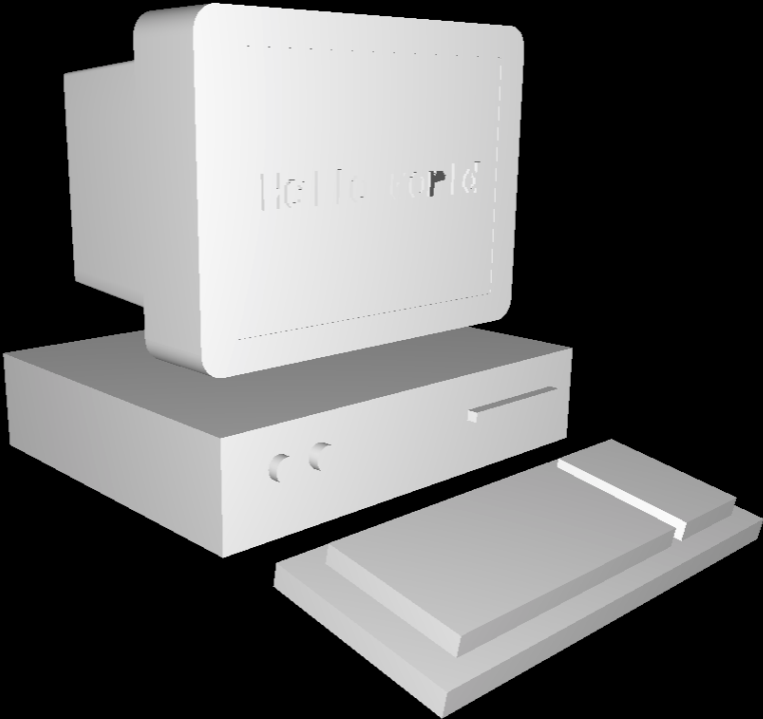
three.js / examples

mtl

webgl

loader / obj / mtl

three.js - OBJLoader + MTLLoader



View source

CLH_Compute...mtl ^

127.0.0.1:8080/examples/?q=mtl#webgl_loader_obj_mtl

Apps LH:8080 LH:4000 Red Hat - Calend Portal - Cl RH Dev CP Ops Synthetics - New StatusPage.io - D cp-ops - Chat OpenShift Web C Latest topics - Ne Imported From Fi Personal | Trello

Filter

☐ Hide data URLs

XHR JS CSS Img Media Font Do

500 ms 1000 ms

Name	S	T	I...	S	T	Waterfall
CL...	20	sc	...	11	23	
M...	20	sc	...	11	23	
O...	20	sc	...	11	23	
sta...	20	sc	...	2	16	
CL...	20	xt	...	3	6	
CL...	20	xt	...	2	6	
fav...	40	te	...	1	8	

12 requests | 1.4 MB transferred | Finis...

Console What's New

Highlights from the Chrome 71 update

Hover over a Live Expression to highlight a DOM node

Hover over a result that evaluates to a node to highlight that node in the viewport.

Store DOM nodes as global variables

Right-click a node in the Elements panel or Console and select "Store as global variable".

