Team OrangeSQ
CSS 452

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Requirements Checklist

Supports 3 Scenes:

Splash/Win/Lost

- There is a splash screen scene
- There is an instructions scene
- There's a main game scene where the game is played
- There is a high score scene which handles win/loss (just highscore update/no update)

Appropriate game complexity

At least three object types

- Fire (base class)
    - Bomb
    - Angry Fire
    - Meteor
- Snowman
- Ice Block
- Owl
- Water

At least 10 instances

- 15 ice blocks
- 20 fire, bomb, angry fires, and meteors (ratios and spawn rate depend on difficulty)
- 1 snowman
- 1 owl
- up to 10 water "pieces"

Use of per-pixel accurate collision

- Fire and its subclasses collide with the snowman, the water, and the owl on a per-pixel level. The only object that doesn't collide in this manner is the Fire class/subclasses and the ice blocks.

At least 2 camera views

Meaningful use of the cameras

There is one main camera view, and four "danger" cameras that show a fire or subclass object when it's very close to the ice (to indicate that you're in danger). The main camera shakes when a fire object hits an ice block.

Object Behavior (Two of the following three)

Interpolate

The owl interpolates towards the snowman if the snowman is close enough

ShakePosition

The owl shakes if it gets hit by fire.

Pseudo autonomous (chase)

The "angry fire" (like normal fire but with a face and purple spotlight) rotates to point towards the snowman, and follows the snowman in the horizontal plane as it falls.

Physics

At least one of the game object types interact with environment via physics engine

All game objects have physics enabled. This enables the snowman to fall through and jump on top of blocks. Snowman's movement is based on applying velocity.

Game World

At least 3 lights, with all three types (point, spot, directional)

1. Point lights on all types of fire except for angry fire:
2. Angry fire has a purple spotlight
3. There's a directional light to simulate moonlight on the background
4. There's a spotlight inside the igloo

At least 2 lights with animated parameters

1. The igloo light pulses warmly
2. The bomb light quickly changes color to indicate impending doom
3. The angry fire spotlight rotates to point towards the snowman

At least 2 objects are illuminated by the lights

1. The background is illuminated by the directional light, as well as all the fire class/subclasses lights.
2. The igloo is illuminated by all the lights in the game.

At least 1 object with normal map

1. There is a normal map on the igloo
2. There is a normal map on the bg

All the lights in the game influence these normal maps.

Meaningful Game

Intuitive gameplay

All keys that can be pressed for difficulty, instructions, etc. are written on screen. The movement keys can be either WASD or the arrow keys, as with any platformer. The only potentially unintuitive gameplay element is the spacebar for shooting water. However, any player faced with impending doom from falling fire will try to find some way to defend themselves. The objective is simple enough, and the player quickly picks up on the goal - stop the fire from hitting the ice blocks or melting you.

Proper echo of game status (points, life, etc)

- Score is echoed at the top left of the main game screen
- The snowman's health is echoed at the top right of the main game screen
- When you melt or fall off the ice blocks, the current high score or your high score (if it was better than the old score) is presented

Interesting to play with

We've had mostly positive feedback about the game, and people really enjoy playing it. We ourselves have found that we enjoy the game in its current state quite a lot, even though we have to play it a fair amount to test it. It has long-lasting value and the multiple difficulty levels give it a good amount of replayability. The arcade elements and the highscore makes you want to keep playing.