ImpactJS Presentation

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Why ImpactJS?

- ► Collision handling
- ► Camera pluginss
- ► Map Editor
- ► Player Physics
- ► Strong OOP Design

JavaScript Types

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- array : var arr = [1, 2, 3, 4]
- object : person = { name: David, Age: 23 }

JavaScript Types

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- number : var x $= 45$
- boolean : var flip $=$ true
- function
- array : var arr $= [1, 2, 3, 4]$
- object : person $= \{$ name: David, Age: 23 $\}$
- undefined : typeof person $===$ undefined

JavaScript Types

- strings : "Hello World"
- number : var x = 45
- boolean : var flip = true
- function
- array : var arr = [1, 2, 3, 4]
- object : person = { name: David, Age: 23 }
- undefined : typeof person === undefined
- null : var x = null

JavaScript Objects

```
var person = {
  name: David,
  age: 23,
  major: Computer Science
};

person.name; // David
person.age; // 23
person.major; // Computer Science
```

Init Function

```
init: function (){
  // Init function is only run once
  ig.input.bind( ig.KEY.LEFT_ARROW , 'left');
  ig.input.bind( ig.KEY.RIGHT_ARROW , 'right');
  ig.input.bind( ig.KEY.X, 'jump');
}
```

Update Function

```
update: function(){
  // update is run once per frame
  if( typeof player === undefined ){
    var player = this.getEntitiesByType(EntityPlayer)[0];
    this.screen.x = player.pos.x - ig.system.width/2;
    this.screen.y = player.pos.y - ig.system.height/2;
  }
}
```

Draw Function

```
draw: function(){
  this.parent();
  if(this.font){
    var player = this.getEntitiesByType(EntityPlayer)[0];
    this.font.draw('Health: ' + player.health, 50, 10, ig.
        Font.ALIGN.CENTER);
  }
}
```

main.js

- Require all modules

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- ► Define game classes

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- ▶ Camera code, game logic within Update()
- ▶ Draw images within Draw()

Loading modules

```
ig.module(
    'game.main'
)
.requires(
    'impact.game',
    'impact.debug.debug',
    'game.levels.test',
    'game.entities.player',
    'game.entities.goomba'
)
```

Define your game class

```
.defines(function(){
    MyGame = ig.Game.extend({

    });

    ig.main( '#canvas', MyGame, 60, 320, 240, 2 );
    });
});
```

Define properties

```
.defines(function(){
    MyGame = ig.Game.extend({
        font: new ig.Font('media/04b03.font.png'),
        gravity: 300,
    });

    [ ... ]
});
```

Init function

```
MyGame = ig.Game.extend({
    init: function(){
        ig.input.bind( ig.KEY.LEFT_ARROW, 'left');
        ig.input.bind( ig.KEY.RIGHT_ARROW, 'right');
        ig.input.bind( ig.KEY.X, 'jump');
        this.loadLevel( LevelTest );
    }
});
```

Update function

```
MyGame = ig.Game.extend({
    init: [ ... ],

    update: function(){
        var player = this.getEntitiesByType(
            EntityPlayer )[0];
        if( player ) {
        this.screen.x = player.pos.x - ig.system.width
            /2;
        this.screen.y = player.pos.y - ig.system.height
            /2;
        }
        this.parent();
    },
});
```

Draw function

```
MyGame = ig.Game.extend({
    update: [ ... ],
    draw: function(){
        this.parent();
        if(this.font){
            var player = ig.game.getEntitiesByType('
                EntityPlayer')[0];
            this.font.draw('Health: ' + player.health,
                50, 10, ig.Font.ALIGN.CENTER);
        }
    },
});
```