Initiator and priority information now in HAR imports and exports

Show all

HACKING MAKE A TASK LIST AND GET CODING

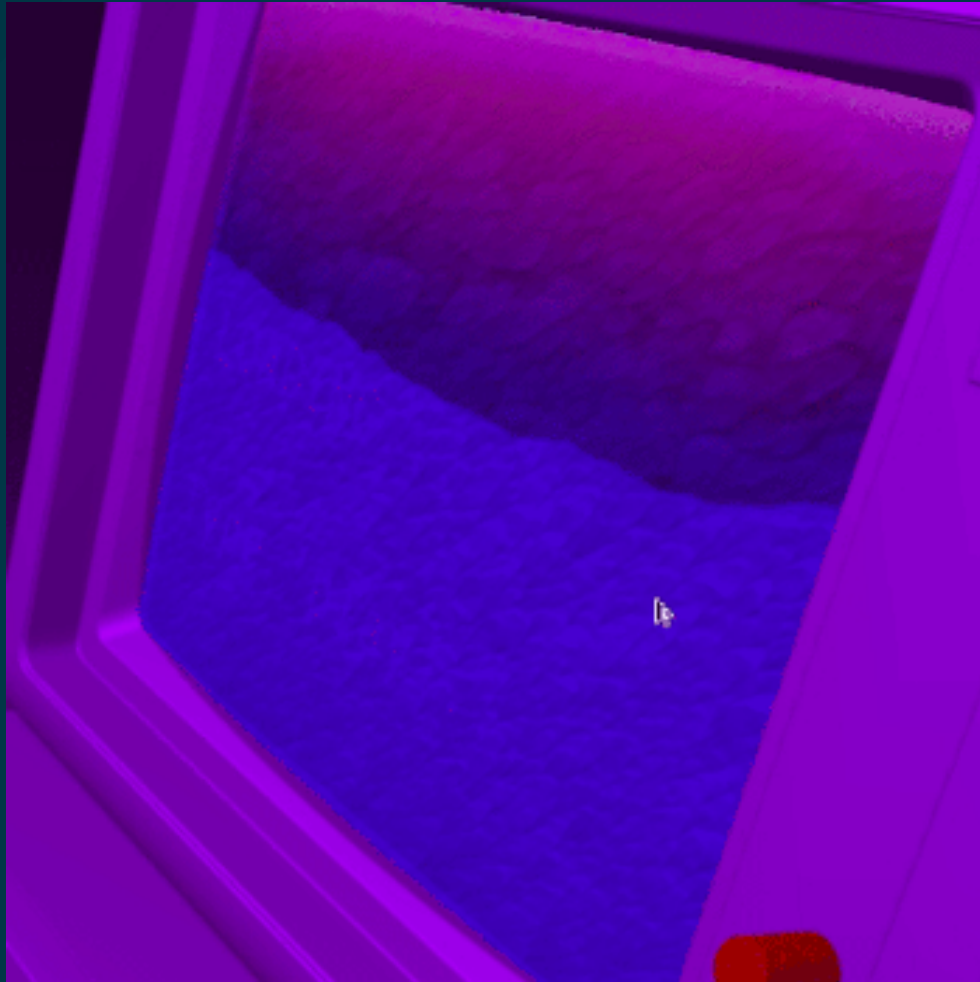


HACKING MAKE A TASK LIST AND GET CODING



```
GAME OVER  
score: 0  
Bash: 0  
Python: 0  
JavaScript: 0  
HTML: 0  
Press Enter to continue.
```

