



# WELCOME TO COMPSOC

WEEK 1 – INTRO TO 2D GAME DEVELOPMENT

# WHAT CAN I DO WITH THIS INFORMATION?

- Get used to working with libraries you may not be familiar with
- Creative Computing
- Make your own audio/data visualisers with Python Libraries, or animations in After Effects, Cinema 4D, Blender, etc...
- Basic simulation
- Absolutely nothing
- Game Developer
  - Rockstar Games (£53,000)
  - Bossa Studios (£42,000)
- Platform Engineer
  - Tesco (£46-£48,000)
  - Nominet (£68-£88,000)
- Computer Graphics Designer
  - The British Army (£53-£56,000)
  - Hertz (£51-£56,000)
- Sell your Game (£0 - £ Infinity)



# ADVICE FROM ACTUAL GAME DEVELOPERS

- I hadn't figured out what lists were yet, all code was in one file, there wasn't a shred of object orientated programming...but by December, I had my first proper game – DaFluffyPotato
- You can be bad at programming and make a brilliant game that changes the entire industry – Jason "Thor" Hall, Pirate Software
- Publish games quickly and get real players' feedback & Don't reinvent the wheel, choose simple tools that get games made – James Hahn, Fancade



PROGRAMME



CUPHEAD



RUST



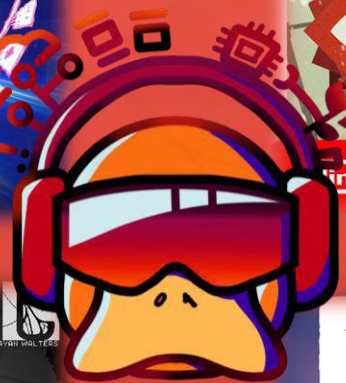
NUCLEAR THRONE



HOTLINE MIAMI



BEAT SABER



FORTNITE



UNRECORD



CRUELTY SQUAD



SONIC COLOURS ULTIMATE



BROTATO



lib  
GDX

**A** TORQUE  
GAME ENGINE

 openage

STARLING  
FRAMEWORK



 JMONKEYENGINE

 Superpowers  
the extensible, collaborative HTML5 game maker

IRR LIGHT  
lightning fast realtime 3D engine

ATOMIC™  
GAME ENGINE

U+H+O+J



  
MONOGAME

LWJGL

 DEVELOP

 babylon.js







PROGRAMME





# Setup

Data

Logic

Game/Screen Settings

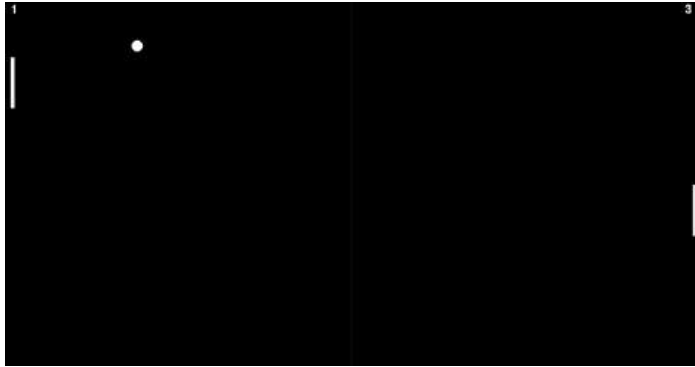
# Loop

Drawing to Screen

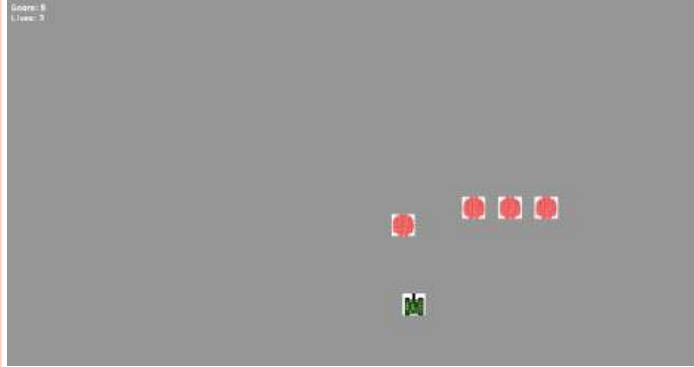
Updating

Control Inputs





PONG



SPACE INVADERS



PACMAN

LEVELS



# WHAT ALL OF YOU WILL NEED TO DO



MOVEMENT



COLLISION



SOUND



SCORE



GAME OVER

# WHAT SOME OF YOU WILL NEED TO DO



INSTALL PYTHON



CHECK PIP



INSTALL PYGAME



COMING UP!

SATURDAY: CAMPUS TOUR SOCIAL

NEXT WEEK: INTRO TO DOCKER

## Install Python

- Go to <https://www.python.org/downloads/>
- Follow instructions
- I'm using Python 3.12.4

## Make sure Pip is installed from command line

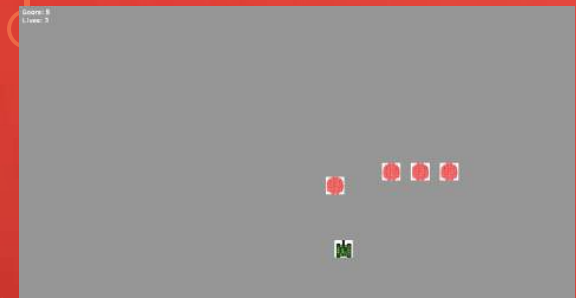
- `pip --version`
- `curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py`
- `python get-pip.py`
- `pip --version`

## Install Pygame from command line

- `pip install pygame`



 <https://github.com/LUCompSoc/cssPONG>



 <https://github.com/LUCompSoc/cssSPACEINVADERS>



 <https://github.com/LUCompSoc/cssPACMAN>