# 48 hour competitions:
# learn from my mistakes

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# Coming up with ideas

- Simple is good
- You don't have to be innovative
- Re-use mechanics from other games
- #1 source of game ideas:
    - Making other games
- Imagine playing the game in your head
    - Is it fun?
    - If not, why would you want to make it?!

# A note on fun

- Unless otherwise stated, your goal is:

   FUN

- Other goals are allowed:
  - Emotive
  - Educational
  - But it should probably still be fun

# A note on 3D

- If you must make a 3D game, use Unity
- **BUT**
    - The art assets are more complicated
    - The game logic is more complicated
    - The gameplay just needs to be better
    - More can go wrong

# Be flexible

- Your idea will change

- You will have to remove components

- If something is harder than expected:

    - Is it important?

    - Can you fake it?

    - Can you cut it?

- You can always start from scratch

# Audio

- Sound effects: 10x improvement
    - SFXR
- Music: 10x improvement
    - LMMS or Musagi
    - Online free sources
- <u>Good</u> sound effects and music:
    - 10x improvement again
- Total: 1000x better game

# Recommended tools

- Programmers:

    – FlashPunk/Flixel

    – pygame

    – XNA

- Non-programmers:

    – Game Maker

    – Construct

    – RenPy

- 3D: Unity

# Why you shouldn't use C++

- Setting up your dev environment is a pain
- Your personal codebase is not good enough
- Ratio of code to improvements is too high
- You could learn FlashPunk or Unity
    - In 48 hours
    - And make a better game than with C++

# Effective uses of time

- You need to:
    - Sleep
    - Eat
    - Drink
    - Take breaks

# Don't forget!

- Remember to leave time for:

  - Level design

  - Sound/Music

  - Particles

  - Testing

  - Packaging

  - FUN!

# Final advice

- You're making a game, not a tech demo
- You're making a game, not a sandbox
- Make it fun straight away
- Fake anything you can get away with
- Use SVN or Git
- Imagine playing the game in your head
  - Is it fun?

# Flash development

- How to make Flash games using free tools
  - Free Flex SDK
  - FlashDevelop (Windows)
  - Flash Builder (free trial, cross-platform)
  - mxmlc (command-line compiler)
- Flash libraries:
  - FlashPunk
  - Flixel
  - PushButton

# ActionScript 3

- Java-like syntax
- "`var name:Type`" not "`Type name`"
- Optional static-typing
- Getter/setter methods
- Closures/first order functions
- Embed graphics/audio into SWF in code

# FlashPunk

- Download: http://www.flashpunk.net/
- Worlds have entities
- Entities have a graphic and a mask
- Entities can test collisions against types
- Lots of utility functions
- Easy to override

# FlashPunk: Main

```
package {
    import net.flashpunk.*;

    [SWF(width = "640", height = "480")]
    public class Main extends Engine {
        public function Main () {
            super(640, 480, 60, true);
            FP.world = new Level();
        }
    }
}
```

```
package {
    import net.flashpunk.*;

    public class Level extends World {
        public function Level () {
            add(new Player());
            add(new Enemy());
        }
    }
}
```

# FlashPunk: Entity

```
package {
    import net.flashpunk.*;
    import net.flashpunk.graphics.*;

    public class Player extends Entity {
        [Embed(source="player.png")]
        public static const GFX: Class;

        public function Player () {
            graphic = new Image(GFX);
            setHitbox(20, 20);
            type = "player";
        }

        public override function update (): void {
            // update x, y
        }
    }
}
```

This will never work...