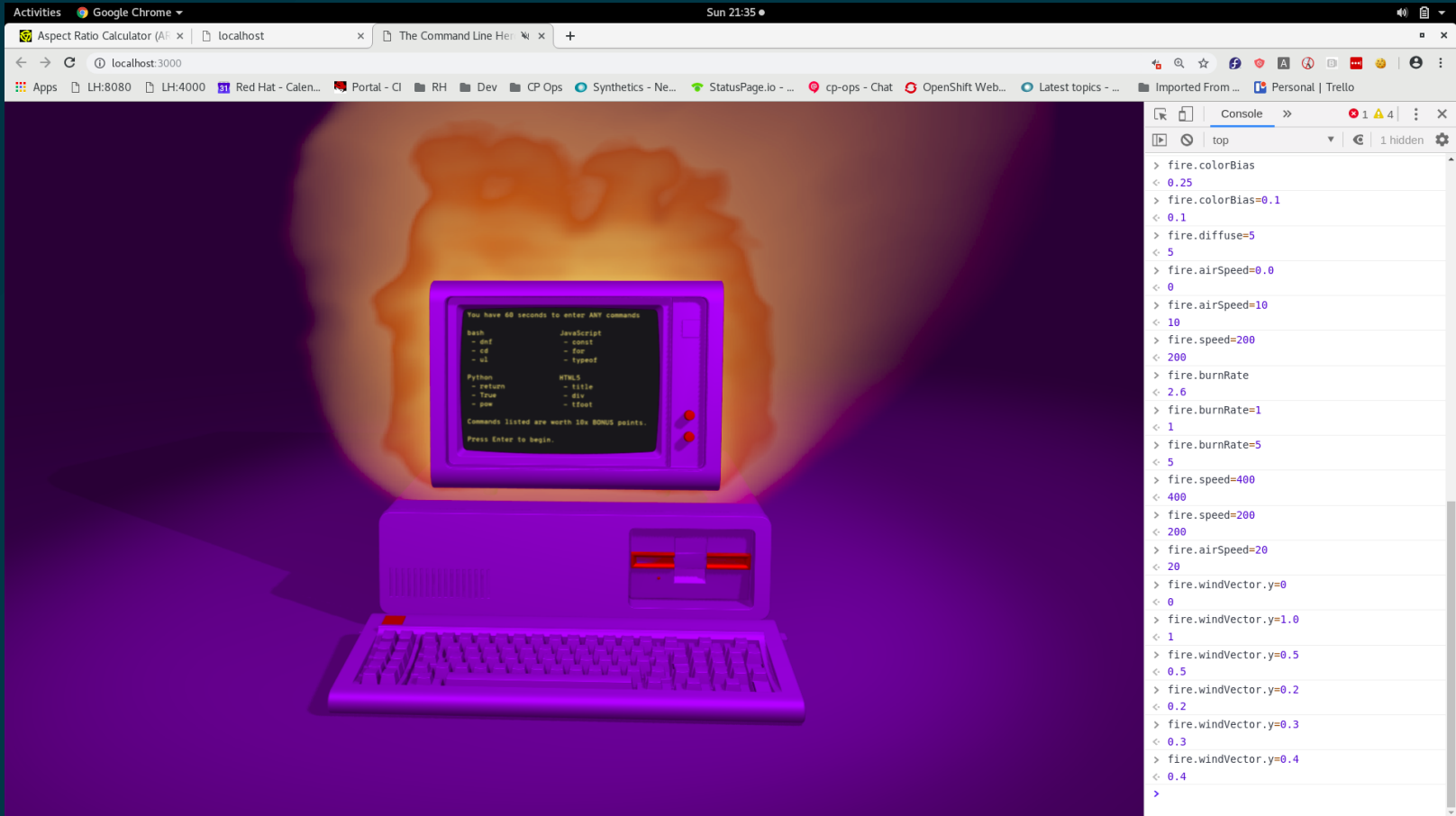

HACKING MAKE A TASK LIST AND GET CODING



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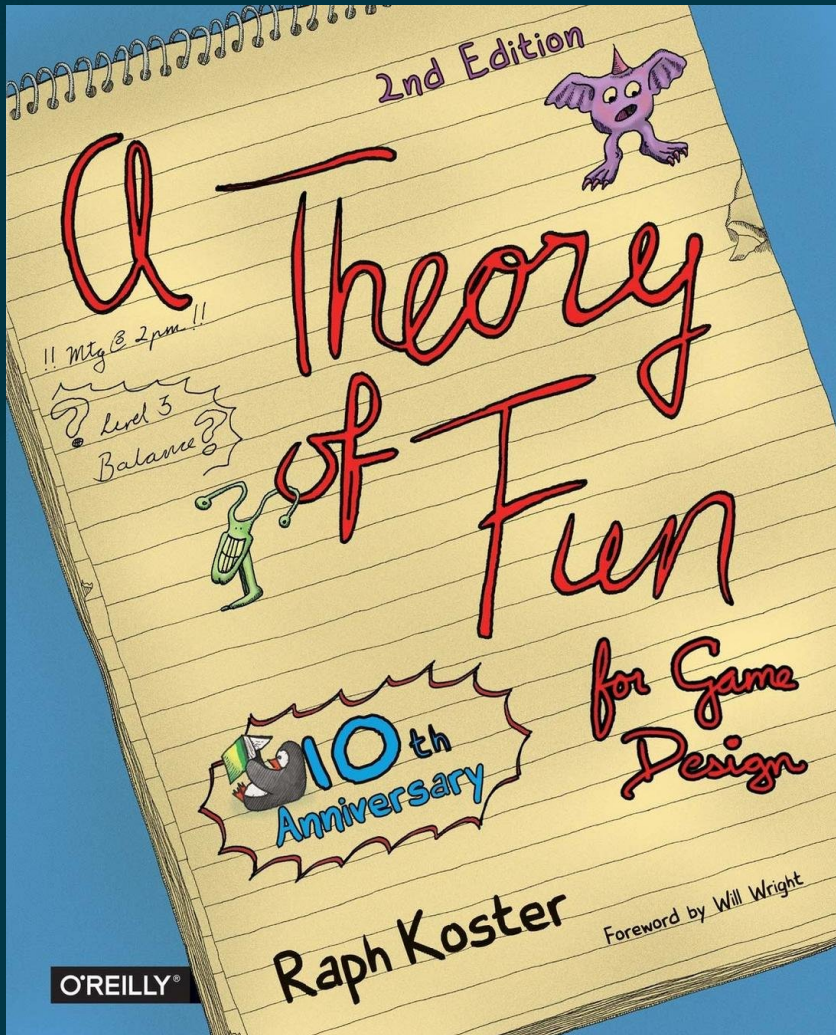
**BEHIND THE SCENES
DEMO**

MUSIC & SOUND IS 1/3 OF YOUR GAME



WAVESHAPER1.BANDCAMP.COM

MAKE IT FUN THE MOST IMPORTANT PART



- 1 If the game is too hard to understand or play, people will get bored and walk away
- 2 If the game is too easy to master people will get bored and walk away
- 3 There should be learning and rewards for that sweet dopamine

How did we try to achieve the above with CLH-BASH?

ADDING THE COOLNES

REMEMBER DAN?



GAME DEVELOPMENT IS REWARDING



HOW TO MAKE YOUR GAME OPEN SOURCE FRIENDLY

GAMES ARE ART. DECIDE AHEAD OF
TIME WHERE YOU COULD USE OPEN
SOURCE CONTRIBUTIONS.

GAME DEV PROCESS SUMMARY

- OPPORTUNITY
- PROTOTYPING
- INSPIRATION
- FINDING AN ARTIST
- PICK YOUR TOOLS
- FOUNDATION FIRST
- HACK & POLISH
- MUSIC & SOUND
- MAKE IT FUN
- OPEN SOURCE FRIENDLY

EVERYONE HAS A GAME IN THEM



= ∞

THERE IS NO END TO ORIGINAL GAME IDEAS.

NOW YOU HAVE THE PROCESS AND THE TOOLS,
GO MAKE ONE!



OPEN JAM

OPENJAM.IO

**LETS BREAK THE
HIGHEST SCORE
TOGETHER!**

QUESTIONS?

THANK YOU!

Jared Sprague - @caramelcode

Michael Clayton - @mwcz

Scripta Games - <http://scripta.co>

Open Jam - <http://openjam.io>

Exhaustive list of FOSS gamedev tools - bit.ly/awesome-gamedev