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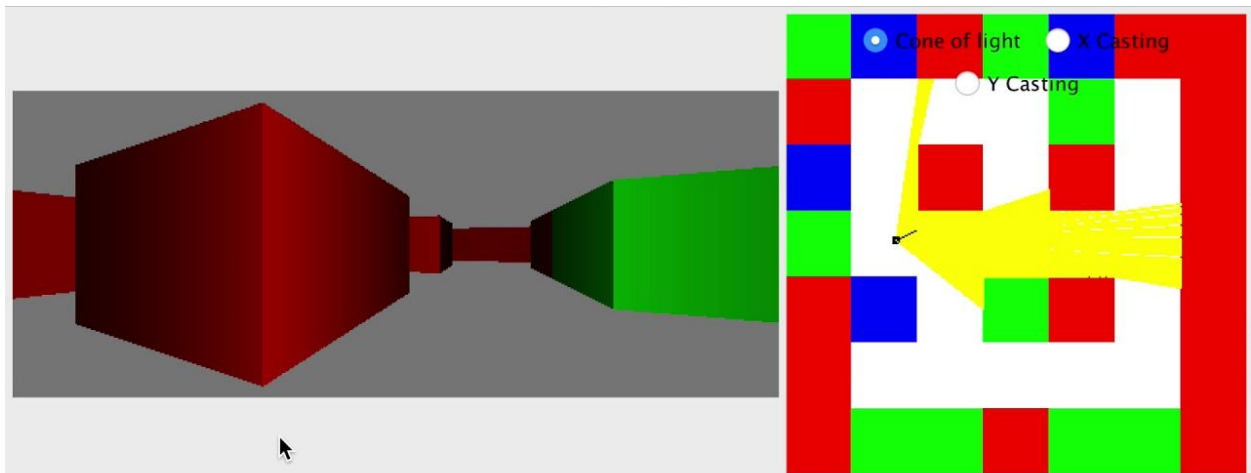
Ray Casting Maze Game Proposal

Overview:

For this project we plan on building a maze simulator that using a joystick to move a player through a randomly generated maze. We want to use a pseudo-3D technique called raycasting which can turn a 2D map into a 3D object that you can explore. It's an older technique that was used in the first 3D games and doesn't require too much memory or any costly computation. Raycasting essentially creates 3D objects using a bunch of straight lines, where the length and brightness of the line corresponds to the distance of the object from the viewing point. Most of the computation involves computing dot products between 2D vectors.

Peripherals:

- LCD screen (126x160 using SPI)
- Joystick (On board)
- Buttons (On board)
- LPC 4088 development kit



Goals

1. Implement the maze graphics on a computer first
2. Test player movement
3. Configure LCD screen and joystick peripheral
4. Port the maze game to the LPC 4088 and have the peripherals work properly