**Chapter 3**

**ABOUT THE PROJECT**

**3.1 Introduction to the project**

This mini project on **<TITLE>** displays a scientific calculator with all the mathematic functions. Geometrically it is a rectangular calculator with small rectangular boxes represents the key pad keys and Upper left and right two rectangular boxes indicate the display screens. It compute normal mathematical calculations and also graphical functions which generate graphs. Mainly it has calculator key pad which is indicating all the numeric and function keys, and two display screens.

The calculator keys takes input from keyboard stroke and mouse clicks. The left side display shows all the inputs and result in normal mathematical form. The right side display gives the graphical display of mathematical functions.

**3.2 User Defined Functions**

There are eight user defined functions in the source code of <TITLE>

1. **void set\_properties()**

Used to set properties of the surface material, light source properties and the camera position.

1. **Void mouse(int button, int state, int x, int y)**

Displays and updates the needles of the clock as per the current time read by the program.

1. **void Draw\_gear( void )**

Updates the position of the clock gear as per the current matrix stack.

1. **void Draw\_clock( GLfloat cx, GLfloat cy, GLfloat cz )**

Used to draw the analog wall clock on the screen.

1. **void num()**

Displays the numbers on the clock according to orthogonal view.

1. **void about()**

Displays a small description about the project when the user clicks the respective mouse button.

1. **void display\_clock()**

Displays the wall clock on the output window.

1. **void options(int id)**

Used to display a menu along with options regarding the light state, view of the clock, description and perform the corresponding action.