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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Project Entitled

"MINESWEEPER GAME"

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MINESWEEPER GAME

Abstract

This project demonstrates a simple game of Mine-Sweeper. Minesweeper is a single-player puzzle video game. The objective of the game is to clear a square board containing hidden "mines" without detonating any of them, with help from clues about the number of neighboring mines in each field.

The game is played by revealing squares of the grid by clicking each square. If a square containing a mine is revealed, the player loses the game. If no mine is revealed, a digit is instead displayed in the square, indicating how many adjacent squares contain mines; if no mines are adjacent, the square becomes blank. The player uses this information to deduce the contents of other squares, and may either safely reveal each square or mark the square as containing a mine by placing a flag.

The game will be played as follows:

Left Mouse button to select a box/field and reveal its contents.

Right Mouse button to place a flag on the square or remove an existing flag.

On left clicking a field that has a mine, the game is “GAME OVER”

Proposed System

In proposed system, the OpenGL is a graphic software system designed as a streamlined, hardware-independent interface to be implemented on many different hardware platforms. To achieve these qualities, no commands for performing windowing tasks or obtaining user input are included in OpenGL; instead, you must work through whatever windowing system controls the particular hardware you're using.

OpenGL doesn't provide high-level commands for describing models of three-dimensional objects. Such commands might allow you to specify relatively complicated shapes such as automobiles, parts of the body, airplanes, or molecules. With OpenGL, you must build up your desired model from a small set of *geometric primitives* - points, lines, and polygons.

System Requirements

Hardware Requirements

1. Intel Pentium CPU 2.66 GHZ
2. Minimum of 1 GB RAM
3. 2 Button Mouse
4. Standard 108 Keyboard
5. Recommended monitor resolution 800x600

Software Requirements

1. OpenGL Tools (FreeGLUT for Linux systems)
2. OpenGL Extension Wrangler Library (GLEW)
3. Mesa OpenGL Tools
4. Linux 32-Bit Operating System
5. G++ compiler for the Linux Platform
6. Emacs with CMake enabled IDE for Linux

Conclusion

An attempt will be made to develop an OpenGL graphics package, which meets necessary requirements of the users successfully. It enables us to learn about the basic concept in OpenGL graphics and know standard library graphics functons.

We will learn the functions used to generate various shapes at lower level or to simulate/animate any real thing at high level. This project will give us an insight into the use of Computer graphics. As we would have to use many built-in and user defined functions, we will manage to get a certain degree of familiarity with these functions and attain an understanding of the power of these functions. We will be able to comprehend the true nature of the most powerful tool in graphics ie. OpenGL and will understand the reason why graphics is so powerful for programmers.

Expected Output would be a full blown mine-sweeper game like the first one made in the 1980s