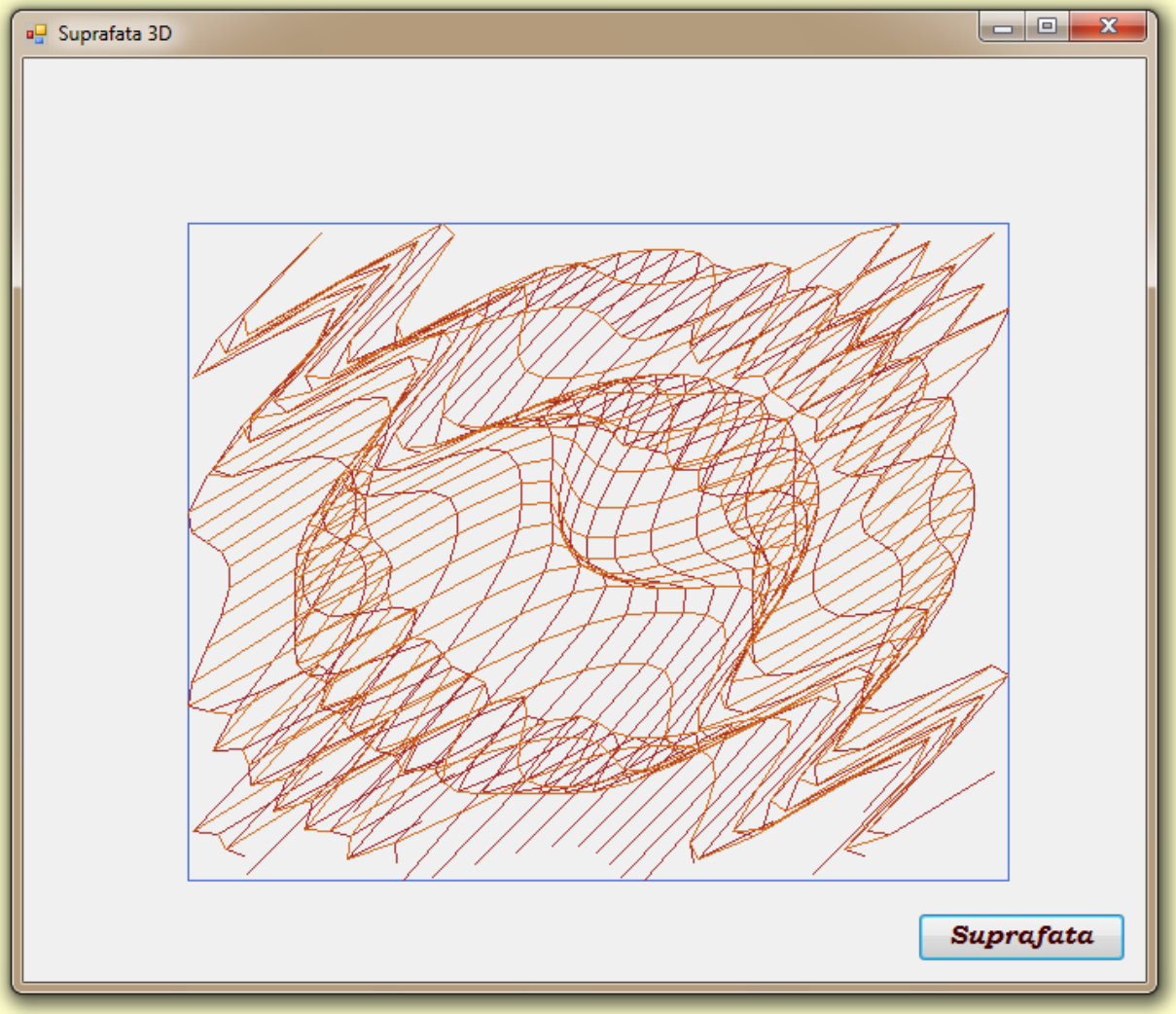
```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace Supr_3D
{
   public partial class Form1 : Form
   {
      double z(double x, double y) { return Math.Sin(Math.Pow(x,2)+Math.Pow(y,2)); }     // z:[a,b]x[c,d] -> R

      int u1, v1, u2, v2;          // ViewPort
      double a, b, c, d;           // Window
      double Raza, Alfa;           // Pr. Par.
