

VGS GAMEDEV WORKSHOPS

WEEK 2:

Intro to Game Programming

Meaningful Play

these slides and additional notes are available at drewwallacegames.com/vgsworkshops.html

Follow-up from last week's exercise:

Discussion of games people designed paying attention to the Rules / Play / Culture framework

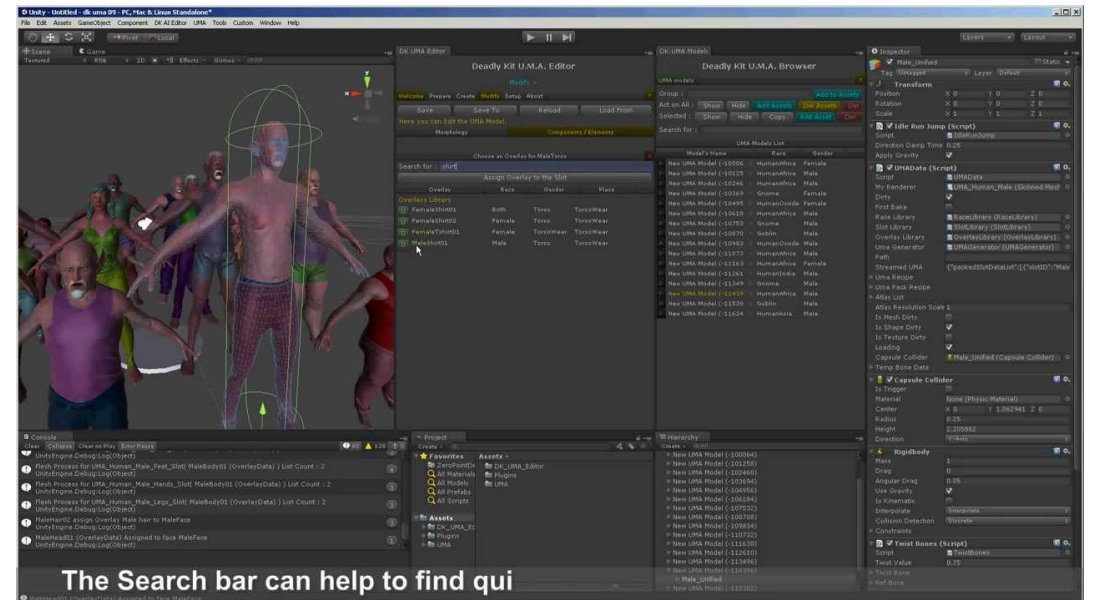
p5.js: JavaScript library for creative work

Download: p5js.org/download
(get the complete library and the editor)

Reference: p5js.org/reference

Sidenote: Why not Unity / GameMaker / UE4 / etc?

Fancy engines have tons of features and structures that are totally unnecessary when you're getting started and that take extra time to get started.



JavaScript isn't Java (though basic syntax is the same)

JavaScript

```
var x = 10;
```

```
function funcName(a, b) { }
```

```
var arrName = [1, 2, 3];  
array.push(4);
```

```
var mapName = {};  
mapName.key = 100;  
console.log(mapName.key);
```

Java

```
int x = 10;
```

```
void funcName(float a, int b) { }
```

```
ArrayList<Integer> arrName = new ArrayList<Integer>(Arrays.asList(1,2,3));  
arrName.add(4);
```

```
HashMap<String, Integer> mapName = new HashMap<String, Integer>();  
mapName.put("key", 100);  
System.out.println(mapName.get("key"));
```

Structure of a p5.js Program

```
// global variables
var y = 100;

// setup() gets auto-called once when the program starts
function setup() {
  createCanvas(640, 360); // set window size (must do this first)
  frameRate(60); // run at 60 fps
}

// draw() gets auto-called repeatedly until the program is exited
function draw() {
  background(0, 0, 0); // clear the screen to color to 0 red, 0 green, 0 blue (black)
  ellipse(252, 144, 72, 72); // draw ellipse centered at (252, 144) with horizontal and vertical radii (72, 72)
}
```

Drawing Shapes

In the p5 editor: File->Examples->Form->Shape Primitives

Mouse Interaction

File->Examples->Interaction->Tickle

```
// Check if mouse button is down:  
if (mouseIsPressed) console.log("mouse is pressed now!");  
  
// Function autocalled whenever mouse is clicked:  
function mousePressed() {  
    if (mouseButton == LEFT)  
        console.log("LEFT MOUSE CLICK");  
}
```


Keyboard Interaction

```
// Check if key is down:  
if (keysDown("A".charCodeAt(0)))  
    console.log("A is currently down!");  
  
// Function autocalled every time a key is pressed:  
function keyPressed() {  
    if (key == "A") console.log("A was just pressed!");  
}
```

Workshop Part 2: Design Stuff

Meaningful Play (Salen and Zimmerman, *Rules of Play*)

~~“A game is a series of interesting decisions”~~

“A game involves (and is often based on) meaningful actions and reactions”

...but what makes these (re)actions meaningful?

Meaningful Play (Salen and Zimmerman, *Rules of Play*)

Descriptive definition: "Meaningful play in a game emerges from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action. The meaning of an action in a game resides in the relationship between action and outcome."

Evaluative definition: "Meaningful play is what occurs when the relationships between actions and outcomes in a game are both discernable and integrated into the larger context of the game."

Exercise (Zimmerman)

Redesign Tic-Tac-Toe. Change just as much as you need to.

Misc Stuff

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Not on the vgs_list listserv? Let me know and I'll add you

See you next week!