**5.3:APPENDIX**

**5.3.1 glColor3f ( )**

1. Purpose: Using glColor3f function it is possible to color vertices of 3dimensional with OpenGL parameters we will use the function glColor3f which takes the R, G and B...

2. Prototype: glColor3f (r, g, b);

3. Description: We can use a different color for each vertex.

**5.3.2 glBegin ( )**

1. Purpose: the glBegin () function which takes as one parameter the “mode” or type of object you want to draw. ...

2. Prototype: glBegin ();

3. Description: All the vertices defined between these two functions will be drawn using the rules given in the glBegin function.

**5.3.3 glEnd ( )**

1. Purpose: The glBegin and glend functions delimit the vertices of a primitive or a group ... You can use only a subset of OpenGL functions between glBegin and glEnd. ...

2. Prototype: glEnd ( );

3. Description: glVertex is not constrained to be the only function you can use inside glBegin and glEnd. Here is the full listing of all functions you can use inside...

**5.3.4 glLoadIdentity ( )**

1. Purpose: glLoadIdentity (); This is used in conjunction with 2 other functions called glMatrixMode (GL\_PROJECTION) and glMatrixMode (GL\_MODELVIEW). ...

2. Prototype: glLoadIdentity ( );

3. Description: glLoadIdentity () happens to be used to clear the rotation of the 'model'. ... Let's call this function again anyway, just before we call glRotatef ()...

**5.3.5 glTranslatef ( )**

1. Purpose :Multiplies the current matrix by a translation matrix.

2. Prototype : glTranslatef ((frand () - 0.5) \* seedsize, (frand () - 0.5) \* seedsize, 0.0);

3. Description :This function multiplies the current matrix by a translation matrix.

**5.3.6 glVertex2f ( )**

1. Purpose: Specifies the 2D coordinates of a vertex.

2. Prototype: void glVertex2f (frand () - 0.5) \* seedsize, (frand () - 0.5) \* seedsize);

3. Description: This function is used to specify the vertex coordinates of points, lines and polygons.

**5.4: glutFunctions()**

**5.4.1 glutCreateWindow ( )**

1. Purpose :Creates an OpenGL enabled window

2. Prototype void glutCreateWindow(char \*name);

3. Description :This function creates a top level window in GLUT. This is considered the current window.

**5.4.2 glutDisplayFunc ( )**

1. Purpose :Sets the display callback function for the current window.

2. Prototype void glutDisplayFunc(void (\*func) (void));

3. Description :This function tells GLUT which function to call whenever the windows contents must be drawn.

**5.4.3 glutInit( )**

1. Purpose :Is used to initialize the GLUT library.

2. Prototype void glutInit(int \*argcp, char \*\*argv

3. Description : Will initialize the GLUT library and negotiate a session with the window system.

**5.4.4 glutInitDisplayMode( )**

1. Purpose :Initializes the display mode of the GLUT library OpenGL window.

2. Prototype void glutInitDisplayMode(unsigned int mode);

3. Description :This is the \_rst function that must be called by a GLUT based program to set up the OpenGL window.This function sets the characteristics of the window that OpenGL will use for drawing operations.

**5.4.5 glutIdleFunc ( )**

1. Purpose :Sets the global idle callback..

2. Prototype void glutIdleFunc(void (\*func)(void));

3. Description :Sets the global idle callback to be func so a GLUT program can perform background processing tasks or continuous animation when window system events are not being received.

**5.4.6 glutInitWindowSize ( )**

1. Purpose :Set the initialwindow size.

2. Prototype void glutInitWindowSize(int width, int height)

3. Description : Windows created by glutCreateWindow will be requested to be created with the current initial window size..

**5.4.7 glutMouseFunc (mouse)**

1. Purpose: Sets the mouse call-back function for the current window.

2. Prototype: void glutMouseFunc (mouse);

3. Description: This function establishes a call back function called by GLUT whenever one of the ASCII generating keys is pressed..

**5.4.8 glutMainLoop ( )**

1. Purpose :Starts the main GLUT processing loop

2. Prototype void glutMainLoop(void);

3. Description : This function begins the main GLUT event handling loop. The event loop is where all keyboard, mouse, timer, redraw, and other window messages are handled..