      int Lu, Lv;                  // Lpr;

      int u(double x) { return (int)((x - a) / (b - a) * (u2 - u1) + u1); }
      int v(double y) { return (int)((y - d) / (c - d) * (v2 - v1) + v1); }

      void ViewPort(int x1, int y1, int x2, int y2) { u1 = x1; v1 = y1; u2 = x2; v2 = y2; }
      void Window(double x1, double y1, double x2, double y2) { a = x1; d = y1; b = x2; c = y2; }

      void DefPr(double r, double a) { Raza = r; Alfa = a; }   //   r=1; a=0.8;   // = Pi/4

      double PrX(double x, double z) { return x + Raza * z * Math.Cos(Alfa); }
      double PrY(double y, double z) { return y + Raza * z * Math.Sin(Alfa); }

      void MoveTo(int u1, int v1) { Lu = u1; Lv = v1; }
      void LineTo(int u1, int v1, System.Drawing.Graphics Gr, System.Drawing.Pen Pen)
            { Gr.DrawLine(Pen, Lu, Lv, u1, v1); Lu = u1; Lv = v1; }


      public Form1()
      {
         InitializeComponent();
      }
```

```
private void button1_Click(object sender, EventArgs e)
      {
         System.Drawing.Graphics Drept;          Drept = this.CreateGraphics();
         Pen myPen = new Pen(System.Drawing.Color.RoyalBlue);
         Rectangle myRectangle = new Rectangle(100, 100, 500, 400);
         Drept.DrawRectangle(myPen, myRectangle);
         myPen = new System.Drawing.Pen(System.Drawing.Color.Brown);
         System.Drawing.Graphics formGraphics = this.CreateGraphics();
         ViewPort (100, 100, 600, 500);
         double Pi=3.1416;  DefPr(1, 3.14/4);   int n=25, m=25;
         double a=-Pi, b=Pi, c=-Pi, d=Pi;                    //        Domeniul de definiție
         double Pas_x=(b-a)/n,   Pas_y=(d-c)/m;
         double Wl=PrX(a,z(a,c)),  Wr=PrX(a,z(a,c));      // Max,Min / x',y' (Window)
         double Wd=PrY(c,z(a,c)),  Wt=PrY(c,z(a,c));
         for (double x=a; x<=b; x+=Pas_x)
            for (double y=c; y<=d; y+=Pas_y) {
               double Ux=PrX(x,z(x,y)), Uy=PrY(y,z(x,y));
               if (Ux<Wl) Wl=Ux;  else  if (Ux>Wr) Wr=Ux;
               if (Uy<Wd) Wd=Uy;  else  if (Uy>Wt) Wt=Uy;
         }
         Window  (Wl, Wt, Wr, Wd);
         for (double x = a; x <= b; x += Pas_x)
         {
            double y = c;          MoveTo(u(PrX(x, z(x, y))), v(PrY(y, z(x, y))));
            for (y = c+Pas_y; y <= d; y += Pas_y)
               LineTo(u(PrX(x, z(x, y))), v(PrY(y, z(x, y))), formGraphics, myPen);
         }
         myPen.Color = Color.Chocolate;
         for (double y = c + Pas_y; y <= d; y += Pas_y)
         {
            double x = a;              MoveTo(u(PrX(x, z(x, y))), v(PrY(y, z(x, y))));
            for (x = a; x <= b; x += Pas_x)
               LineTo(u(PrX(x, z(x, y))), v(PrY(y, z(x, y))), formGraphics, myPen);
         }
      }
   }
}
```


Suprafata 3D
Suprafata