Work In Progress Report 3

Dino Dynamite LTD.

**Major Breakthroughs:**

Daniel: The major breakthroughs I had were my **DD\_HitDetectionPlatformLanding** and **DD\_HitDetectionPassThrough** scratches. The platform landing scratch detects if the dinosaur is coming from above the platform before it detected a collision using a vector variable which stores the dinosaurs previous position

**if (sprDino.vPrevPos.y >= (sprPlatform.vPrevPos.y + sprPlatform.getSprite().getHeight())) {  
return 2;  
}**.

I’ve also changed the **HitPlatform()** to where it now returns an integer to make it easier to represent different types of collisions. In my **DD\_HitDetectionPassThrough** scratch I’ve added three more types of collisions, where I detect whether the dinosaur comes from the bottom(it is allowed to “pass through”), from the side(it dies), and in the process of passing through(stays alive). This scratch also implements platform carrying where the dinosaur is carried by the platform.

David: My major breakthroughs were few and far apart, one was the Animation araniDino[]; where it made the animation array with the Dino sprite sheet which is actually garbage for graphics. Getting the animation integrated into the render with this batch.draw(trTemp, sprDino.getX(), sprDino.getY(), 150, 200); using trpacker was much more efficient then me going through the array and created more seamless animation.

**Major Challenges:**

Daniel: By far I’ve been most challenged by the implementation of “platform carrying”. I had a hard time making the dinosaur ride along with the platform without any bugs. At first I tried adding the the dinosaurs direction vector with the platform direction variable, but then the dinosaur would fly off the screen. I also tried setting the dinosaur’s direction to the direction vector of the platform but then movement of the sprite was lost. I eventually had to add two booleans **bMove** and **bPlatformCarry** which worked together to set the dinosaurs direction to the platforms only when the dinosaur was not moving. I also made use of the **bJump** boolean to make sure the dinosaur would not be carried by the platform when passing through the top of the platform.

David: The orientation of characters between Daniel and I’s scratch were off again. vGrav.set(0, (float) (vGrav.y \* 1.1)); Where the orientation of the x and y are mine then once gravity and resetting location works once it transfers to Daniel’s and flys off the screen. Also I am have trouble with the void animate void Animate(Texture \_txDinoState) { and extends Sprite in my SprDino class as when I pass the array size and array it only works for the one movement. Also since it I couldn’t pass the trregion to the sprite class the scrolling background and progress only work if you have an invisible sprDino in drawn in the back, which causes hit detection to be off.

**Modified Plans:**

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| --- | --- |
| **Release Name** | **New incremental features of this release** |
| **1.0 Movement** | **Sprite on screen with keyboard controlled sprite movement.** |
| **1.1 Gravity** | **User controlled sprite affected by gravity.** |
| **1.2 Platforms** | **Platforms will generate and spawn on right of screen. They will move from the right to left of screen.** |
| **1.3 Hit Detection** | **Have hit detection between a platform and the sprite.** |
| **1.4 Background** | **Have a scrolling background that moves from right to left.** |
| **1.5 Enemies** | **Have enemies randomly spawn within bounds and move from right to left.** |
| **1.6 Shooting** | **Have the ability to use the laser vision to shoot the enemies based on mouse input.** |
| **1.7 Killing** | **Hit detection between bullet and the enemies** |
| **1.8 Score** | **Have a progress bar for distance travelled and a score bar for enemies killed.** |
| **1.9 Difficulty** | **Have platforms and enemies progressively get more difficult to avoid and kill as you progress further and high scores stored in JSON file.** |
| **2.0 Animation** | **Animation of sprite and animation of enemies.** |
| **2.1 Menu** | **Have a menu page with working buttons that redirect you to new pages.** |
| **2.2 Final Touches** | **Integrate menu and make manual.** |
| **2.3 Echo** | **Final Release** |

**Sources:**

Daniel:

<https://github.com/Mrgfhci/Drop>

<https://docs.oracle.com/cd/E17802_01/j2se/javase/technologies/desktop/java3d/forDevelopers/j3dapi/javax/vecmath/Vector2d.html>

<http://2oip.sgrondin.ca/ss09/Shoot.html>

David:

- Orthographic camera with sprite left and right movement

<http://stackoverflow.com/questions/18553209/orthographic-camera-and-selecting-objects-with-raycast>

-Sprite Animation

<https://github.com/WeeGunny/Animation>

-Font Test

<https://github.com/WeeGunny/FontTest>

-Scrolling background with velocity

<https://github.com/LittleDrEvil/Sonic-DoggoGame>

**Peer Assessment:**

David: 100

Daniel: 100