```
/*App-F6-Demo-Invert44.c
  Part of: 3D-Environment, Version 0.6 by  Jeffrey M. Setterholm
  2016.06.24 JMS-                                          Version 0.5
  2013.01.17 JMS- Traveler2/Athlon64/WinXPPro/APF9.0:C/OpenGL+CGlut

 Herein: void AppF6(void)
*/
#include <3DEnv.h>   //<- Environment's variables & functions become available.

void AppF6(void) //-----------------------------------2015.09.18.1340cdt JMS
                 //You've entered this application reached by pressing 'F6'
{                //    "F_: Title__________________ yyyy.mm.dd\0";      <-e.g.
        char AppName[]="F6: Invert44-Demo           2016.06.24\0";
  //                     E  ,  N   ,     F  ,  L  ,  R  , T  , B  ,  D
    double FrustCoes[8]={ 1.2, -4.0  ,     6.0,-10.4, 10.4,-6.5, 6.5, 24.0 };
  int i;
  char Label[80];
  double Xyzh[4],Rpyh[4];
  double TestMatrix[4][4]= { { 1.0e0, -.1e0,  .1e0, -.1e0},
                             {  .2e0, 2.0e0,  .2e0, 5.0e0},
                           //{  .2e0, 2.0e0,  .2e0, 5.0e0}, // lin dep.
                             {  .3e0, -.3e0, 3.0e0, -.3e0}, // lin indep.
                             {  .4e0, -.4e0,  .4e0, 4.0e0} };
  double TestMatrixInverse[4][4];

 switch(S.ThreePhase) // <- driven by the 3D viewer ------
  {       /*---------------------------------*/
   case(1):Phase One- Transfers, initializations, & non-screen computations:
    if(S.AppInit[S.AppNumber]<1)
     { S.iTeapot              = 1;
       S.AppInit[S.AppNumber] = 1;
       S.Scale                 = 1.e0; //S.Scale alters depth bounds
       S.FovYZzoom            = 1.e0; //S.FovYZzoom doesn't alter depth bounds
       S.VuMode               = 1;
     }//S.AppInit

    sprintf(S.AppName,"%s\0",AppName);
                                                    //VuMode
    for(i=0;i<8;i++) { S.FrustCoes[i]=FrustCoes[i]; } //Frustum coefficients

          /*---------------------------------*/                          break;
   case(2):Phase Two- 2D orthographic screen graphics:
    //Author & IP information:
    h4Fill(Xyzh, -.25e0*(S.xyWindowRatio),  .95e0, 0.e0, 1.e0);
    h4Fill(Rpyh,90.00e0                  , 0.00e0, 0.e0, 1.e0);
    sprintf(Label,"\xe0\x08 2016 Jeffrey M. Setterholm\0");
    Xyzh[1]=.95e0; VecText7D(Xyzh,Rpyh, .03e0, 1.,  1  ,Label);
    sprintf(Label," 8095 230th St. E., Lakeville, MN 55044\0");
    Xyzh[1]=.92e0; VecText7D(Xyzh,Rpyh, .02e0, 1., 11  ,Label);
    sprintf(Label,"       jeff.setterholm@gmail.com  \0");
    Xyzh[1]=.89e0; VecText7D(Xyzh,Rpyh, .02e0, 1.,  6  ,Label);
    sprintf(Label,"This 'App-F6' is freely distributable.\0");
    Xyzh[1]=.86e0; VecText7D(Xyzh,Rpyh, .02e0, 1.,  8  ,Label);

    if(S.NowView==0)
     {sprintf(Label,
                   "Function 'Invert44' has a viewer & a printer built in.\0");
      PrntOrtho(4,2, 1,0,Label);

      sprintf(Label,"Press 'v' or 'V'.\0");
      h4Fill( Xyzh ,-1.e0, 0.e0, 0.e0, 1.e0);
      h4Fill( Rpyh , 0.e0, 0.e0, 0.e0, 1.e0);
      Alpha6D(    Xyzh,Rpyh,0,.12e0,4.,11,Label);
     }/*(S.NowView==0)*/

    if(S.NowView>0)
     {sprintf(Label,"Press 'p' to print to %-35s\0",S.YourAppOutput);
      PrntOrtho(4,2, 1,0,Label);
     }/*(S.NowView>0)*/
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```
     Invert44(TestMatrix,TestMatrixInverse,1,1);
                                    //     ^ >0 enables 'v' & 'V' viewing, &
                                    //    ^   >0 enables 'p' & 'P' printing;
                                    //          i.e.: Invert44 self-reports.
            /*-----------------------------------*/                          break;
    case(3)://Phase Three- 2D/3D Ee-key-controlled screen graphics:


    //CubeGrid(13);

            /*-----------------------------------*/                          break;
   }//S.ThreePhase-------------------------------------------

 }//End AppF6  ---------------------------------------------------------------------

 //-------------------------------------------------------------------------7 9
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