

Labyrinth
Assignment 11
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Overview

This project is a simplified version of the game Labyrinth. In our game the ball is dropped in the middle of the board and the user has to maneuver the ball to the end of the maze. The user can either use the mouse to move the board by clicking and dragging, or the user can use the arrow keys to move the board. In this assignment we have a rendered board and a ball. We do not have knobs because it does not fit with the way the user moves the board. There is a texture on both the board and the ball. On the board there is a fairly complicated maze with holes and a marked winning position. Basic board physics are applied to the ball which allow it to roll and bounce around the maze. The board and the ball are illuminated by lights. The camera is also moveable in a 360 degree view around the board with a default position that the user can opt for. On the screen there is different types of information being displayed. The user can see the faults, time, and scores on the screen. Finally there is a menu that can be accessed using the middle mouse button on the users mouse which will bring up different menu options.

Extra Credit

For extra credit we implemented a top ten scoreboard on the right side of the screen.

User Manual

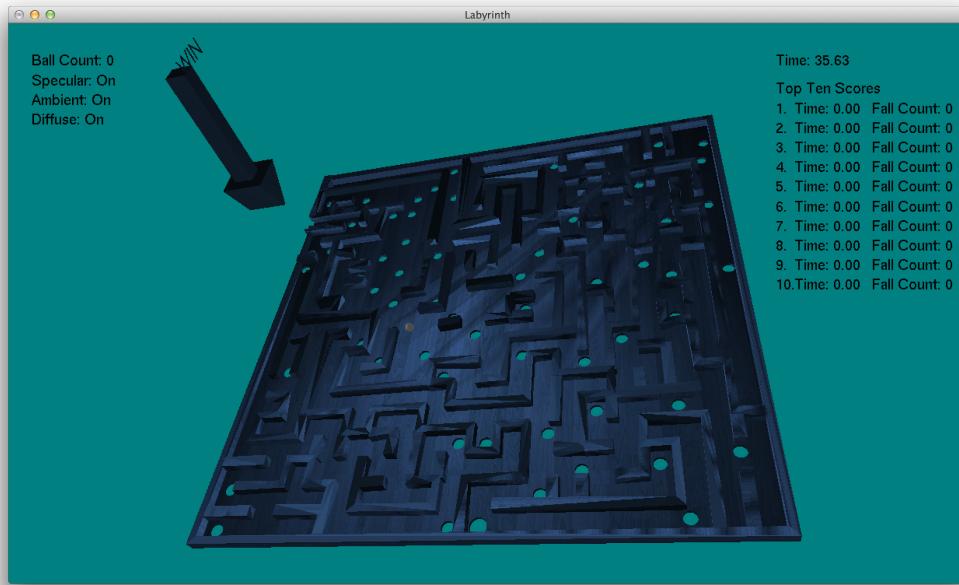
Controls

- Arrow keys will move the board in the corresponding direction. These controls are only accurate when the user is in the default camera mode.
- Spacebar puts the user into default camera mode.
- ‘T’ key will simulate a win event.
- Right click and drag will move the camera around the board.
- Left click and drag will move the board. These controls are accurate no matter which side the camera is on.
- Middle mouse button will bring up the menu.

