Penguino

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CSS 452 A 2D Game Engine Development

Technical requirements  
  
**Supports 3 Scenes: Flesh/Win/Lost**

7 scenes:  
Intro screen ( flash/ splash)

regular game play (5 levels)

death screen,

level complete,

game over,

game win,

high score input  
  
  
  
**Appropriate game complexity  
  
  
At least three object types**

* Many wall objects in different levels.
* Seal enemy
* Pelican enemy
* Sardine point booster
* Walls
* Triumph platform
* Hero

**At least 10 instances**

* -check
* 100+ objects per level

**Use of per-pixel accurate collision**

* Pelican uses pixel accurate collision with hero (Penguin)
* Fish coin uses bounding box collision (pixel collision to expensive)

**At least 2 camera views**

* Main game view
* Small zoomed out view Lower-left corner

**Meaningful use of the cameras**

* Main screen for playing
* Minimap for getting better awareness of upcoming map
* Stats screen to keep track of time, lives, score, etc.

4.

**Object Behavior (Two of the following three)**  
  
**Interpolate, ShakePosition, Pseudo autonomous**  
  
Pseudo Autonomous: pelican patrol circles, enemy seal pacing

Pelican also uses interpolation

Camera Shake

Camera Interpolate                 
  
**Physics**  
  
**At least one of the game object types interact with environment via physics engine**

Hero, Walls, and enemy Seal interact with other objects via physics engine.

Walls have 0 mass and do not check collision with each other.

Penguin can have mass or not, enemy seal always has regular physics interaction.  
  
   
  
              
  
**Game World**  
   
  
**>=3 lights, with all three types (point, spot, directional)  
>=2 lights with animated parameters  
>=2 objects are illuminated by the lights  
>=1 object with normal map**  
  
Directional light added to all levels (negative in cave levels, slightly whiter in level 4)

Point light added (red) at beginning of caves levels

Spotlight in cave levels.

All objects illuminated by lights

Background texture uses normal map

**7.       Four person team:  
  
a.       Must support either Shadow or Particle System**

Walls have particle emitters that start when hit by hero.

**Meaningful Game**  
  
  
**Intuitive gameplay  
Proper echo of game status (points, life, etc)**  
**Interesting to play with**  
  
Points

Life

Time

Level