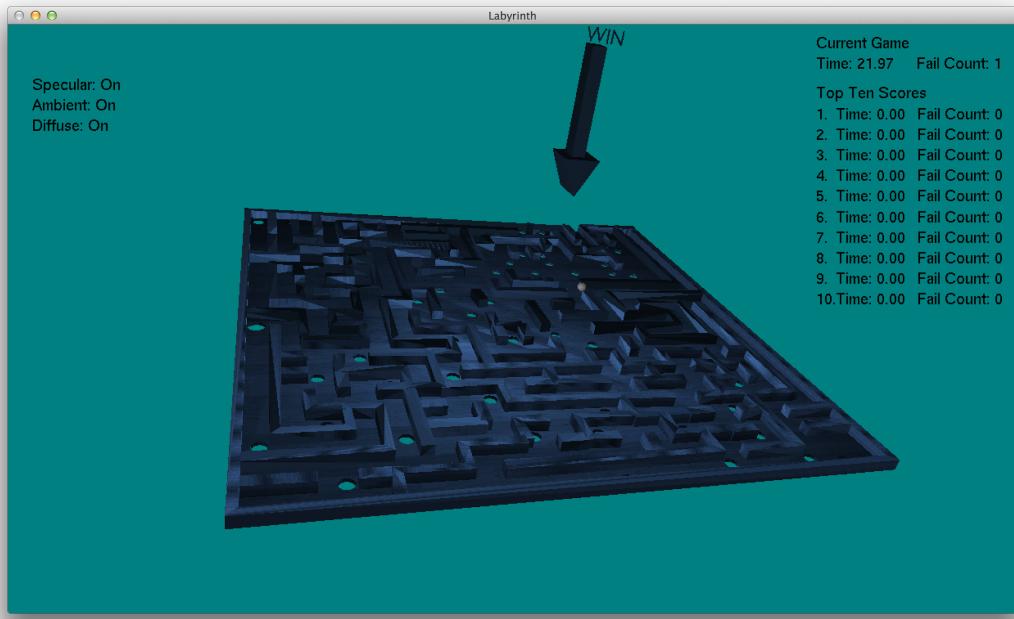
When the user first starts up the game, they will be presented with this view of the board and ball.



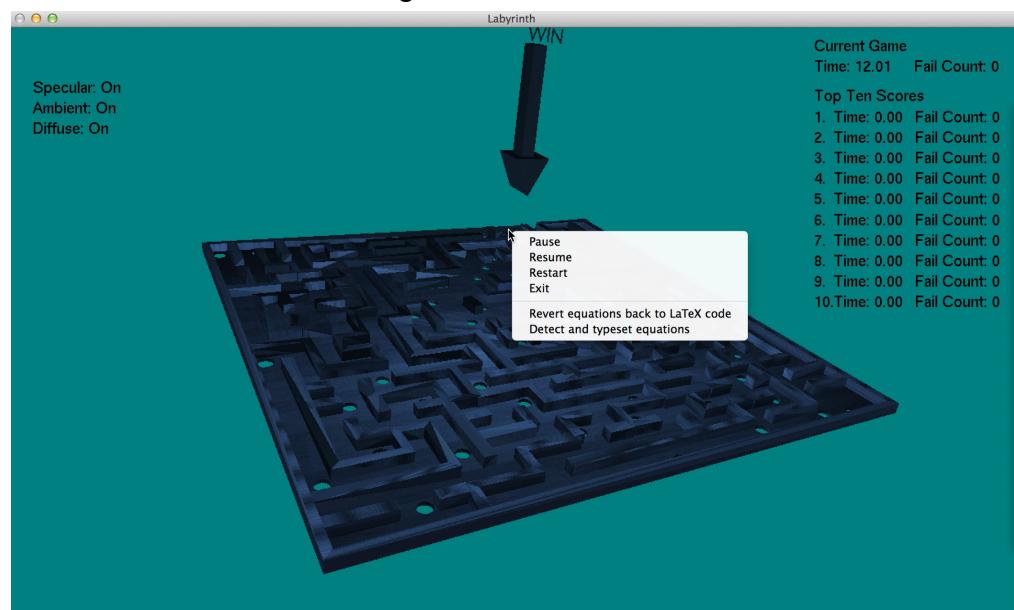
In this screen shot the user has moved the board and the ball is moving.



In this screenshot the user has a fault which is displayed in the upper right corner of the screen.



In this screen shot the user is looking at the menu.



Tech Manual

Issues

- Move too fast and the ball can phase through the board or fly out.
- Game is a little too difficult.
- Since we are not applying a force to the board, instead we are moving it in small increments, the ball acts unrealistically near the edges where the board moves the fastest.

What we would do differently

Given more time we would add multiple different stages to the game. We would also like to add shadows and multiple balls. With more time we would figure out a way to move dynamic concave objects using forces so the physics would work better